



Repsol International
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The Hague, February 28, 2017

In accordance with Article 14 of Law of 9 May 2006, on market abuse, Repsol International Finance, B.V. (the "Company") is filing the Annual Consolidated Financial Report for the fiscal year ended on 31 December 2016 of Repsol, S.A. ("Repsol Annual Report 2016"), Guarantor of the Euro 10,000,000,000 Guaranteed Euro Medium Term Note Programme of the Company.

The Repsol Annual Report 2016 was filed Repsol, S.A. with the Spanish Securities Market Commission (*Comisión Nacional del Mercado de Valores*) on 23 February 2017.

* * *

Translation of a report originally issued in Spanish based on our work performed in accordance with the audit regulations in force in Spain. In the event of a discrepancy, the Spanish-language version prevails.

INDEPENDENT AUDITOR'S REPORT ON CONSOLIDATED FINANCIAL STATEMENTS

To the Shareholders of Repsol, S.A.:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Repsol, S.A. (the Parent) and Subsidiaries (the Repsol Group), which comprise the consolidated balance sheet as at 31 December 2016, and the consolidated income statement, the consolidated statement of recognised income and expense, consolidated statement of changes in equity, consolidated cash flows statement and notes to the consolidated financial statements for the year then ended.

Directors' Responsibility for the Consolidated Financial Statements

The Parent's directors are responsible for preparing the accompanying consolidated financial statements so that they present fairly the consolidated equity, consolidated financial position and consolidated results of the Repsol Group in accordance with International Financial Reporting Standards as adopted by the European Union and the other provisions of the regulatory financial reporting framework applicable to the Group in Spain (identified in Note 2 to the accompanying consolidated financial statements) and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with the audit regulations in force in Spain. Those regulations require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the preparation by the Parent's directors of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated equity and consolidated financial position of Repsol, S.A. and Subsidiaries as at 31 December 2016, and their consolidated results and their consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union and the other provisions of the regulatory financial reporting framework applicable to the Group in Spain.

Report on Other Legal and Regulatory Requirements

The accompanying consolidated management report for 2016 contains the explanations which the Parent's directors consider appropriate about the situation of Repsol Group, the evolution of their business and other matters, but is not an integral part of the consolidated financial statements. We have checked that the accounting information in the consolidated management report is consistent with that contained in the consolidated financial statements for 2016. Our work as auditors was confined to checking the consolidated management report with the aforementioned scope, and did not include a review of any information other than that drawn from the accounting records of Repsol, S.A. and Subsidiaries.

DELOITTE, S.L.

Registered in ROAC under no. S0692

A handwritten signature in blue ink, appearing to read 'Javier Ares San Miguel', with a long horizontal stroke extending to the right.

Javier Ares San Miguel

22 February 2017

**CONSOLIDATED FINANCIAL
STATEMENTS**
For the financial year 2016



REPSOL, S.A. and Investees comprising the Repsol Group

*Translation of a report originally issued in Spanish
In the event of a discrepancy, the Spanish language version prevails*

Repsol, S.A. and investees comprising the Repsol Group
Consolidated balance sheet at December 31, 2016 and at December 31, 2015

	Note	€Million		
	2.1	12/31/2016	12/31/2015	01/01/2015
ASSETS				
Intangible Assets:	6	5,109	4,782	2,282
a) Goodwill		3,115	3,099	498
b) Other intangible assets		1,994	1,683	1,784
Property, plant and equipment	7	27,297	28,202	17,003
Investment property		66	26	23
Investment accounted for using the equity method	8	10,176	11,797	11,141
Non-current financial assets	10	1,204	715	593
Deferred tax assets	20	4,746	4,743	3,967
Other non-current assets	10	323	179	155
NON-CURRENT ASSETS		48,921	50,444	35,164
Non current assets held for sale	9	144	262	98
Inventories	11	3,605	2,853	3,931
Trade and other receivables:	12	5,885	5,681	5,685
a) Trade receivables		3,111	2,607	3,083
b) Other receivables		1,785	2,061	1,970
c) Income tax assets		989	1,013	632
Other current assets		327	271	176
Other current financial assets		1,280	1,237	2,513
Cash and cash equivalents	10	4,687	2,448	4,638
CURRENT ASSETS		15,928	12,752	17,041
TOTAL ASSETS		64,849	63,196	52,205
LIABILITIES AND EQUITY				
NET EQUITY				
Issued share capital		1,496	1,442	1,375
Share premium and reserves		24,232	26,030	24,867
Treasury shares and own equity instruments		(1)	(248)	(127)
Profit attributable to the equity holders of the parent		1,736	(1,398)	1,612
Other equity instruments		1,024	1,017	-
EQUITY	13	28,487	26,843	27,727
Items reclassifiable to income for the year		2,380	1,691	440
Financial assets available for sale		6	3	(5)
Hedge transactions		(171)	(227)	(163)
Translation differences		2,545	1,915	608
ACCUMULATED OTHER COMPREHENSIVE INCOME	13	2,380	1,691	440
EQUITY ATTRIBUTABLE TO EQUITY HOLDERS OF THE PARENT AND OTHER HOLDERS OF EQUITY INSTRUMENTS	13	30,867	28,534	28,167
MINORITY INTERESTS	13	244	228	217
TOTAL EQUITY		31,111	28,762	28,384
Grants		4	7	9
Non-current provisions	14	6,127	5,827	2,386
Non-current financial liabilities	15	9,482	10,581	7,612
Deferred tax liabilities	20	1,379	1,600	1,770
Other non-current liabilities	18	2,009	1,942	1,801
NON-CURRENT LIABILITIES		19,001	19,957	13,578
Liabilities related to non-current assets held for sale	9	146	8	-
Current provisions	14	872	1,377	240
Current financial liabilities	15	6,909	7,073	4,086
Trade payables and other payables:	19	6,810	6,019	5,917
a) Trade payables		2,128	1,799	2,350
b) Other payables		4,365	3,975	3,402
c) Current income tax liabilities		317	245	165
CURRENT LIABILITIES		14,737	14,477	10,243
TOTAL EQUITY AND LIABILITIES		64,849	63,196	52,205

Notes 1 to 34 are an integral part of the consolidated balance sheet.

Repsol, S.A. and investees comprising the Repsol Group
Consolidated income statement for December 31, 2016 and 2015

	Note	€Million	
	2.1	2016	2015
Sales		34,556	39,582
Services rendered and other income		133	155
Changes in inventories of finished goods and work in progress inventories		129	(524)
Income from reversals of impairment losses and gains on disposal of non-current assets		1,625	661
Other operating income		990	1,867
OPERATING REVENUE	21	37,433	41,741
Supplies		(23,615)	(28,833)
Personnel expenses		(2,501)	(2,129)
Other operating expenses		(5,930)	(6,455)
Depreciation and amortization of non-current assets		(2,529)	(3,124)
Impairment losses recognized and losses on disposal of non-current assets		(947)	(3,924)
OPERATING EXPENSES	21	(35,522)	(44,465)
OPERATING INCOME		1,911	(2,724)
Finance income		176	150
Finance expenses		(741)	(707)
Changes in the fair value of financial instruments		189	1,052
Net exchange gains (losses)		94	(204)
Impairment and gains (losses) on disposal of financial instruments		48	170
FINANCIAL RESULT	23	(234)	461
Share of results of companies accounted for using the equity method after taxes	8	194	(89)
NET INCOME BEFORE TAX		1,871	(2,352)
Income tax	20	(391)	996
Net income from continuing operations		1,480	(1,356)
Net income attributable to minority interests from continuing operations		(43)	(42)
NET INCOME ATTRIBUTABLE TO THE PARENT FROM CONTINUING OPERATIONS		1,437	(1,398)
NET INCOME ATTRIBUTABLE TO THE PARENT FROM DISCONTINUED OPERATIONS	14	299	-
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT		1,736	(1,398)
EARNINGS PER SHARE ATTRIBUTABLE TO EQUITY HOLDERS OF THE PARENT	2.1	<u>Euros per share</u>	<u>Euros per share</u>
Basic	24	1.16	(0.95)
Diluted	24	1.16	(0.95)

Notes 1 to 34 are an integral part of the consolidated income statement.

Repsol, S.A. and investees comprising the Repsol Group

Consolidated statement of recognized income and expense for the years ended December 31, 2016 and 2015

	€Million	
	2016	2015
CONSOLIDATED NET INCOME FOR THE YEAR ⁽¹⁾ (from the Consolidated Income Statement)	1,779	(1,356)
OTHER COMPREHENSIVE INCOME		
Items not reclassifiable to income for the year:		
From actuarial gains and losses	(5)	14
Share in other comprehensive income recognized for investments in joint arrangements and associates	(6)	(3)
Tax effect	-	-
TOTAL	(11)	11
OTHER COMPREHENSIVE INCOME		
Items reclassifiable to income for the year:		
Financial assets available for sale	1	13
Measurement gains (losses)	1	7
Amounts transferred to the income statement	-	6
Cash flow hedges	18	(39)
Measurement gains (losses)	(16)	(564)
Amounts transferred to the income statement	34	-
Amounts transferred to the initial carrying amount of the hedged item	-	525
Translation differences	505	1,366
Measurement gains (losses)	560	1,390
Amounts transferred to the income statement	(55)	(24)
Share in other comprehensive income recognized for investments in joint arrangements and associates	152	(121)
Measurement gains (losses)	99	(125)
Amounts transferred to the income statement	53	4
Tax effect	15	54
TOTAL	691	1,273
TOTAL RECOGNIZED INCOME FOR THE YEAR	2,459	(72)
a) Attributable to the parent	2,413	(128)
b) Attributable to minority interests	46	56

⁽¹⁾ This amount is the sum of the following income statement captions: “*Net income from continuing operations*” and “*Net income attributable to the parent from discontinued operations*”.

Notes 1 to 34 are an integral part of the consolidated statement of recognized income and expenses.

Repsol, S.A. and investees comprising the Repsol Group

Consolidated statement of changes in equity for the years ended December 31, 2016 and 2015

€Million	Equity attributable to equity holders of the parent								Total equity
	Capital and reserves				Other equity instruments	Accumulated other comprehensive income	Total equity attributable to the parent and other holders of equity instruments	Minority interests	
	Issued share capital	Share premium and reserves	Treasury shares and own equity instruments	Total net income attributable to the parent					
Closing balance at 12/31/2014	1,375	24,642	(127)	1,612	-	435	27,937	217	28,154
Adjustments (see Note 2.1)	-	225	-	-	-	5	230	-	230
Initial adjusted balance	1,375	24,867	(127)	1,612	-	440	28,167	217	28,384
Total recognized income / (expense)	-	11	-	(1,398)	-	1,259	(128)	56	(72)
Transactions with shareholders or owners									
Increase / (decrease) of share capital	67	(67)	-	-	-	-	-	-	-
Dividend payments	-	-	-	-	-	-	-	-	-
Transactions with treasury shares or own equity instruments (net)	-	3	(121)	-	-	-	(118)	-	(118)
Increases / (decreases) due to changes in the scope of consolidation	-	49	-	-	-	18	67	(45)	22
Other transactions with members and owners	-	(471)	-	-	-	-	(471)	-	(471)
Other changes in equity									
Transfers between equity accounts	-	1,612	-	(1,612)	-	-	-	-	-
Perpetual subordinated bond issues	-	(22)	-	-	1,017	-	995	-	995
Other changes	-	48	-	-	-	(26)	22	-	22
Closing balance at 12/31/2015	1,442	26,030	(248)	(1,398)	1,017	1,691	28,534	228	28,762
Total recognized income / (expense)	-	(11)	-	1,736	-	688	2,413	46	2,459
Transactions with shareholders or owners									
Increase / (decrease) of share capital	54	(54)	-	-	-	-	-	-	-
Dividend payments	-	-	-	-	-	-	-	(9)	(9)
Transactions with treasury shares or own equity instruments (net)	-	(61)	247	-	-	-	186	-	186
Increases / (decreases) due to changes in the scope of consolidation	-	-	-	-	-	-	-	(21)	(21)
Other transactions with members and owners	-	(243)	-	-	-	-	(243)	-	(243)
Other changes in equity									
Transfers between equity accounts	-	(1,398)	-	1,398	-	-	-	-	-
Perpetual subordinated bond issues	-	(29)	-	-	7	-	(22)	-	(22)
Other changes	-	(2)	-	-	-	1	(1)	-	(1)
Closing balance at 12/31/2016	1,496	24,232	(1)	1,736	1,024	2,380	30,867	244	31,111

Notes 1 to 34 are an integral part of the consolidated statement of changes in equity.

Repsol, S.A. and investees comprising the Repsol Group
Consolidated cash flows statements for the years ended December 31, 2016 and 2015

	Note	€Million	
	2.1	2016	2015
Net income before tax		1,871	(2,352)
Adjustments to net income:		2,547	6,081
Depreciation and amortization of non-current assets	6 and 7	2,529	3,124
Other adjustments to results (net)		18	2,957
Changes in working capital		(517)	1,370
Other cash flows from operating activities:		(11)	(163)
Dividends received	8	920	363
Income tax received/ (paid)		(264)	(128)
Other proceeds from/ (payments for) operating activities		(667)	(398)
Cash flows from operating activities	25	3,890	4,936
Payments for investing activities:	4, 6 and 7	(3,649)	(12,232)
Group companies and associates		(842)	(8,974)
Property, plant and equipment, intangible assets and investment property		(2,003)	(2,991)
Other financial assets		(804)	(267)
Proceeds of divestments:	4	4,056	2,778
Group companies and associates		3,090	894
Property, plant and equipment, intangible assets and investment property		813	352
Other financial assets		153	1,532
Other cash flows		(16)	494
Cash flows from investing activities		391	(8,960)
Proceeds from/ (payments for) equity instruments:	13	(92)	861
Issues		23	996
Redemption		(23)	-
Acquisition		(103)	(318)
Disposal		11	183
Proceeds from/ (payments for) financial liabilities:	15	(910)	1,255
Issues		12,712	12,244
Repayment and redemption		(13,622)	(10,989)
Dividend payments and remuneration on other equity instruments	13 and 24	(420)	(488)
Other cash flows from financing activities:		(631)	147
Interest payments		(591)	(682)
Other proceeds from/ (payments for) financing activities		(40)	829
Cash flows from financing activities		(2,053)	1,775
Effect of changes in exchange rates		11	59
Net increase/ (decrease) in cash and cash equivalents		2,239	(2,190)
Cash and cash equivalents at the beginning of the year	10	2,448	4,638
Cash and cash equivalents at year-end	10	4,687	2,448
COMPONENTS OF CASH AND CASH EQUIVALENTS AT YEAR-END		12/31/2016	12/31/2015
Cash at bank and in hand		3,207	2,311
Other financial assets		1,480	137
TOTAL CASH AND CASH EQUIVALENTS AT YEAR-END		4,687	2,448

Notes 1 to 34 are an integral part of the consolidated cash flow statement.

**NOTES TO THE 2016 CONSOLIDATED FINANCIAL STATEMENTS
Repsol, S.A. and Investees comprising the Repsol Group**

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(1) GENERAL INFORMATION

1.1) About the Repsol Group

Repsol constitutes an integrated group of oil and gas (hereinafter “Repsol”, “Repsol Group” or “Group”) which commenced its operations in 1987.

The Repsol Group is engaged in all the activities relating to the oil and gas industry, including exploration, development and production of crude oil and natural gas, transportation of oil products, liquefied petroleum gas (LPG) and natural gas, refining, the production of a wide range of oil products and the retailing of oil products, oil derivatives, petrochemicals products, LPG, natural gas and liquefied natural gas (LNG).

The Repsol Group prepares its consolidated financial statements including the investments in all of its subsidiaries, associates and joint arrangements. Appendices I and II detail the most significant subsidiaries, associates and joint arrangements that have been included in the scope of consolidation of the Group.

1.2) About the parent company

The corporate name of the parent company of the Repsol Group that prepares and files these financial statements is Repsol, S.A. It is registered at the Madrid Commercial Registry in sheet no. M-65289; its tax ID number (C.I.F.) is A-78/374725 and its C.N.A.E. no. is 70.10.

Its registered office is in Madrid, 44 calle Méndez Álvaro, where the Shareholder Information Office is also located, the telephone number of which is 900 100 100.

Repsol S.A. is a private-law entity incorporated in accordance with Spanish legislation, which is subject to the Companies Act (Ley de Sociedades de Capital) approved by Legislative Royal Decree 1/2010 of July 2nd, and all other legislation related to listed companies.

Repsol, S.A.’s shares are represented by book entries and are all admitted to trading on the Spanish Stock Exchanges (Madrid, Barcelona, Bilbao, and Valencia) and the Buenos Aires Stock Exchange (Bolsa de Comercio de Buenos Aires). On March 9, 2011, the ADS (American Depositary Shares) Program began to trade on the OTCQX market, a platform within the OTC market (*over-the-counter*) in the United States which distinguishes issuers with improved market information and solid business activities.

1.3) About the consolidated financial statements

The accompanying consolidated financial statements of Repsol, S.A. and its investees, comprising the Repsol Group, present fairly the Group’s equity and financial position at December 31, 2016, as well as the Group’s consolidated earnings performance, the changes in the consolidated equity and the consolidated cash flows for the year then ended.

These consolidated financial statements have been approved by the Board of Directors of Repsol S.A. at a meeting held on February 22, 2017 and, as well as the financial statements of the investees, will be submitted for approval by their respective Annual General Meetings, with no modifications expected.¹

¹The 2015 consolidated financial statements were approved at Repsol’s Annual Shareholders’ Meeting held on May 20, 2016.

(2) BASIS OF PRESENTATION

The accompanying financial statements are presented in millions of euros and were prepared based on the accounting records of Repsol, S.A. and its investees. They are presented in accordance with the International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB) as well as the IFRS endorsed by the European Union (EU) as of December 31, 2016¹ and other provisions of the regulatory framework. The changes in accounting standards that have been applied by the Group as of January 1, 2016 have not had a significant impact or disclosures in the financial statements.²

The preparation of the consolidated financial statements, which is the responsibility of the Board of Directors of the Group's parent company, makes it necessary to use accounting estimates and judgments when applying the accounting standards. The areas in which most significant judgments and estimates have to be made are detailed in Note 3 *Accounting Estimates and Judgments*. The main criteria and policies used by Repsol are described below.

2.1) Comparative information

According to IFRS 6 *Exploration for and evaluation of mineral resources*, an entity may develop a specific accounting policy for those assets in the exploration and evaluation phase. To integrate Repsol Oil & Gas Canada Inc (formerly Talisman and hereinafter "ROGCI", see Note 4) on the Group's business and based on its prior experience, the Group has reviewed its accounting policies and, in particular, it has considered that the capitalization of the geology and geophysics costs (G&G) during the exploration phase provides a fairer presentation of the activities economic reality global oil and gas exploration investments, thereby making the information provided more valuable for financial statement users. Notes 7 (b) and 8 (c) in the section *Standards applicable to the preparation of financial information* of this same note contain the wording as updated in response to the change in accounting policy.

This change in accounting policy must be applied retrospectively in accordance with IAS 8. For this reason, the consolidated balance sheet, the consolidated income statement, the consolidated statement of changes in equity, and the consolidated cash flow statement for 2015 and their respective notes have been restated to make the required changes with respect to the consolidated financial statements for 2015.

The impacts on the Group's consolidated balance sheet and income statement at January 1 and December 31, 2015 are as follows:

€Million	Investments accounted for using the equity method	Property, plant and equipment, and intangible assets	Deferred tax liabilities	Reserves and translation differences	Net income (expense)
January 1, 2015	31	285	86	230	-
December 31, 2015	40	25	(8)	244	(171) ⁽¹⁾

Note: These amounts are presented net of the tax gains associated with the activities in Alaska that were previously recognized as revenue for the purpose of consistency with the new G&G cost accounting policy.

⁽¹⁾ The impact on net income affects the headings *Other operating costs* in an amount of €86 million, *Depreciation and amortization*

¹ The IFRSs adopted and in effect in the EU differ in some respects from the IFRSs issued by the IASB; however these differences do not have a material impact on the Group's consolidated financial statements in the years presented.

² The standards applicable from January 1, 2016 are: i) Amendments to IFRS 11 *Acquisitions of interests in joint operations*; ii) Amendments to IAS 16 and IAS 41 *Bearer plants*; iii) Amendments to IAS 16 and IAS 38 *Clarification of acceptable methods of depreciation and amortization*; iv) Annual Improvements to IFRSs, 2012-2014 Cycle; v) Amendments to IAS 1 *Disclosure initiative*; vi) Amendments to IAS 27 *Equity method in separate financial statements*, and vii) Amendments to IFRS 10, IFRS 12 and IAS 28: *Investment entities: Applying the consolidation exception*.

of assets in amount of €136 million, Recognition of provisions and losses on asset sales in an amount of €234 million, Financial expenses in an amount of €1 million, Income from equity-accounted entities after taxes in amount of €5 million and Corporate income tax in an amount of €7 million.

Following the sale of 10% of Gas Natural SDG (see Note 4.1), Gas Natural Fenosa is no longer considered an operating segment and the remaining stake is included under *Corporate and others*. As a result, segment information in Note 5 regarding 2015 has been rephrased to include the necessary changes to the information in the 2015 consolidated annual accounts.

Finally, the earnings per share at December 31, 2015 has been restated with respect to that recognized in the 2015 consolidated financial statements in accordance with accounting standards, as the average number of outstanding shares considered in the calculation should be based on the new number of shares issued after the capital increase carried out as part of the compensation scheme to shareholders known as "*Repsol Flexible Dividend*" described in Note 13 "*Equity*."

2.2) Applicable standards to financial reporting

1. Basis of consolidation

Repsol's consolidated financial statements include investments in all their subsidiaries, associates and joint arrangement.

The subsidiaries, are those companies over which Repsol exercises direct or indirect control, are fully consolidated. The power to exercise control is generally evidenced by direct or indirect ownership of at least 50% of an investee's voting rights, giving the Group the current ability to direct its relevant activities and influence the amount of variable returns to which the Group is exposed as a result of its involvement with the investee.

The share of the non-controlling interests in the equity and profit of the Repsol Group's consolidated subsidiaries is presented under "*Minority interests*" within "*Equity*" in the consolidated balance sheet and "*Net income attributable to minority interests*" in the consolidated income statement.

Stakes in arrangements over which Repsol has joint control whereby under an agreement with third parties strategic operational and financial decisions require the unanimous consent of all the parties sharing control are as follows:

- Interests in joint operations that are structured through a *Joint Operating Agreement (JOA)* either via a consortium arrangement (UTE for its acronym in Spanish) or a similar separate vehicle that does not limit its rights to the assets and obligations for the liabilities relating to the arrangement. The Group has classified as joint operations certain joint arrangements structured through holding companies or similar vehicles in which, despite their legal form, the parties in the arrangement retain the rights to substantially all of the economic benefits of the assets held by the vehicle and the vehicle depends on the parties on a continuous basis for settling the liabilities related with the activity performed under the arrangement. All of these investments in joint operations are held by the Group through investments in fully-consolidated subsidiaries.
- Investments in joint arrangements in which Repsol has rights only to the net assets of the joint arrangement or joint ventures (JV) are accounted for using the equity method. The equity method consists of recognizing the Group's share of the joint venture's net assets and goodwill, if any, in a single consolidated balance sheet line item called "*Investments accounted for using the equity method*". The net result in each year of the percentage stake in such companies is reflected in the consolidated income statement as "*Results of companies accounted for using the equity method after taxes*".

Interests where Repsol's consent is not required in strategic operational and financial decision-making, but

the Group has power to take part, are considered to be under significant influence and are classified as associates (this is presumed, unless shown otherwise, for companies where the interest is equal to or greater than 20%), and are accounted for using the equity method referred to above.

Appendices I and II contains a list of the main consolidated subsidiaries, associates and most significant joint arrangements in which Repsol, S.A. as of December 31, 2016, has direct and indirect ownership interests, which were included in the scope of consolidation, as well as the changes in the consolidation scope in 2016 and 2015.

On consolidation process, the balances, transactions and profit or loss generated between the fully consolidated companies were eliminated. The profit or loss on transactions between Group companies and joint ventures or associates was eliminated in proportion to the Group's share in these investees.

The accounting policies used by the Group's subsidiaries, joint arrangements and associates have been adjusted so that they are consistent with those applied by the parent and so that the consolidated financial statements are presented using uniform accounting policies for like transactions.

The financial statements of the investees whose functional currency differs from the presentation currency (see section 4) are translated as follows:

- The assets and liabilities in each of the balance sheets presented are translated applying the closing exchange rate on the balance sheet date.
- For practical reasons, income and expense are generally translated applying the average exchange rate for the period in which the transactions were performed. However, the transaction-date exchange rate is used to translate significant transactions or when exchange rates have fluctuated significantly during the reporting period.
- Any exchange differences arising as a result of the foregoing are recognized as “*Translation Differences*” under “*Other comprehensive income*” of “*Equity*” heading.

The exchange rates against the euro of the main currencies used by the Group companies at December 31, 2016 and 2015 were as follows:

	December 31, 2016		December 31, 2015	
	Year-end rate	Cumulative average rate	Year-end rate	Cumulative average rate
US dollar	1.05	1.11	1.09	1.11
Brazilian real	3.43	3.86	4.25	3.70

2. *Classification of assets and liabilities into current and non-current*

In the consolidated balance sheet, assets and liabilities maturing within twelve months are classified as current items and those maturing within more than twelve months as non-current items.

3. *Offsetting of balances and transactions*

As a general rule, in the consolidated financial statements neither assets and liabilities nor income and expenses are offset, except when offsetting is required or permitted by a given standard or interpretation and when offsetting better reflects the substance of the transaction.

4. *Functional currency and foreign currency transactions*

a) *Functional currency*

The items included in these consolidated financial statements relating to the Group companies are measured using their functional currency, which is the currency in the main economic environment in which they operate. The consolidated financial statements are presented in euros, which is the functional currency of the Repsol Group's parent company and presentation currency of consolidated financial statements.

b) *Foreign currency*

Transactions in currencies other than the functional currency of an entity are deemed to be 'foreign currency transactions' and are translated to the functional currency by applying the exchange rates prevailing at the date of the transaction. At each year end, the foreign currency monetary items on the balance sheet are measured applying the exchange rate prevailing at that date and the exchange rate differences arising from such measurement are recorded as "*Net exchange gains/(losses)*" within "*Financial result*" in the consolidated income statement in the year incurred. This does not apply to the accounting treatment of monetary items that qualify as hedging instruments (see section 25 of this Note).

5. *Business combinations*

The business combinations in which the Group acquires control of one or more businesses by merging or spinning off several companies or by acquiring all of the assets and liabilities of a company or part of a company that qualifies as a business or several businesses are accounted for using the acquisition method, according to the standards establish in IFRS 3 *Business combinations*. The acquisition method entails, except for the recognition and measurement exceptions established in IFRS 3, the registration in the books at the acquisition date, of the identifiable assets acquired and liabilities assumed at their fair value on this date, provided that this value can be reliably established. Within liabilities assumed in a business combination, is also posted to the acquisition date any contingent liabilities identified, although it had not been recognized in accordance with the general criteria for accounting of provisions not likely give rise to benefits economic, provided that corresponds to a present obligation arising from past events and its fair value can be measured reliably. Costs related to the acquisition are expensed in the income statement.

The difference between the cost of the business combination and the fair value of the identifiable assets acquired less the liabilities assumed is recognized as goodwill if positive, and as a gain on a bargain purchase in profit or loss if negative.

Business combinations for which the measurement period for applying the acquisition method has not fully elapsed at the end of the reporting period are accounted for using provisional amounts. The provisional amounts must be adjusted within a maximum of one year from the acquisition date to show the new information about any issues or circumstances that already existed at the acquisition date, and which affect the recognized amounts. Adjustments made to round out initial accounting for a business combination are made retroactively so that the amounts recognized are those that would have been recognized had the Group had access to all the required information upon initial recognition of the transaction; comparative figures are adjusted accordingly.

6. *Goodwill*

Goodwill represents the excess of the cost of a business combination over the acquirer's interest in the net fair value of the assets acquired and the liabilities assumed at the date of acquisition that meet the pertinent recognition criteria. Goodwill is recognized as a non-current asset in the corresponding intangible asset caption on the consolidated balance sheet on the date of acquisition.

Because goodwill has an indefinite useful life, it is not depreciated. Subsequent to initial recognition, it is

measured at cost less any accumulated impairment losses.

Goodwill is allocated to one or more cash-generating units within the boundary of the business segment for impairment testing purposes. In the event of the sale or disposal of an operation that forms part of a cash-generating unit, the goodwill corresponding to the operation disposed of is derecognized at the time of the sale and is factored in for the purpose of generating the resulting gain or loss. The amount of goodwill to be derecognized is determined by reference to metrics relating to the operation sold in proportion to those of the portion of the cash-generating unit retained, unless there is better evidence justifying another (non-arbitrary) means of allocating the goodwill.

7. Other intangible assets

The Repsol Group initially recognizes intangible assets at acquisition or production cost, except in the case of the emission allowances received for no consideration as described in section c) below. This cost is amortized on a straight-line basis over the assets' useful lives, except for assets with indefinite useful lives described below, which are not amortized but are tested for impairment at least annually, and whenever indicators of impairment are detected. At closing balance sheet date, these assets are measured at cost less accumulated amortization and any accumulated impairment losses.

The main intangible assets of the Repsol Group are as follows:

a) Service/Gas stations association rights and other rights

This heading primarily includes the costs associated with the various forms of agreements for acquiring service station association rights, reflagging rights and image rights of publicity and the associated exclusive supply agreements with service stations. These costs are amortized on a straight-line basis over the period of each contract, which for service station association rights acquisition contracts is an average ranging from 25 to 30 years, and for reflagging, image and exclusive supply contracts is 1 year, renewable to a maximum of 3 years at the option of the counterparty.

b) Exploration rights and geological and geophysical costs

The costs of acquiring rights to explore and the costs incurred in conducting geological and geophysical (G&G) studies during the exploration phase are capitalized under this heading at their acquisition price and incurred cost, respectively. During the exploration and evaluation phase, these costs are not amortized, although they are tested for impairment at least once a year and whenever indications of impairment are detected, in accordance with the guidelines set forth in IFRS 6 *Exploration for and evaluation of mineral resources*. Any impairment losses or the reversal thereof are recognized in profit or loss following the general criteria stipulated in IAS 36 *Impairment of assets*. Once the exploration and evaluation phase is completed, if no reserves are found, the amounts previously capitalized are recognized as an expense in the consolidated income statement. If the exploration work does yield positive results, giving rise to commercially exploitable wells, costs are reclassified to "*Investment in areas with reserves*" (see section 8 c) at their carrying amount when this determination is made. These costs are then amortized/depreciated over the estimated commercial life of the field and are calculated as a function of the relationship between actual production during the period and the field's proved reserves at the start of the amortization period.

c) Carbon emission allowances

Emission allowances are recognized as an intangible asset and are initially recognized at acquisition cost.

Allowances received free of charge under the emissions trading system for the period 2013-2020, are initially recognized at the market price prevailing at the beginning of the year in which they are issued, and a balancing item is recognized as a grant for the same amount as deferred income. As the corresponding tons of CO₂ are issued, the deferred income is reclassified to profit or loss.

The allowance rights are not amortized as their carrying amount equals their residual value and, therefore, the depreciable basis is zero. Emission allowances are subject to an impairment test based on their recoverable amount, as measured with reference to the price of the benchmark contract in the futures market provided by the ECX-European Climate Exchange.

The Group records an expense under “*Other operating expenses*” in the income statement for the CO₂ emissions released during the year, recognizing a provision calculated based on the tons of CO₂ emitted, measured at: (i) their carrying amount in the case of the allowances of which the Group is in possession at year end; and (ii) the closing list price in the case of allowances of which it is not in possession at year end.

When the emissions allowances for the CO₂ tons emitted are delivered to the authorities, the intangible assets as well as their corresponding provision are derecognized from the balance sheet without any effect on the income statement.

When carbon emission allowances are actively managed to take advantage of market trading opportunities (see Note 31), the trading allowances portfolio is classified as trading inventories.

d) Other intangible assets

This heading primarily includes the following items:

- i. Concessions and similar assets: these are initially recognized at acquisition cost if they are acquired directly from a government or other public sector body, or at the fair value attributable to the concession if they are acquired as part of a business combination. They are subsequently measured at acquisition cost less accumulated amortization and impairment loss, if any. These concessions are amortized on a straight-line basis over the term of the concession agreements.
- ii. Development costs are capitalized only if all the conditions stipulated in the applicable accounting standard are met. Research costs incurred by the Group are expensed in the income statement as costs of the year.
- iii. Other costs, including those relating to software and industrial property, are amortized on a straight-line basis over their useful lives (which range between 3 and 20 years).

Trademarks and analogous intangible assets internally developed by the Group are not capitalized; and the related expenses are recognized in the consolidated income statement in the period in which they are incurred.

8. *Property, plant and equipment*

The Repsol Group uses the cost model by which items of property, plant and equipment are measured initially at acquisition cost.

a) Cost

The cost of property, plant and equipment includes their acquisition cost, all the costs directly related to the location of assets and all the costs to make them operational.

Additionally, if applicable, it will include the present value of the expected disbursements necessary for any costs of dismantling and removing the item or restoring the site on which it is located, when such obligations are incurred under certain conditions. Subsequent changes to the measurement of the dismantling obligations and related liabilities resulting from changes in the estimated cash flows and/or in the discount rate are added to or deducted from the asset's carrying amount in the period in which they are incurred, except where the lower corrected value of the liability is greater than the carrying amount of the associated asset, in which case the surplus is recognized in the income statement.

Borrowing costs that are directly attributable to the acquisition or construction of assets that require more than one year to be ready for use are capitalized as part of the cost of these assets, in accordance with the limits established in the applicable accounting rules.

The costs of expansion, modernization or improvements leading to increased productivity, capacity or efficiency or to a lengthening of the useful lives of the assets are capitalized, as long as the general capitalization criteria are met.

Repair, upkeep and maintenance expenses are recognized in the income statement as incurred. Furthermore, certain facilities require periodic reviews. In this respect, the assets subject to replacement are recognized specifically and are depreciated over the average term remaining until the next repairs are carried out.

This heading also includes investments relating to oil and gas exploration and production activities (see section c below) and the cost of assets held under finance leases (see section 22).

b) Depreciation

Property, plant and equipment, other than those items relating to oil and gas exploration and production activities (see section c), are depreciated using the straight-line method on the basis of the acquisition cost of the assets less their estimated residual value, over the years of estimated useful life of the assets. Estimated useful life of the main assets classified as Property, Plant and Equipment are as follows:

	Estimated useful life (years)
Buildings and other structures	20-50
Machinery and facilities:	
Machinery, fixtures and tools	8-25
Specialized complex facilities:	
Units	8-25
Storage tanks	20-40
Pipelines and networks	12-25
Gas and electricity infrastructure and distribution facilities	12-40
Transport equipment	5-20
Other PP&E:	
Furniture and fixtures	9-15

Depreciation of these assets starts when the assets become available for use.

Land is classified separately from the buildings or facilities that might be located on it and is deemed to have an indefinite useful life. Therefore, it is not depreciated.

c) Recognition of oil and gas exploration and production transactions

Repsol recognizes oil and gas exploration and production operations using accounting policies mostly based on the “successful efforts” method. Under this method, the various costs incurred are treated as follows for accounting purposes:

- i. The costs incurred in the acquisition of new interests in areas with proved and unproved reserves (including bonds, resource-related costs, legal costs, etc.) are capitalized as incurred under “*Investments in areas with reserves*” associated with proven reserves or non-proven reserves, as appropriate when incurred.

ii. Exploratory drilling costs, including those relating to stratigraphic exploration wells, are recognized as assets under the heading “*Other exploration costs*” until it is determined whether reserves justifying their commercial development have been found. If no reserves are found, the capitalized drilling costs are registered in the income statement. In the event that reserves are found but remain under evaluation for classification as proven, their recognition depends on the following:

- If the area requires additional investments prior to the start of production, the drilling costs continue to be capitalized for as long, and only for as long, as the following conditions are met: (i) the amount of reserves found justifies the completion of a productive well if the required investment is carried out; and (ii) satisfactory progress has been made in the evaluation of reserves and the operational viability of the project. If any of these conditions fails to be satisfied, the drilling costs for exploratory wells are treated as impaired, and are expensed in the income statement.
- In all other cases, if there is no commitment to carry out significant activities to evaluate reserves or develop the project within a reasonable period after well drilling has been completed, or if activities have been halted, the costs capitalized in relation to that well must be recorded as an expense in the income statement.

Costs incurred in exploratory drilling work that has yielded a commercially exploitable reserve finding are reclassified to “*Investments in areas with reserves.*”

iii. Exploration costs other than geological and geophysical costs (see section 7 b), excluding the costs of drilling exploration wells and exploration licenses, are recognized as an expense in profit and loss when incurred.

iv. Development expenditure incurred in lifting proven reserves and in processing and storing oil and gas (including costs incurred in drilling relating to productive wells and dry wells under development, oil rigs, recovery improvement systems, etc.) are recognized as assets under “*Investments in areas with reserves*”.

v. Future field abandonment and dismantling costs (environmental, safety, etc.) are estimated, on a field-by-field basis, and are capitalized at their present value when they are initially recognized under “*Investments in areas with reserves*” in assets in the balance sheet. This capitalization is recorded against the caption dismantling provision (see Note 14).

The investments capitalized as described above are depreciated as follows:

- i. Investments in the acquisition of proven reserves and common facilities are depreciated over the estimated commercial life of the field on the basis of the production for the period as a proportion of the proven reserves of the field at the beginning of the depreciation period.
- ii. The costs incurred in surveys for the development and extraction of hydrocarbon reserves are amortized over the estimated commercial life of the field on the basis of the relationship between the production of the period and proved developed reserves of the field at the beginning of period amortization.
- iii. Investments relating to non-proven reserves or fields under evaluation are not depreciated. These investments are tested for impairment at least once a year and whenever indications of impairment are detected.

The changes in estimated reserves are considered on a prospective basis in calculating depreciation.

At closing balance sheet date or whenever there are indications that the assets might have become impaired, their recoverable amount is compared to their carrying amount. Any impairment losses, or reversal thereof, resulting from this exercise are recognized within “*Provisions recognized and losses on disposal of non-*

current assets” or “Reversal of provisions and gains on disposal of non-current assets” in profit or loss, as warranted (see Notes 6, 7, and 22).

d) Environmental property, plant and equipment

Property, plant and equipment of an environmental nature, the purpose of which is to minimize environmental impact and to protect and improve the environment, are identified on the basis of the nature of the business activities carried on, based on the Group’s technical criteria, which are based on the guidelines relating to these matters issued by the American Petroleum Institute (API).

Environmental property, plant and equipment and the related accumulated depreciation are recognized in the balance sheet together with other property, plant and equipment, classified by their nature for accounting purposes.

Their cost, depreciation methods and the valuation adjustments to be performed are determined in accordance with the rules relating to these asset items, as explained in sections 8.a) and 8.b) of this heading.

9. *Non-current assets and liabilities held for sale and discontinued operations*

The Group classifies a non-current asset (or group of assets) as held for sale if the carrying amount of the asset(s) and associated liabilities will be recovered through a sale transaction rather than through continuing use.

This condition is regarded as met only when the sale is highly probable and the asset is available for immediate sale in its present condition. The sale should be expected to be completed within one year from the date of classification although this could take longer depending on regulatory requirements or similar circumstances.

The sale should be expected to be completed within one year from the date of classification although this could take longer depending on regulatory requirements or similar circumstances. These assets or group of assets are presented at the lower of carrying amount and fair value less costs to sell and, except for the ones mentioned in the paragraph below, are not depreciated as long as they are classified as held for sale or form part of a group of assets classified as held for sale.

In the specific case of financial assets, deferred tax assets, investment properties, and assets related to employee benefits, even when classified as "held for sale" these assets are measured according to their nature, irrespective of the fact that they are presented under this heading.

In addition, the Group classifies as discontinued operations any component (a cash-generating unit or a group of cash-generating units) that represents a separate major line of business or geographical area of operations, or has been sold or disposed of by other means, or that qualifies for classification as held for sale.

Non-current assets held for sale are shown on the consolidated balance sheet under the single heading, “*Non-current assets held for sale*”. On the liabilities side of the balance sheet, “*Liabilities related to non-current assets held for sale*” comprises the liabilities related to the assets that satisfy the definition set out in the foregoing paragraphs. The after-tax profits or losses generated by discontinued operations are presented in a single heading “*Net income attributable to equity holders of the parent from discontinued operations*”.

10. *Investments accounted for using the equity method*

See section 1 of this Note for a description of how these investments are initially recognized.

To determine whether it is necessary to recognize any impairment losses on investments in associates and joint ventures, the entire carrying amount of the investment is tested for impairment in accordance with IAS 36 *Impairment of assets* as a single asset, including any goodwill that may be implicit within the investment,

by comparing its recoverable amount with its carrying amount. The recoverable amount of an investment in an associate or a joint venture is evaluated individually, unless it does not generate cash inflows from continuing use that are largely independent of those generated by other Group assets or cash-generating units.

11. *Financial assets*

The Group classifies its investments in financial assets when they are initially recognized and reviews their classification at period end date. The assets are classified on the basis of the nature of the financial assets and the purpose for which those assets were acquired.

This category has, in turn, the following sub-categories:

a) Financial assets at fair value with changes through profit or loss

a.1) Financial assets held for trading: Derivatives not designated as hedging instruments are included within this category.

a.2) Other financial assets at fair value with changes through profit or loss: this category comprises financial assets acquired for trading or sale other than derivatives.

b) Financial assets available for sale

Financial assets available for sale are financial assets that have either been designated as available for sale or have not been classified in any other financial asset category.

c) Loans and receivables

There are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market and for whose the Group does not intend to sell immediately or in the near term. They arise when the Group delivers goods or provides services or financing directly to a third party.

d) Held to maturity investments

Held to maturity investments are financial assets with fixed or determinable payments and fixed maturity that the Group has the positive intention and ability to hold to the date of maturity.

A financial asset is initially recognized at fair value. Transaction costs that are directly attributable to the acquisition or issuance of a financial asset are capitalized upon initial recognition of the asset, except in relation to assets designated as financial assets at fair value through profit or loss that are recognized in the income statement, as incurred.

Subsequent to initial recognition, all financial assets, except for “*Loans and receivables*” and “*Held to maturity investments*” are measured at fair value. Likewise, equity investments in unlisted prices whose fair value cannot be measured reliably are measured at cost.

In the case of “*Other financial assets at fair value with changes in profit and loss*,” gains and losses from changes in fair value are recognized in the net profit or loss for the year. In the case of “*Financial assets available for sale*”, the gains and losses from changes in fair value are recognized directly in equity until the asset is disposed of or it is determined that it has become impaired, at which time the cumulative gains or losses previously recognized in equity are recognized in the profit or loss for the year.

“*Loans and receivables*” and “*Held to maturity investments*” are measured at amortized cost, and the accrued interest income is recognized in profit or loss using the corresponding effective interest rate.

Accounts receivables which do not bear explicit interest are recognized at their face value whenever the effect of not discounting the related cash flows is not significant. In this instance, these assets are subsequently measured at face value also.

An impairment loss on financial assets at amortized cost is recognized when there is objective evidence that the Group will not be capable of collecting all the related amounts under the original terms of the accounts receivable. The amount of the impairment loss is recognized in the consolidated income statement. The carrying amount of the asset is reduced through an allowance account.

If, in subsequent periods, the value of the financial asset is recovered, the previously recognized impairment loss shall be reversed. The reversal shall not exceed the carrying amount the financial asset prior to the initial recognition of the impairment loss. The amount of the reversal shall be recognized in the income statement for the period.

The Group derecognizes financial assets when the contractual rights to the cash flows from the financial asset expire or it transfers the financial asset and the transfer qualifies for derecognition.

12. *Inventories*

Inventories acquired for our own use are stated at the lower of cost and net realizable value. Cost, basically calculated as the average cost, includes acquisition costs (less trade discounts, rebates and other similar items), transformation and other costs which have been incurred in bringing the inventories to their present location and condition.

In the case of refinery products, the costs are allocated to income in proportion to the selling price of the related products (*isomargin* method) due to the existing difficulty to recognize the conversion costs of every product.

The Group assesses the net realizable value of inventories at the end of each period and recognizes the appropriate write-down in profit or loss to the extent the carrying amount of inventories exceeds their net realizable value. When the circumstances that previously caused the impairment no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of the write-down is reversed.

Net realizable value is the estimated selling price at year end less the estimated costs of completion and costs to be incurred in marketing, selling and distribution.

In the case of commodities and similar products, it is not necessary to write down their carrying amount below cost as long as management expects to recuperate its value through the sale of the finished goods in which they will be incorporated when it will be sold above cost.

“*Commodities*” inventories for “*trading*” activities are measured at fair value less costs to sell and changes in fair value are recognized in income statement.

13. *Statement of cash flows*

In accordance with the presentation options allowed in IAS 7 *Statement of cash flows*, the Group uses the so-called “indirect method” to disclose its operating cash flows. Under this method, the statement of cash flows starts with “*Net income before tax*” for the year, as per the income statement; this figure is then adjusted for the effects of transactions of a non-cash nature, any deferrals or accruals of past or future operating cash receipts or payments, and items of income or expense associated with investing or financing cash flows.

14. *Cash and Cash equivalents*

Repsol classifies under "*Cash and cash equivalents*" liquid financial assets, deposits or liquid investments needed to meet payment obligations in the short term that can be converted into a known amount of cash within a period usually shorter than three months and that are subject to an insignificant risk of changes in value.

15. *Earnings per share*

Basic earnings per share are calculated by dividing the profit for the period attributable to equity holders of the parent by the weighted average number of ordinary shares outstanding during the period taking into account, where appropriate, any treasury shares held by the Group (see section 2.1 of this Note and Note 24).

16. *Treasury shares*

Treasury shares are measured at acquisition cost and are presented as a deduction from equity. Any related gains or losses are recognized directly in equity.

17. *Financial liabilities*

Unless they are part of a transaction qualifying for hedge accounting, non-derivative financial liabilities are initially recognized at fair value and are subsequently measured at amortized cost. Any difference between the financing proceeds received (net of transaction costs) and the repayment value is recognized in the consolidated income statement over the life of the debt instrument in question, using the effective interest rate method.

Bond and note issues that do not involve a contractual obligation to make payment in cash or other financial assets or an obligation to exchange financial assets or liabilities are recognized in equity under "*Other equity instruments*". Repsol issued a perpetual subordinated bond that satisfies this definition, and which has accordingly been recognized under *Other equity instruments* (see Note 13.3).

Trade payables and other payables are financial liabilities that do not bear explicit interest and are recognized at face value, when the effect of not discounting them is not material.

The Group derecognizes financial liabilities when the obligations are cancelled or expire.

18. *Provisions and contingent liabilities*

The Group distinguishes between:

- a) Provisions. These are present obligations, either legal or assumed by the Group, arising from past events, the settlement of which is probable to give rise to an outflow of resources the amount and timing of which are uncertain; and
- b) Contingent liabilities. These are possible obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more future events not wholly within the control of the Group, or present obligations arising from past events, the amount of which cannot be measured with sufficient reliability or whose cancellation is not likely to give rise to an outflow of resources embodying future economic benefits.

Contingent liabilities are not recognized as provisions in the consolidated financial statements. Notwithstanding the above, the existence of these liabilities is disclosed, depending on their materiality, to the extent the probability that settlement will give rise to an outflow of resources is not deemed remote (see Notes 20 and 29).

19. *Share purchase programs aimed at beneficiaries of the pluri-annual variable pay incentive plan and share acquisition plans*

Repsol has in place share purchase programs aimed at beneficiaries of pluri-annual variable pay incentive plan and and share acquisition plans (see detailed disclosures in Note 28).

The estimated cost of the shares to be delivered under those plans is recognized under the captions “*Personnel expenses*” and “*Other reserves*” to the extent that the plan beneficiaries’ rights to receive the shares vest.

20. *Defined contribution pension plans*

Repsol has recognized defined contribution pension plans for certain employee groups (see Note 28). The annual cost of these plans is recognized under “*Personnel expenses*” in the consolidated income statement.

21. *Grants*

a) Grants related to assets

These are grants related to non-current assets and are measured at either: (i) the amount granted or face value; or (ii) the fair value of the assets received, if they have been transferred for no consideration. They are classified on the liability side of the balance sheet as deferred income when it is certain that they will be received.

These grants are recognized in profit or loss income statement on straight line basis over the useful life of the assets they are financing. The consolidated financial statements present the assets and the grants received separately.

b) Grants related to income

These are grants not related to non-current assets that become receivable by the entity and are recognized as income for the period in which they become receivable.

This heading also includes as deferred income the amounts associated with carbon emission allowances received free of charge (section 7c).

22. *Leases*

Determination of whether an arrangement is, or contains, a lease is based on the substance of the arrangement and requires, at inception date, the evaluation of whether the fulfillment of the arrangement is dependent on the use of a specific asset or assets or the arrangement conveys a right to use the asset.

The agreements classified as leases for accounting purposes include the following categories:

a) Finance leases

Leases are classified as finance leases whenever the lessor transfers substantially all the risks and rewards of ownership to the lessee. The ownership of the asset may or may not be transferred to leaseholder at the end of the lease term.

Leased assets are presented in the consolidated balance sheet according to the nature of the leased asset, and, simultaneously, recognize a financial liability within “*Other non-current liabilities*” of the balance sheet for the same amount. These assets are depreciated according to criteria applied to the items of property, plant and equipment that are owned or are depreciated over the lease term, whichever is lower, provided there is

no reasonable certainty that the lessee shall be granted the ownership at the end of the lease term.

The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability. The resulting finance expense is charged to the heading "*Financial result*" in the consolidated income statement.

b) Operating leases

Leases in which the ownership of the leased asset and substantially all the risks and rewards incidental to ownership of the leased assets remain with the lessor are classified as operating leases.

Lease costs are recognized under "*Other operating expense*" in the consolidated income statement as incurred.

When the Group acts as lessor, the resulting income is recognized under "*Other operating income*" in the consolidated income statement, as accrued.

23. *Income tax*

Repsol recognizes in the income statement for the year the accrued tax on the companies' income, which is calculated taking into account the differences between the timing of recognition for accounting purposes and tax purposes of the transactions and other events in the current year recognized in the financial statements, giving rise to temporary differences and, therefore, to the recognition of certain deferred tax assets and liabilities in the balance sheet. These amounts are recognized by applying to the temporary differences the tax rate that is expected to apply in the period when the asset is realized or the liability is settled, and are stated at their net value at the relevant company or taxpayer unit.

Deferred tax liabilities are recognized for all taxable temporary differences, unless the temporary difference arises from the initial recognition of goodwill for which amortization is not deductible for tax purposes or unless the exception to the deferred tax liabilities is applicable in cases of taxable temporary differences related to investments in subsidiaries, branches and associates.

For their part, deferred tax assets recognized for temporary differences and other deferred tax assets (tax losses and tax deductions carry forwards) are recognized when it is considered probable that the consolidated companies will have sufficient taxable profits in the future against which the deferred tax asset can be utilized.

The accrued income tax expense includes both the deferred income tax expense and the current income tax expense, which is taken to be the amount payable (or refundable) in relation to the taxable net income for the year (see Note 20).

"*Income tax*" in the accompanying consolidated income statement includes both the accrued income tax expense and the net provisions recognized in the year for income tax contingencies, insofar as latter relate to income tax.

Current and deferred taxes are recognized outside profit or loss account if they are related to items that are under "*Other comprehensive income*". Those related to items recognized directly in other captions of "*Equity*" are recognized within the equity heading in which the impact of the transaction was recognized.

24. *Revenues and expenses recognition*

Revenues are measured at fair value of the consideration received or receivable and represent the amounts receivable for the goods and services provided in the normal course of business, net of discounts and any amounts received on account of third parties, such as the valued added tax.

In sales in which the Group acts as an agent, the Group does not recognize all the income and expenses associated with the transaction, recognizing as revenue only the margin received or pending to receive.

In order to minimize transport costs and optimize the Group's logistics chain, the Group arranges swaps of oil products of similar nature with other companies in a number of geographical locations. These transactions are not recognized in the income statement as separate purchases and sales being recognized for the net amount.

Sales of goods are recognized when substantially all the risks and rewards have been transferred. Revenue associated with the rendering of services is also recognized by reference to the stage of completion of the transaction at the balance sheet date, provided the outcome of the transaction can be estimated reliably. Interest income is accrued on a time proportion basis, by reference to the principal outstanding and the effective interest rate applicable. Dividend income from investments is recognized when the shareholders' rights to receive payment have been established.

An expense is recognized when there is a decrease of economic benefits associated to a reduction of an asset, or an increase in a liability, which can be measured reliably.

As a result of the legislation on oil and gas retailing in force in the countries in which the Group operates, Repsol reflects as both revenue and expenses the excise and analogous duties levied specifically on consumption related to the production and/or sale of oil and gas products.

Work relating to water management, atmospheric protection, waste management, remediation of soil and subsoil water and the development of environmental management systems are considered as environmental expenses and are recognized for accounting purposes in accordance with the criteria indicated above.

25. *Financial Instruments-derivatives*

The Group arranges derivatives to hedge its exposure to financial and commercial risks due to interest rate and exchange rate fluctuations and to changes in the prices of certain commodities. All financial derivative instruments are initially recognized at fair value at the contract date and are subsequently measured at fair value.

The derivatives are recognized as an asset when their fair value is positive and as a liability when it is negative. The differences in fair value are recognized in the income statement, except for specific hedge accounting treatment, where applicable.

Long-term oil and gas sale and purchase firm commitments are analyzed with the aim to determine whether they correspond to the supply or marketing needs of the normal business activities of the Group or whether, on the contrary, these should be considered as a derivative instrument and be recognized in accordance with the criteria set forth in IAS 39 *Financial Instruments - Recognition and Measurement*.

The fair value valuation methods and inputs used are detailed in Note 10 "*Financial assets*" and Note 15 "*Financial liabilities*".

The valuation and recognition of derivative financial instruments in keeping with specific hedge accounting criteria are as follows:

a) Fair value hedges

These are hedges of the exposure to changes in the fair value of an asset or a liability recognized for accounting purposes, an unrecognized firm commitment or an identified portion of the aforementioned asset, liability or firm commitment that can be attributed to a particular risk and could affect the profit or loss for the period.

The changes in the fair value of hedging derivatives and the changes in the fair value of the hedged items attributable to the hedged risk, are recognized in the income statement.

b) Cash flow hedges

These are hedges of the exposure to changes in cash flows that: (i) are attributed to a particular risk associated with a recognized asset or liability, a highly probable forecasted transaction or a firm commitment, if the risk hedged is foreign currency related; and (ii) could affect profit or loss for the period.

The portion of the changes in the fair value of the hedging instruments that is determined to be an effective hedge is recognized in equity under "*Hedging transactions*" and the ineffective portion of the gain or loss on the hedging instrument (corresponding to the excess, in absolute terms, between the cumulative change in the fair value of the hedging instrument with respect to the change in the fair value of the hedged item) is recognized in profit or loss. The gains or losses accumulated in equity are transferred to profit or loss in the periods in which the hedged items affect profit or loss or, when the transaction hedge results in the recognition of a non-financial asset or liability, are included in the cost of the related asset or liability.

c) Investments hedges

These are hedges of the exposure to foreign exchange rate changes in relation to investments in the net assets of foreign operations.

Hedges of net investments in a foreign operation are accounted for in a similar way to cash flow hedges, although the exchange rate differences resulting from these transactions are recognized in "*Translation differences*" within equity in the accompanying consolidated balance sheet.

The cumulative amount of the translation differences are reclassified to the income statement, when the foreign operation subject to the hedge is sold or disposed of in any other way.

26. *New standards issued for mandatory application in future years*

A) The standards and amendments to standards that have been issued by the IASB and endorsed by the European Union and which will be mandatory in future reporting periods are listed below:

Mandatory application in 2018:

- IFRS 9 *Financial instruments*.
- IFRS 15 *Revenue from contracts with customers* ⁽¹⁾.

The identified accounting effects of first application of IFRS 9 *Financial instruments* will be recognized in reserves. They will chiefly consist of the effects of application of the new scheme of impairment of financial assets based on "expected loss". i.) Application of the expected loss model under IFRS 9 *Financial instruments*, to the extent that this model, in contrast to that prescribed by the current IAS 39, would entail the early recognition of expected credit losses from as soon as a financial instrument is recognized for the first time even in the absence of any indication of impairment. As to subsequent application, depending on the transactions concluded in future, the main effects that might arise from application of IFRS 9 would be: i) the recognition of a provision for credit risk based on the "expected loss" model upon recognition on the balance sheet of a financial asset or creation of a financial guarantee; ii) wider flexibility in the accounting treatment of hedges; and iii) the option to measure at fair value through profit or loss those commodity purchase and sale commitments within the Group's normal course of business which would otherwise create an accounting asymmetry with the related derivative financial

¹ Includes the Amendment to IFRS 15 issued by the IASB on September 11, 2015, deferring by one year the first application of the Standard to January 1, 2018.

instruments. In addition, the Standard includes new criteria for classification and measurement of financial assets based on the contractual characteristics of the instruments and on the entity's management model. The Group continues to evaluate these impacts and when they were first applied.

As to IFRS 15 *Revenue from Contracts with Customers*, as of the reporting date the Group has not identified any potential material impact on its financial statements regarding: (i) changes in transactions within the scope of the new Standard with respect to the current Standard; (ii) the identification of "performance obligations" (obligations to transfer goods or services in contracts with customers) other than those already identified that might lead to their separation for the purposes of income recognition and measurement; (iii) accrual for accounting purposes or temporary attribution of income, other than the new disclosure requirements introduced by the Standard.

- B) At the date of issuance of these consolidated financial statements, the standards and amendments that have been issued by the IASB but not yet endorsed by the European Union are the following:

Mandatory application in 2017:

- Amendments to IAS 12 *Recognition of deferred tax assets for unrealized losses*.
- Amendments to IAS 7 – *Disclosure initiative*.
- Annual Improvements to IFRSs, 2014-2016 Cycle⁽¹⁾.

Mandatory application in 2018:

- Clarifications to IFRS 15 *Revenue from contracts with customers*.
- Amendments to IFRS 2 *Share-based payment*.
- Amendments to IFRS 4 *Application of IFRS 9 Financial Instruments in conjunction with IFRS 4 Insurance contracts*.
- Annual Improvements to IFRSs, 2014-2016 Cycle.²
- Amendments to IAS 40 *Investment Property*
- Interpretation IFRIC 22 *Foreign currency transactions and advance consideration*.

Mandatory application in 2019:

- IFRS 16 *Leases*.

Mandatory application has been deferred indefinitely:

- Amendments to IFRS 10 and IAS 28 *Sale or Contribution of Assets between an Investor and its Associate or Joint Venture*³.

With regard to the other standards, interpretations and amendments outlined in the current section B), the Group is currently assessing the impact their application may have on the consolidated financial statements. The changes to the standards which the Group believes might have material effects include the application of IFRS 16 *Leases*, because the leases under which the Group is a lessee and which in accordance with IAS 17 *Leases*, now in effect, are classified as operating leases (see Note 21.6 "*Other operating expenses*") would be recognized on the balance sheet on a basis resembling the one now applicable to finance leases. As a result, all leases would increase the Group's recognized assets and

¹Amendments to IFRS 12 *Disclosure of interests in other entities*.

² Includes Amendments to IFRS 1 *First-time adoption of IFRS*, and Amendments to IAS 28 *Investments in associates and joint ventures*.

³ The application of these amendments to IFRS 10 and IAS 28, which were originally issued in September 2014, was deferred indefinitely in December 2015, until such time as the IASB completes the project relating to the equity method, which, in turn, has been delayed until the post-implementation phase of IFRS 10, IFRS 11 and IFRS 12.

liabilities. Additionally, it would change the basis of recognition of lease expenses, to the extent that it would be recorded as an expense for amortization of the leased asset and as an interest expense by discounting the lease liability to present value.

2.3) Segment reporting

1. *Definition of segments*

The segment reporting disclosed by the Group in this section is presented in accordance with the disclosure requirements of IFRS 8 *Operating segments*.

The definition of the Repsol Group's business segments is based on the delimitation of the different activities performed and from which the Group earns revenue or incurs expenses, as well as on the organizational structure approved by the Board of Directors for business management. Using these segments as a reference point, Repsol's management team (the Corporate Executive, E&P and Downstream Committees) analyzes the main operating and financial indicators in order to make decisions about segment resource allocation and to assess how the Company is performing. In 2016, following the sale of 10% of Gas Natural SDG, S.A and termination of the shareholder agreement with La Caixa on September 21, 2016 (see Note 8), Gas Natural Fenosa no longer qualifies as an operating segment. From that date on, the remaining interest in Gas Natural SDG, S.A. is included under "*Corporation and Others*".

At December 31, 2016, the operating segments of the Group are:

- *Upstream*, corresponding to exploration and development of crude oil and natural gas reserves and;
- *Downstream*, corresponding, mainly, to the following activities: (i) refining and petrochemistry, (ii) trading and transportation of crude oil and oil products, (iii) commercialization of oil products, petrochemical and LPG, (iv) the commercialization, transport and regasification of natural gas and liquefied natural gas (LNG).

Finally, *Corporation and others* includes activities not attributable to the aforementioned businesses, and specifically, corporate expenses, net finance costs, the earnings and other metrics related to the remaining interest in Gas Natural SDG¹ and inter-segment consolidation adjustments.

The Group has not aggregated any operating segments for presentation purposes.

2. *Presentation of segment results*

In presenting the results of its operating segments Repsol includes the results of its joint ventures² and other companies managed as such³ in accordance with the Group's ownership interest, considering its operational and economic metrics in the same manner and with the same detail as for fully consolidated companies. Thus, the Group considers that the nature of its businesses and the way in which results are analyzed for decision-making purposes is adequately reflected.

In addition, the Group, considering its business reality and in order to make its disclosures more comparable with those in the sector, utilizes as a measure of segment profit the so-called Adjusted Net Income, which corresponds to net income from continuing operations at "*Current cost of supply*" or CCS after taxes and minority interests and not including certain items of income and expense ("*Special Items*"). Net finance cost

¹ Includes net income of the company according to the equity method. The other measures (EBITDA, free cash flow, etc.) only reflect the cash flows affecting the Group in its capacity as shareholder in Gas Natural SDG, S.A. (dividends, etc).

² In the segment reporting model, joint ventures are consolidated proportionally in accordance with the Group's percent holding. See Note 8 "*Investments accounted for using the equity method*" and Appendix I "*Main companies comprising the Repsol Group at December 31, 2016*", where the Group's main joint ventures are identified.

³ It corresponds to Petrocarabobo, S.A., (Venezuela), an associated entity of the Group.

is allocated to the *Corporation and others* segment's Adjusted Net Income.

The Current Cost of Supply (CCS) is commonly used in this industry to present the results of Downstream businesses which must work with huge inventories subject to continual price fluctuations is not an accepted European accounting regulation, yet does enable the comparability with other sector companies as well as monitoring businesses independently of the impact of price variations on their inventories. Using the CCS method, the cost of volumes sold during the reporting period is calculated using the costs of procurement and production incurred during that same period. Due to the above, the Adjusted Net Income does not include the "Inventory Effect". This Inventory Effect is presented separately, net of tax and minority interests, and corresponds to the difference between Income at CCS and that arrived at using the Weighted Average Cost approach, which is the method used by the Company to determine its earnings in accordance with European accounting regulations.

Furthermore, Adjusted Net Income does not include the so-called Special Items, i.e., certain material items whose separate presentation is considered appropriate in order to facilitate analysis of the ordinary business performance. It includes gains/losses on disposals, personnel restructuring charges, asset impairment gains / losses and provisions for contingencies and other significant charges. Special Items are presented separately, net of the tax effect and minority interests.

(3) ACCOUNTING ESTIMATES AND JUDGMENTS

The preparation of financial statements in accordance with generally accepted accounting principles makes it necessary to make assumptions and estimates that affect the valuation of the amounts of the assets and liabilities recognized, the presentation of contingent assets and liabilities at year end and the income and expenses recognized during the year. The actual results could differ depending on the estimates made.

The accounting policies and areas which require the highest degree of judgment and estimates in the preparation of the consolidated financial statements are: (i) crude oil and natural gas reserves; (ii) impairment testing and the calculation of the recoverable value of the Group's assets (see Notes 6, 7 and 22); (iii) business combinations (see Note 4); (iv) provisions for litigation, dismantling and other contingencies (see Note 14); (v) the calculation of income tax, tax credits and deferred tax assets (see Note 20); and (vi) the value of derivative financial instruments (see section 25 in Note 2 and Note 17).

Crude oil and gas reserves

The process of estimating oil and gas reserves is a key component of the Company's decision-making process. Oil and gas reserve estimates are used to calculate depreciation and amortization charges applying the unit-of-production ratio method and to test these *Upstream* assets for impairment (see "*Testing assets for impairment and calculating their recoverable amounts*" further on in this Note). Any change in reserve volumes could have a significant impact on the Group's results.

Until 2014, Repsol had been voluntarily applying the oil and gas reserves reporting and disclosure guidance and framework established by the Securities Exchange Commission (SEC) to estimate its proved reserves and the criteria established by the Society of Petroleum Engineers' SPE/WPC/AAPG/SPEE Petroleum Resource Management System (SPE-PRMS) to estimate its probable and possible reserves. As of December 31, 2015, in order to facilitate the integration of the Talisman group (which estimates its reserves using the Canadian Administrator's National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities, which in turn relies on the conceptual framework of the Canadian Oil and Gas Evaluation Handbook ("COGE Handbook") and enable consistent reserve and resource management, the Repsol Group has decided to use the SPE-PRMS criteria for proved reserve reporting purposes. The SPE-PRMS is one of the systems accepted by the International Accounting Standards Board (IASB) and the European Securities and Markets Authority (ESMA). Changing the system led to no major differences in how reserves are estimated.

Testing assets for impairment and calculating their recoverable amounts

In order to ascertain whether its assets have become impaired, the Group compares their carrying amount with their recoverable amount at least annually and whenever there are indications that an asset might have become impaired.

For that purpose, assets are grouped into cash-generating units (CGUs), to the extent that such assets, when individually considered, do not generate cash inflows that are independent of the cash inflows from other assets or CGUs. The grouping of assets into the various CGUs implies the use of professional judgments and the determination, among other criteria, of the business segments and geographic areas in which the Group operates. Against this backdrop, in the *Upstream* segment, each CGU corresponds to one of the various contractual exploration areas widely known as 'blocks'; exceptionally, if the cash flows generated by more than one block are mutually interdependent, these blocks will be grouped into a single CGU. In the *Downstream* segment, the CGUs are defined as a function of business activities (mainly Refining, Chemicals, Commercial Businesses and LPG) and geographic areas. With respect to the LNG business, the Group includes a single CGU that essentially encompasses the North American assets.

Goodwill acquired on a business combination is allocated among the CGUs or groups of cash-generating units (CGUs) that benefit from the synergies of the business combination and the recoverable amount, thereof is estimated, generally, by discounting the estimated future cash flows of each unit.

The recoverable amount is the higher of fair value less costs of sale and value in use. If the recoverable amount of an asset (or a CGU) is estimated to be less than its net book value, the carrying amount of the asset (or the CGU) is reduced to its recoverable amount, and an impairment loss is recognized in the consolidated income statement.

After an impairment loss has been recognized, amortization charges are calculated prospectively on the basis of the reduced carrying amount of the impaired asset.

On the occurrence of new events, or changes in existing circumstances, which prove that an impairment loss recognized on a prior date could have disappeared or decreased, a new estimate of the recoverable value of the corresponding asset is developed, to determine whether it is applicable to reverse the impairment losses recognized in previous periods. An impairment loss of goodwill cannot be reversed in the following years.

In the event of a reversal of an impairment previously recorded, the carrying amount of the asset (or the CGU) is increased to the revised estimate of its recoverable value, so that the increased carrying amount does not exceed the carrying amount that would have been determined in case no impairment loss had been recognized for the asset (or the CGU) in prior years.

The methodology used by the Group to estimate the recoverable amount of assets is, in general, the value in use calculated by discounting to present value the future cash flows expected to derive from the operation of these assets.

The cash flow projections are based on the best available estimates of the CGUs' income and expenses using sector forecasts, prior results and the outlook for the business's performance and market's development:

- The Group's annual budget and the business plan set macroeconomic forecasts for each of the countries where it has business operations, which include variables such as inflation, GDP growth, exchange rates, etc. that are used to quantify the abovementioned income and expense estimates. The aforementioned macroeconomic forecasts are prepared on the basis of the content of internal reports that use in-house estimates, based on updated external information of relevance (forecasts prepared by consultants and specialized entities).
- The oil and natural gas price trend estimates used by the Group are based on analysis of available market information, internal reports on the global energy landscape, including our own forecasts of the

balance of supply and demand, and consideration of other factors (macroeconomic, financial, etc) and opinions expressed by outside sources:

- To estimate near-term (2-3 year) price trends we use reports produced by a selection of analysts, investment banks and benchmark agencies¹.
- For long-term estimates, the only sources that produce sufficiently detailed analysis and forecasts are the benchmark agencies (IEA and EIA), so only these views are considered. These agencies engage in detailed research on supply, demand and prices under various scenarios. From 2021 onward, prices are set to climb at a rate of 2% annually.

The resulting prices are consistent with the annual budget and the updated strategic plan.

Valuations of Exploration & Production assets (*Upstream*) use cash flow projections for a period that covers the economically productive useful lives of the oil and gas fields, limited by the contractual expiration of the operating permits, agreements or contracts. The key valuation assumptions used to determine the variables that most affect this business' cash flows are summarized below:

- a) Oil and gas sales prices. The international benchmark prices used by the Group are: Brent, WTI (West Texas Intermediate) and HH (Henry Hub). In countries where international list prices do not reflect local market circumstances, the prices modeled factor in local market prices.
- b) Reserves and production profiles. Production profiles are estimated on the basis of output levels at existing wells and the development plans in place for each productive field. As a consequence, these profiles are then used to estimate proven and unproven reserves and resources. To estimate proven and unproven reserves and oil and gas resources, Repsol uses the criteria established by the SPE-PRMS (Society of Petroleum Engineers - Petroleum Resources Management System).
- c) Operating expenses and capital expenditure. These are calculated in year one on the basis of the Group's annual budget and thereafter in keeping with the asset development programs until 2020. These costs were extrapolated at a growth rate of 2% for impairment testing purposes in 2021 and subsequent years.

In the *Downstream* segment, the various businesses' cash flows are estimated on the basis of the outlook for its key variables (unit contribution margins, fixed costs and required maintenance capital expenditure), in keeping with the expectations reflected in the annual budget and the individual business-specific strategic plans. Cash inflows and outflows corresponding to future restructuring exercises or initiatives to enhance the assets' performance are not considered. The cash flow projection period considered to this end is generally five years; cash flows after year five are extrapolated without factoring in any further growth. Specifically:

- a) In the Refining business, long-term projections span a period of more than 20 years because of the impact of the refinery expansion work and upgrades.² For the purpose of calculating residual values, the only investment considered is maintenance capital expenditure and any investment needed for renovation purposes in order to maintain the CGU's productive capacity.
- b) The key assumptions the for the Gas&Power cash flow estimates businesses are as follows:
 - i. LNG and gas prices. The international benchmark prices used by the Group are: Brent, HH,

¹ The analysts engaging in macroeconomic and energy analysis are PIRA, IHS and Wood Mackenzie. The benchmark agencies are the International Energy Agency (IEA) and the US Energy Information Administration (EIA).

² The use of the period of more than 5 years began in 2011 after the coming into operation of the refinery expansion and improvement projects. To keep the amortization rate in step with the pace of investment, we extended the timeline of cash flow projection, so that, from the fifth year onwards, EBITDA is projected, continuing at a similar level of activity and in a similar business environment.

Algonquin and NBP (National Balancing Point), adjusted as required for local market considerations in the event that these international benchmarks do not fully reflect local market circumstances. The price trend used is consistent with the one used for the annual budget and the updated strategic plan (see Note 22.1).

- ii. Gas and LNG marketing volumes and margins. The volumes used for cash flow forecasting purposes are estimated on the basis of the contracts in force at year-end and activity estimates, all of which in keeping with the annual business budget and strategic plan. Margins factor in historical data, the price forecasts detailed in i. above and the outlook for margins going forward.

These estimated after-tax cash flows are discounted to present value using CGU-specific discount rates determined as a function of the currency in which their respective cash flows are denominated and the risks associated with these cash flows, including country risk. Repsol discounts projected cash flows using post-tax weighted average costs of capital for each country and business. These rates are reviewed at least once a year. The discount rates are intended to reflect current market assessments of the time value of money and the risks specific to the asset. Accordingly, the various discount rates¹ used factor in the risk-free rate, country risk, the currency in which the cash flows are generated and business and market and credit risk factors. To ensure that the calculations are consistent, the cash flow projections do not factor in risks that have already been built into the discount rates used, and vice versa. The discount rates used factor in average sector leverage as a reasonable proxy for the optimal capital structure, to which end management monitors leverage rates at comparable oil and gas companies during the last 5 years.

Business combinations

The Group's business combinations are accounted for using the acquisition method (see section 2.2.5 of Note 2) and require judgments and estimates when assigning their values to the assets acquired and liabilities assumed in the transaction and assigning the purchase price to those fair values. The process of valuing ROGCI's assets and liabilities was completed in 2016, and has required the use of significant judgments and estimates by the Group's management team (see Note 4.2).

Provisions for litigation, dismantling and other contingencies

The final cost of settling claims, grievances and lawsuits could vary due to estimates based on differing interpretations of the technical rules, opinions and final assessments of the amount of the damages.

Repsol uses judgments and estimates to recognize provisions for the cost of dismantling its oil and gas production operations. These calculations are complex on account of the need to recognize the present value of the estimated future costs and to adjust this figure in subsequent years in order to reflect the passage of time and changes in the estimates due to changes in the underlying assumptions on account of technological advances and regulatory, economic, political and environmental developments, as well as changes in the initially-established schedules or other terms. The dismantling provisions are updated regularly to reflect trends in estimated costs and the discount rates. These discount rates take into account the risk-free rate, by term and currency, country risk and a spread according to debt structure and the cash flow projection period. Specifically, the weighted average rate used by the Group was 4.03%.

¹ The main components of the discount rate are as follows:

- The risk-free interest rate for dollar flows matches that for 10-year U.S. Treasuries; for euro flows, the risk-free interest rate matches the 10-year German sovereign bond;
- The country risk uses the spread between the sovereign bonds in euros or U.S. dollars and the debt issued by Germany (euros) and the USA (U.S. dollars), respectively, as well as the EMBI (*Emerging Markets Bond Index*) published by JP Morgan and the country risk information published by three external providers (Country Risk Rating (IHS Global Insight), International Country Risk Guide (PRS Group) and Business Monitor (Fitch Group), all adjusted by specific business risks;
- We use a single market risk premium for all countries. betas are calculated specifically for each business – Upstream, Refining, Marketing, Chemicals, Gas & Power and LPG – based on five-year historic series for comparable companies obtained from Bloomberg.

Additionally, Repsol makes judgments and estimates in recording costs and establishing provisions for environmental clean-up and remediation costs which are based on current information regarding costs and expected plans for remediation. For environmental provisions, costs can differ from estimates because of changes in laws and regulations, discovery and analysis of site conditions and changes in clean-up technology.

Therefore, any change in the factors or circumstances related to provisions of this nature, as well as changes in laws and regulations could, as a consequence, have a significant effect on the provisions recognized for these costs (see Notes 14, 20, and 29).

Calculation of income tax, tax credits and deferred tax assets

The appropriate assessment of the income tax expense is dependent on several factors, including estimates of the timing and realization of deferred tax assets and the timing of income tax payments. Actual collections and payments may differ materially from these estimates as a result of changes in tax laws as well as unanticipated future transactions impacting the Company's tax balances (see Note 20).

(4) CHANGES IN GROUP COMPOSITION ¹

4.1) Main disposals

2016:

Sale of 10% in Gas Natural SDG

On September 12, 2016, Repsol, S.A. and Criteria Caixa, S.A.U. entered into an agreement with GIP III Canary 1 S.À R.L, an entity controlled by Global Infrastructure Management LLC, for the sale of 20% of the share capital of Gas Natural SDG, S.A. for a total sum of €3,803 million. Under it, each of Repsol and Criteria sold to GIP 100,068,934 shares, representing individual 10% interests in the share capital of Gas Natural, SDG, S.A., for €1,901 million, which is equivalent to €19 per share. The agreement and sale were completed on September 21, 2016. The gain finally realized for the Repsol Group came to €233 million before tax.

As a result of this sale and on the same date, Repsol and Criteria terminated their shareholder agreement to jointly control Gas Natural Fenosa.

Piped-gas business in Spain

Under the agreements reached in 2015 for the sale of the Group's piped gas business in Spain², in 2016, Repsol Butano, S.A. sold LPG facilities to Gas Natural Fenosa group companies, Redexis Gas, S.A., Naturgas Energía y Distribución, S.A.U. and Distribución y Comercialización de Gas de Extremadura, S.A. for €737 million, generating a pre-tax gain of €464 million.

LPG businesses in Peru and Ecuador

In April 2016, Repsol agreed the sale of its LPG businesses in Peru and Ecuador to the South American multinational, Abastible. The sale of the business in Peru³ closed on June 1, 2016 for €236 million and pre-

¹ For further information on changes in the Group's composition, see Appendix Ib "Main changes in the consolidation scope".

² The carrying amount of derecognized assets came to a total of €195 million.

³ The Group has derecognized €87 million of assets and €70 million of liabilities (€176 million of non-current assets, €1 million of current liabilities and €1 million of cash and cash equivalents) as a result of this transaction.

tax gain of €129 million. The sale to Abastible of the LPG business in Ecuador, which included Repsol's interests in Duragas, S.A. and Servicios de Mantenimiento y Personal, S.A., closed on October 1, 2016 at a price of €33 million, which is equivalent to its carrying amount.¹

UK wind power business

In May 2016, Repsol closed the sale of its UK wind power business to the Chinese group SDIC Power for €65 million. The transaction included Repsol's interests in Wind Farm Energy UK Limited (100%) and in the Inch Cape Offshore Limited (100%), Beatrice Wind Limited (100%) and Beatrice Offshore Windfarm Limited (25%) developments off the coast of eastern Scotland.² The sale generated a pre-tax gain of €101 million in the second quarter of 2016.

Repsol E&P T&T Limited

In October 2016, Repsol Exploración S.A. and Perenco Trinidad & Tobago (Holdings) ETVE SLU have agreed the sale of Repsol E&P T&T Limited.³ On December 9, 2016, the sale was completed at a price of €122 million. The transaction generated a pre-tax gain of €17 million.

Tangguh LNG Project

In December 2016, the Group sold its 3.06% interest in the LNG integrated project in West Papua, Indonesia (Tangguh LNG)⁴ for €286 million. The transaction generated a pre-tax gain of €21 million.

2015:

On September 24, 2015, Repsol reached an agreement with investment group Ardian encompassing the sale of its 10% equity interest in Compañía Logística de Hidrocarburos, S.A. ("CLH") for €325 million. This sale generated a gain of €293 million.

4.2) Main acquisitions

In 2016, Repsol acquired no major assets or businesses.

On May 8, 2015, Repsol, through its Canadian subsidiary Repsol Energy Resources Canada Inc., acquired 100% of shares in Talisman Energy Inc. (hereinafter "ROGCI")⁵.

After the closing of the transaction, ROGCI's ordinary shares were delisted from the Toronto and New York Stock Exchanges. ROGCI is incorporated under the Canada Business Corporations Act.

The total amount paid out for the acquisition was €8,005⁶ million.

To integrate ROGCI on the Group's financial statements as provided under accounting standards (see Note 2 "*Basis of presentation*"), the purchase price has been allocated to the assets acquired and the liabilities assumed based on their estimated fair values as of the acquisition date.

¹ The Group has derecognized €44 million of assets and €10 million of liabilities (€25 million of non-current assets, €7 million of current liabilities and €6 million of cash and cash equivalents) as a result of this transaction.

² The Group has derecognized €176 million of assets and €21 million of liabilities (€174 million of non-current assets, €18 million of non-current liabilities, €1 million trade and other receivables and €1 million cash and cash equivalents) as a result of this transaction.

³ The Group has derecognized €284 million of assets and €164 million of liabilities (€244 million of non-current assets, €25 million of current liabilities and €9 million of cash and cash equivalents) as a result of this transaction.

⁴ The Group has derecognized €170 million of assets and €202 million of liabilities (€21 million of non-current assets, €4 million of current liabilities and €19 million of cash and cash equivalents, €185 million of non-current liabilities and €17 million of current liabilities) as a result of this transaction.

⁵ The registered name was changed to Repsol Oil & Gas Canada Inc. on January 1, 2016.

⁶ Includes the effect of exchange rate hedging transactions on the acquisition price (see Note 17).

The amounts recognized as of December 31, 2016 in respect of this business combination are definitive, once the 12-month period following the acquisition date provided for in IFRS 3 “*Business Combinations*” has elapsed. There have been no material changes with respect to the amounts recognized at December 31, 2015. The breakdown of the carrying amount of the net assets acquired and the resulting goodwill is as follows:

€Million	Fair value	Carrying amount at the acquired company
Intangible assets	493	501
Property, plant and equipment	13,459	9,840
Investments accounted for using the equity method	452	505
Deferred tax assets	2,344	2,022
Other non-current assets	106	106
Other current assets	746	767
Cash and cash equivalents	491	458
Total assets	18,091	14,199
Non-current provisions	(4,700)	(1,816)
Non-current financial liabilities	(3,613)	(3,391)
Deferred tax liabilities ⁽¹⁾	(1,879)	(768)
Other non-current liabilities	(108)	(108)
Current provisions	(661)	(564)
Current financial liabilities	(985)	(985)
Other current liabilities	(693)	(693)
Total liabilities	(12,639)	(8,325)
NET ASSETS ACQUIRED	5,452	5,874
ACQUISITION COST	8,005	
GOODWILL (Note 6)	2,553	

⁽¹⁾ Mainly includes the tax effect of asset re-measurement (difference between the fair value of assets acquired and their value for tax purposes) having regard to each country's tax rate, in the amount of €1,399 million (€898 million at 40-48% in Indonesia; €196 million at 39% in Colombia; €91 million at 32-50% in Vietnam; €69 million at 38% in Algeria and €45 million euros in the rest).

(5) SEGMENT REPORTING ¹

5.1 Results for the period by segments

SEGMENT	€Million	
	12/31/2016	12/31/2015
Upstream	52	(925)
Downstream	1,883	2,150
Corporation and other	(13)	627
ADJUSTED NET INCOME	1,922	1,852
Inventory effect	133	(459)
Specific items	(319)	(2,791)
NET INCOME (EXPENSE)	1,736	(1,398)

Adjusted net income for 2016 amounted to €1,922 million, 4% higher than in 2015. Highlights include the better income in Upstream with a return to profit in spite of the challenging price environment (due to rising production, improved operational efficiency and reduced operating expenses), which are partially offset by the lower income in Downstream and in Corporation.

The Group's net income in 2016 totaled a profit of €1,736 million, compared to the €1,398 million recognized in 2015. This is chiefly explained by the positive Inventory Effect (€133 million) as a result of the increase in crude oil prices, and improved special items, mainly due to the gains obtained on non-strategic asset disposals and the lack in 2016 of such important impairment losses recognized in 2015, which were partially offset by the costs incurred in the workforce restructuring and by the devaluation expenses and provision charges in Venezuela.

For further information on Group performance, see section 4.1 of the Management Report for 2016 (<https://www.repsol.com>)

5.2 Disclosures by geography and segment

The breakdown by geography and segment of the year-end 2016 and 2015 metrics for which geographic segmentation is material is provided below:

	€Million							
	Operating revenue		Adjusted net income		Net operating expense ⁽¹⁾		Non-current assets ⁽²⁾	
	12/31/2016	12/31/2015	12/31/2016	12/31/2015	12/31/2016	12/31/2015	12/31/2016	12/31/2015
Upstream	4,963	4,781	52	(925)	1,889	11,370	29,186	28,323
Europe, Africa and Brazil	1,326	1,088	167	(124)	594	774	3,517	2,933
Latin America / Caribbean	1,626	1,912	234	(27)	578	1,139	6,498	6,333
North America	1,044	989	9	(124)	383	209	9,666	9,384
Asia and Russia	967	792	(4)	19	(117)	112	3,719	3,348
Exploration and other	-	-	(354)	(669)	451	9,136 ⁽³⁾	5,786	6,325
Downstream	32,244	37,763	1,883	2,150	(496)	493	10,444	10,720
Europe	30,079	34,979	1,895	2,046	(442)	272	9,012	9,085
Rest of the world	4,245	4,715	(12)	104	(54)	221	1,432	1,635
Adjustments	(2,080)	(1,931)	-	-	-	-	-	-
Corporation and others	(820)	(1,084)	(13)	627	(1,893)	97	4,042	5,526
TOTAL	36,387	41,460	1,922	1,852	(500)	11,960	43,672	44,569

⁽¹⁾ Includes investments accrued during the period net of divestments but does not include investments in "Other financial assets".

⁽²⁾ Does not include "Non-current financial investments", "Deferred tax assets" and "Other non-current assets".

⁽³⁾ It includes, primarily, the price paid to acquire Talisman, €8,005 million.

¹All of the information presented throughout this Note has been prepared using the Group's reporting model (see Note 2.3) and is reconciled with IFRS-EU financial statements in Appendix III. Some of these metrics are Alternative Performance Metrics (APMs) in accordance with ESMA guidelines (for further information, see Appendix I of the Consolidated Management Report 2016 at <https://www.repsol.com>).

Other relevant metrics attributable to each segment for the years ended December 31, 2016 and 2015:

	€Million							
	Upstream		Downstream		Corporation and others		Total	
	12/31/2016	12/31/2015	12/31/2016	12/31/2015	12/31/2016	12/31/2015	12/31/2015	12/31/2015
Equity-accounted investees	364	300	214	52	3,323	4,970	3,901	5,322
Share in results of equity-accounted investees	8	-	(18)	(3)	(361)	(466)	(371)	(469)
Depreciation and amortization ⁽¹⁾	(2,393)	(2,995)	(716)	(735)	(64)	(64)	(3,173)	(3,794)
Gain / (loss) on asset impairments ⁽²⁾	(352)	(3,570)	(233)	(605)	-	-	(585)	(4,175)
Income tax	12	1,515	(545)	(482)	(5)	(124)	(538)	909
Capital employed ⁽³⁾	23,853	23,275	9,469	9,758	5,933	7,664	39,255	40,697

⁽¹⁾ Including depreciation of failed dry wells.

⁽²⁾ See Note 22.

⁽³⁾ Includes capital employed (see Note 16.2) corresponding to joint ventures, non-current non-financial assets, operating working capital and other non-financial liability headings.

(6) INTANGIBLE ASSETS

The breakdown of the intangible assets and of the related accumulated depreciation and impairment losses at December 31, 2016 and 2015 is as follows:

€Million	Intangible assets								Total
	Goodwill	Upstream			Downstream and Corporation				
		Exploration licenses	Software	Other	Service station exclusive dealing rights, et al. ⁽³⁾	Software	Emission allowances ⁽²⁾	Concessions and others ⁽⁴⁾	
GROSS COST									
Balance at January 1, 2015	509	1,340	57	68	771	446	57	210	3,458
Additions ⁽¹⁾	-	240	17	-	28	60	-	9	354
Retirements and disposals	(32)	(10)	-	-	(46)	-	-	(1)	(89)
Translation differences	114	125	7	-	11	3	-	(1)	259
Changes in the scope of consolidation	2,668	-	-	-	-	-	-	89	2,757
Reclassifications and other changes	9	45	88	9	19	2	27	(19)	180
Balance at December 31, 2015	3,268	1,740	169	77	783	511	84	287	6,919
Balance at January 1, 2016	3,268	1,740	169	77	783	511	84	287	6,919
Additions ⁽¹⁾	(1)	176	12	-	10	47	-	3	247
Retirements and disposals	-	(42)	(4)	1	(33)	-	-	(2)	(80)
Translation differences	87	94	5	2	4	1	-	(4)	189
Changes in the scope of consolidation	(67)	1	(4)	-	(1)	(3)	-	(98)	(172)
Reclassifications and other changes	8	360	8	30	5	2	2	9	424
Balance at December 31, 2016	3,295	2,329	186	110	768	558	86	195	7,527
ACCUMULATED AMORTIZATION AND IMPAIRMENT LOSSES									
Balance at January 1, 2015	(11)	(203)	(35)	-	(477)	(302)	-	(148)	(1,176)
Amortization charges	-	(194)	(22)	(3)	(44)	(32)	-	(1)	(296)
Retirements or derecognition	-	12	-	-	44	-	-	-	56
Impairment losses (recognized)/reversed ⁽⁵⁾	(158)	(454)	-	(66)	(1)	-	-	(11)	(690)
Translation differences	-	(20)	(2)	-	(6)	(2)	-	(2)	(32)
Changes in the scope of consolidation	-	-	-	-	-	-	-	-	-
Reclassifications and other changes	-	-	-	-	-	(2)	-	3	1
Balance at December 31, 2015	(169)	(859)	(59)	(69)	(484)	(338)	-	(159)	(2,137)
Balance at January 1, 2016	(169)	(859)	(59)	(69)	(484)	(338)	-	(159)	(2,137)
Amortization charges	-	(139)	(34)	(1)	(41)	(40)	-	-	(255)
Retirements and disposals	-	35	2	-	32	-	-	2	71
Impairment losses (recognized)/reversed ⁽⁵⁾	(20)	(67)	-	66	-	-	(12)	(2)	(35)
Translation differences	-	(37)	(3)	(2)	(2)	(1)	-	(1)	(46)
Changes in the scope of consolidation	9	(2)	1	-	1	2	-	-	11
Reclassifications and other changes	-	8	(3)	(30)	3	-	(1)	(4)	(27)
Balance at December 31, 2016	(180)	(1,061)	(96)	(36)	(491)	(377)	(13)	(164)	(2,418)
Carrying amount at December 31, 2015	3,099	881	110	8	299	173	84	128	4,782
Carrying amount at December 31, 2016	3,115	1,268	90	74	277	181	73	31	5,109

(1) The additions recognized in 2016 and 2015 derive from direct asset acquisitions. Investment in exploration permits mainly refer to activating geology and geophysics costs in the amount of €175 million and €176 million in 2016 and 2015 respectively.

(2) In 2016, this includes €68 million corresponding to CO₂ allowances allocated free in 2016 under Spain's National Allocation Plan and the derecognition corresponding to allowances consumed as a result of emissions made during 2015 in the amount of €83 million. In 2015, it mainly includes €62 million corresponding to CO₂ allowances allocated free in 2015 under Spain's National Allocation Plan and the derecognition corresponding to allowances consumed as a result of emissions made during 2014 in the amount of €54 million. For further information about CO₂ allowances, see Note 31.4.

(3) Service station association rights and other rights are legal rights, title to which is conditional upon the terms of the underlying contracts (see section 7 of Note 2 "Basis of presentation").

(4) In *Downstream*, in 2016 it includes mainly the concessions in the port of A Coruña and Tarragona, and in 2015 it also included the concessions for construction and operation licenses for offshore wind power projects in the United Kingdom – those projects were sold in 2016 (see Note 4.1).

(5) See Note 22.

(6) At year-end 2016, "Other intangible assets" includes €158 million of assets acquired under finance leases, mainly corresponding to service station association rights (€151 million at year-end 2015). Elsewhere, in 2016 this heading includes €6 million of

intangible assets with indefinite useful lives (these assets are not amortized but they are tested at least on an annual basis for impairment) (year-end 2015: € million).

Goodwill

The breakdown of goodwill, by company, at year end 2016 and 2015 is as follows:

Goodwill	€Million	
	2016	2015
Repsol Oil & Gas Canada, Inc. ⁽¹⁾	2,666	2,574
Repsol Portuguesa, S.A.	154	154
Repsol Gas Portugal, S.A.	118	118
Repsol Comercial de Productos Petrolíferos, S.A.	102	98
Other companies	75	155
TOTAL ⁽²⁾	3,115	3,099

⁽¹⁾ See Note 4.2.

⁽²⁾ Includes €180 million and €169 million of impairment losses in 2016 and 2015, respectively.

The breakdown of goodwill at December 31, 2016 and 2015 by operating segment and geographical area is as follows:

	€Million	
	2016	2015
Upstream ⁽¹⁾	2,680	2,589
Downstream ⁽²⁾	435	510
Europe	401	422
Rest of the world	34	88
TOTAL	3,115	3,099

⁽¹⁾ Almost the entirety of this item reflects the goodwill arising from the acquisition of ROGCI in 2015 (see Note 4.2) and allocated for the purpose of evaluating its recoverability in the *Upstream* segment.

⁽²⁾ Corresponds to 9 CGU being the most significant individual amount not exceeding to 30% of the total of segment.

The goodwill derived from acquiring ROGCI is justified, among other reasons, by the synergies from the acquisition as a consequence of savings in corporate and support functions that benefit the entire segment and that cannot be assigned to specific criteria with non-arbitrary criteria. Specifically, there are relevant synergies: i) due to duplicate resources dedicated to corporate and general business support duties and the standardization of the pay conditions in both companies; ii) derived from global finance management thanks to the improved financial conditions stemming from optimizing financing across group companies and from better conditions that have replaced the products that financed ROGCI; iii) and synergies in information systems, equity services, derived from insurance renegotiation and from optimizing processes and functions such as external communication, corporate responsibility, institutional affairs, etc.

Also, the key intangible assets that are not recognized separately in the goodwill and derived from acquiring ROGCI are: a large 2D and 3D seismic database, which is a powerful tool for assessing the exploratory potential of areas for which exploration licenses are not yet held; the organized human capital, which at the time of the acquisition came to 3,000 people (excluding joint ventures), and according to the accounting regulations is not separable as an intangible asset – hence it was recognized within goodwill.

For CGUs with goodwill and/or assets with indefinite useful lives allocated, the Group performs sensitivity analysis in order to quantify if changes in the recoverable amounts, calculated according to the method described in Note 3, of these CGUs would have a significant impact in the financial statements. Specifically, in performing the related sensitivity analysis, the following inputs have been taken into consideration:

Sensitivity analysis

Decline in the price of oil and gas (Brent and HH)	10%
Decrease in sales volume	5%
Increased operating and investment costs	5%
Decline in unit contribution margin	5%
Increases in the discount rate	100 b.p.

Repsol considers, based on its current knowledge, that the reasonably predictable changes in the key inputs for determining the fair value of CGUs to which goodwill has been allocated would not have a material impact on the Group's financial statements for 2016.

(7) PROPERTY, PLANT AND EQUIPMENT

The breakdown of "Property, plant and equipment" and of the related accumulated depreciation and impairment losses at December 31, 2016 and 2015 is as follows:

€Million	Upstream			Downstream and Corporation				Total
	Expenditures in areas with reserves	Expenditures for exploration	Other	Land, buildings and other structures	Machinery and facilities	Other	Assets under construction	
GROSS COST								
Balance at January 1, 2015	10,364	2,594	359	2,505	18,566	1,283	714	36,385
Additions	912	822	67	14	11	40	732	2,598
Retirements and disposals	(362)	(254)	(39)	(8)	(62)	(9)	(14)	(748)
Translation differences	1,553	247	40	54	273	27	21	2,215
Changes in the scope of consolidation ⁽¹⁾	12,532	1,344	92	-	1	2	14	13,985
Reclassification and other changes ⁽²⁾	(202)	12	12	32	(37)	40	(522)	(665)
Balance at December 31, 2015	24,797	4,765	531	2,597	18,752	1,383	945	53,770
Balance at January 1, 2016	24,797	4,765	531	2,597	18,752	1,383	945	53,770
Additions	710	252	82	-	8	48	655	1,755
Retirements and disposals	(24)	(285)	(26)	(8)	(91)	(14)	(2)	(450)
Translation differences	856	130	15	17	93	10	(1)	1,120
Changes in the scope of consolidation ⁽¹⁾	(1,012)	(71)	(39)	(24)	(134)	(123)	(6)	(1,409)
Reclassification and other changes ⁽²⁾	671	(512)	(83)	(37)	717	160	(892)	24
Balance at December 31, 2016	25,998	4,279	480	2,545	19,345	1,464	699	54,810
ACCUMULATED DEPRECIATION & IMPAIRMENT LOSSES								
Balance at January 1, 2015	(5,272)	(1,675)	(103)	(958)	(10,405)	(969)	-	(19,382)
Depreciation charges ⁽⁴⁾	(1,476)	(599)	(37)	(47)	(609)	(60)	-	(2,828)
Retirements and disposals	35	246	11	6	52	8	-	358
Impairment losses (recognized)/reversed ⁽⁵⁾	(2,190)	(405)	(24)	(24)	(496)	(23)	-	(3,162)
Translation differences	(594)	(112)	(10)	(40)	(128)	(17)	-	(901)
Changes in the scope of consolidation	-	-	-	-	-	-	-	-
Reclassification and other changes ⁽²⁾	2	90	(3)	-	268	(10)	-	347
Balance at December 31, 2015	(9,495)	(2,455)	(166)	(1,063)	(11,318)	(1,071)	-	(25,568)
Balance at January 1, 2016	(9,495)	(2,455)	(166)	(1,063)	(11,318)	(1,071)	-	(25,568)
Depreciation charges ⁽⁴⁾	(1,415)	(117)	(46)	(44)	(596)	(56)	-	(2,274)
Retirements and disposals	6	271	11	4	76	15	-	383
Impairment losses (recognized)/reversed ⁽⁵⁾	(30)	(11)	(11)	1	(207)	21	-	(257)
Translation differences	(354)	(67)	(6)	(13)	(64)	(3)	-	(507)
Changes in the scope of consolidation	488	45	8	7	63	50	-	661
Reclassification and other changes ⁽²⁾	57	(47)	16	24	(22)	1	-	29
Balance at December 31, 2016	(10,743)	(2,381)	(194)	(1,084)	(12,068)	(1,043)	-	(27,513)
Carrying amount at December 31, 2015	15,302	2,310	365	1,534	7,434	312	945	28,202
Carrying amount at December 31, 2016	15,255	1,898	286	1,461	7,277	421	699	27,297

(1) See Note 4.

(2) In 2016 and 2015, this heading includes reclassifications from "Assets under construction", mainly to "Machinery and plant", as a result of several upgrade, repair and remodeling projects at the Group's refineries. Additionally, in 2015 includes reclassifications under "Machinery and plant" to the heading "Non-current assets held for sale" for the assets corresponding to the piped gas business in Spain (see Notes 4.1 and 9).

- (3) At December 31, 2016 accumulated impairment charges totaled €4,732 million (€4,492 million at year-end 2015).
- (4) The decrease in 2016 in the *Upstream* segment, compared to the prior year, reflects lower depreciation and amortization charges in respect of exploration rights and dry wells owing to lower investment in exploration, partly offset by higher depreciation of the productive assets consolidated for the first time as a result of the ROGCI business combination in May 2015 (see Note 4.2).
- (5) See Note 22.

The breakdown by geography of the Group's most significant investments is detailed in Note 5.2 "*Disclosures by geography and segment*", which is presented using the Group's reporting model.

Heading "*Property, plant and equipment*" includes €640 million of assets acquired under finance leases at year-end (€18 million at year-end 2015). Among the assets acquired under finance leases, the gas pipelines and other assets for the transportation of gas in the USA and Canada, in the amount of €87 million at year-end 2016 (€48 million at year-end 2015), stand out (see Note 18).

This heading also includes investments made by the Group in service concession arrangements in the amount of €246 million at year-end 2016 (€261 million at year-end 2015). These concessions revert to the state over a period of time ranging from 2017 to 2054.

Repsol capitalizes qualifying borrowing costs as detailed in Note 2. In 2016 and 2015, the average capitalization cost was 2.97% and 3.55%, and the costs capitalized in this respect came to €109 million and €104 million, respectively, recognized in "*Finance expense*" in the income statement.

The figures corresponding to non-depreciable assets, that is, land and assets under construction, amount, respectively, to €83 million and €766 million at December 31, 2016 and €34 million and €1,002 million at December 31, 2015, respectively.

"*Property, plant and equipment*" includes fully depreciated items with an original carrying amount of €1,109 million and €1,170 million at December 31, 2016 and 2015, respectively.

In accordance with industry practices, Repsol insures its assets and operations worldwide. Among the risks insured are damages to property, plant and equipment, together with the subsequent interruptions in its business that such damages may cause. The Group believes that the current coverage level is, in general, appropriate for the risks inherent to its business.

(8) INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD

Movement in this consolidated balance sheet heading during 2016 and 2015 has been as follows:

	€Million	
	2016	2015
Balance at the beginning of the year	11,797	11,141
Net investments ⁽¹⁾	(1,193)	496
Changes in the scope of consolidation	1	400
Share of results of companies accounted for using the equity method	194	(89)
Dividends distributed	(729)	(451)
Translation differences	312	465
Reclassifications and other changes	(206)	(165)
Balance at year-end	10,176	11,797

⁽¹⁾ In 2016, mainly the sale of its 10% interest in Gas Natural SDG, S.A. (see Note 4.1) and capital contributions at BPRY Caribbean Ventures, LLC. and Repsol Sinopec Resources UK Ltd.

The breakdown of the main investments accounted for using the equity method and the Group's share of their results using this method in each corresponding period is provided in the table below:

	€Million			
	Carrying amount of the investment		Share in results ⁽¹⁾	
	2016	2015	2016	2015
Joint ventures	6,713	11,671	(168)	(27)
Associates ⁽²⁾	3,463	126	362	(62)
TOTAL	10,176	11,797	194	(89)

⁽¹⁾ Corresponds to the net income for the period from continuing and discontinued operations. Does not include "Other comprehensive income" of €355 million (€244 million corresponding to joint ventures and €109 million to associates) and €462 million (€452 million corresponding to joint ventures and €11 million corresponding to associates) in 2016 and 2015, respectively.

⁽²⁾ In 2016, mainly the interest in Gas Natural SDG, S.A. (previously a joint venture, until the sale of 10% of its shares as described in Note 4) and Petrocarabobo, S.A.

Joint ventures are when the Repsol Group, based on shareholder agreements signed with each of the partners in each company, makes strategic operational and financial decisions in consensus with the controlling parties. The most significant businesses are:

Joint ventures

Repsol Sinopec Brasil (RSB)

Repsol, S.A. holds a 60% interest in the Repsol Sinopec Brasil (RSB) group, which comprises Repsol Sinopec Brasil, S.A. and its subsidiaries (see Appendix I). Repsol's stake is implemented by holding 60% interest in Repsol Sinopec Brasil, S.A.

This investee's main businesses are oil and gas exploration and production, the import and export of crude oil and gas and derivative products, the storage, distribution and sale of crude oil, oil derivatives and natural gas, as well as the provision of services related to these activities. It operates mainly in Brazil.

Regarding the loans granted to the Repsol Group by RSB, see Note 15 "Financial Liabilities".

YPFB Andina, S.A.

Repsol holds 48.33% of YPFB Andina, S.A., through Repsol Bolivia, S.A., which chiefly engages in oil and gas exploration, operation and marketing. It operates mainly in Bolivia.

BPRY Caribbean Ventures, LLC. (BPRY)

Repsol holds a 30% interest in BPRY Caribbean Ventures LLC (through Repsol Exploración, S.A.), which, together with its subsidiaries, engages in oil and gas exploration, operation and marketing and related activities, such as construction and operation of oil rigs, pipelines and other facilities in Trinidad and Tobago.

Petroquiriquire, S.A.

Repsol has a 40% stake in Petroquiriquire S.A. through Repsol Exploración, S.A. Petroquiriquire is a public-private venture, partly held by Corporación Venezolana de Petróleo, S.A. (CPV) with 56% and PDVSA Social, S.A. with 4%. Its core activity is the production and sale of oil and gas in Venezuela. For information on the Group's risks and exposure in Venezuela, see Note 22.

Cardón IV.

Repsol has a 50% stake in Cardón IV through Repsol Venezuela Gas, S.A. The other 50% are owned by the ENI group. Cardón IV is a gas licensee whose core activity is the production and sale of gas in Venezuela. For information on the Group's risks and exposure in Venezuela, see Note 22.

Equion Energía Ltd.

Equion is a company held 51% and 49% by Ecopetrol, S.A. and Repsol Oil&Gas Canada, Inc., respectively. Equion, mainly, explores for, researches, exploits, develops and sells oil and gas and derivative products in Colombia. Based on a shareholder agreement with Ecopetrol, S.A., Repsol treats Energía Ltd. as one of its joint arrangements.

The tables below provide summarized financial information for these investments, prepared in keeping with IFRS-EU accounting policies, as detailed in Note 2 “Basis of presentation”, and reconcile these disclosures with the amounts at which these investments are carried in the Group's consolidated financial statements:

€ Million	RSB		YPFB Andina		BPRY		Petroquiquire		Cardon IV		Equion	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Operating revenue	957	856	266	340	939	1,700	294	484	697	199	393	343
Depreciation and amortization and impairment provisions	(323)	(339)	(157)	(123)	(638)	(707)	(40)	(776)	(614)	(27)	(232)	(329)
Other operating expenses ⁽¹⁾	(508)	(528)	(110)	(144)	(719)	(1,106)	(452)	(663)	(217)	(117)	(148)	(141)
Operating income	126	(12)	(1)	73	(418)	(113)	(198)	(955)	(134)	55	13	(127)
Finance income ⁽²⁾	70	38	159	320	1	(1)	371	-	54	100	14	-
Finance expenses ⁽²⁾⁽³⁾	22	(36)	(165)	(366)	(55)	28	108	3	(321)	(180)	(1)	(6)
Share of results of companies accounted for using the equity method after taxes	11	20	(12)	16	-	-	-	-	-	-	-	-
Net income before tax	229	10	(19)	43	(472)	(86)	281	(952)	(401)	(25)	26	(133)
Income tax	90	(204)	8	(33)	215	44	(587)	122	(99)	0	64	4
Net income for the period from continuing operations	319	(193)	(11)	10	(257)	(42)	(306)	(830)	(500)	(25)	90	(129)
Net income for the period from discontinued operations	-	-	-	-	-	-	-	-	-	-	-	-
Net income for the period attributable to the parent	319	(193)	(11)	10	(257)	(42)	(306)	(830)	(500)	(25)	90	(129)
Repsol's shareholding	60%	60%	48%	48%	30%	30%	40%	40%	50%	50%	49%	49%
Share of profit/(loss) consolidated by Repsol	191	(116)	(5)	5	(77)	(13)	(122)	(332)	(250)	(13)	44	(63)
Dividends	121	-	5	54	-	-	164	-	-	-	104 ⁽⁵⁾	84
Other comprehensive income	178	466	24	54	19	39	(1)	92	4	26	4	12

(1) In 2016 and 2015, RSB includes operating lease expenses of €70 million and €74 million, respectively, mainly under floating production platform (FPSO units) lease commitments that are secured by the Group (see Note 30).

(2) In 2016 and 2015, RSB includes net interest expense of €74 million and €64 million.

(3) In 2016 and 2015, RSB includes the finance expense associated with the effect of discounting dismantling provisions to present value of €7 million and €10 million.

(4) Relates to “Income and expenses recognized directly in equity” and “Amounts transferred to the consolidated income statement” in the consolidated statement of recognized income and expenses.

(5) In 2016, Equion has declared dividends amounting to €141 million (on the basis of Repsol's share): €37 million in cash and the rest by the cancellation of the loans granted by the Group.

€ Million	RSB		YPFB Andina		BPRY		Petroquiriquire		Cardón IV ⁽⁴⁾		Equion	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Assets												
Non-current assets	4,042	3,745	1,023	959	8,548	6,741	1,048	1,197	3,107	2,879	541	815
Current assets	5,227	4,956	346	477	551	748	4,387	4,148	295	1,035	171	176
Cash and cash equivalents	71	18	120	276	63	64	1	19	24	16	95	99
Other current assets	5,156	4,938	226	201	488	684	4,386	4,129	271	1,019	76	77
Total assets	9,269	8,701	1,369	1,436	9,099	7,489	5,435	5,345	3,402	3,914	712	991
Liabilities												
Non-current liabilities	582	833	248	202	5,920	5,648	1,325	94	926	2,389	257	335
Financial liabilities ⁽¹⁾	95	239	-	-	1,561	1,770	517	-	-	2,223	-	-
Other non-current liabilities ⁽²⁾	487	594	248	202	4,359	3,878	808	94	926	166	257	335
Current liabilities	943	497	91	214	1,144	568	3,722	3,873	2,490	1,029	108	119
Financial liabilities ⁽¹⁾	478	260	-	-	587	-	-	-	2,099	(7)	-	-
Other current liabilities ⁽²⁾	465	237	91	214	557	568	3,722	3,873	391	1,036	108	119
Total liabilities	1,525	1,330	339	416	7,064	6,216	5,047	3,967	3,416	3,418	365	454
NET ASSETS	7,744	7,370	1,030	1,020	2,035	1,273	388	1,378	(14)	496	347	537
Repsol's ownership interest	60%	60%	48%	48%	30%	30%	40%	40%	50%	50%	49%	49%
Share in net assets	4,646	4,422	494	490	611	382	155	551	(7)	248	170	263
Gain / (loss) ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	-
Carrying amount of the investment	4,646	4,422	494	490	611	382	155	551	(7)	248	170	263

(1) Excludes trade and other accounts payable; and provisions.

(2) In 2016 and 2015, RSB includes current and non-current provisions for dismantling obligations in the amount of €166 million and €138 million.

(3) The gain corresponds to goodwill.

(4) As for Cardón IV, as of December 31 2016, a provision for risk and expenses that corresponds to its negative net equity as of this date has been registered.

Repsol Sinopec Resources UK Ltd. (RSRUK)

RSRUK is held by Repsol Oil&Gas Canada, Inc. and Addax Petroleum UK Limited ("Addax"), a subsidiary of the Sinopec Group, with a 51% and 49% stake, respectively, and whose core business is the exploration and exploitation of oil and gas in the North Sea. This joint venture is governed by a shareholder agreement that requires the unanimous consent of both shareholders for all significant financial and operating decisions. Repsol has recorded a provision to cover its obligations deriving from its investment in RSRUK for €1,062 million (see Note 14); the amount of this investment in the Group's financial statements is nil. For information on the arbitration procedure concerning the purchase by Addax of its 49% stake in RSRUK, see Note 29.

Associates

Gas Natural Fenosa (GNF)

Repsol has an interest in the GNF Group by means of a 20% stake in Gas Natural SDG, S.A., through which it exerts significant influence.¹ The shares of Gas Natural SDG, S.A. are admitted to trading on Spain's four stock exchanges, are traded on the continuous market, and are also part of the Ibex-35 (see Note 13 "Equity").

GNF's main businesses are the exploration and production, liquefaction, regasification, transport, storage, distribution and commercialization of gas as well as the generation, distribution and commercialization of electricity. It mainly operates in Spain, and abroad, primarily in Latin America, Europe (France, Italy, Moldavia and Portugal) and Africa.

¹As a result of the sale agreement of 10% of GNF as described in Note 4.1, Criteria and Repsol have terminated the shareholder agreement between "la Caixa" and Repsol on Gas Natural dated January 11, 2000 (as subsequently amended on May 16, 2002, December 16, 2002 and June 20, 2003), as a result of which they had exercised joint control over Gas Natural.

The tables below provide summarized financial information for GNF, prepared in keeping with IFRS-EU accounting policies, as detailed in Note 2 “*Basis of presentation*”, and reconcile these disclosures with the amounts at which these investments are carried in the Group’s consolidated financial statements:

€ Million	GNF		€ Million	GNF	
	2016	2015		2016	2015
Operating revenue	23,665	26,015	Assets		
Depreciation and impairment losses	(1,759)	(1,750)	Non-current assets	38,596	39,275
Other operating expenses	(18,900)	(21,004)	Current assets	8,213	8,772
Operating income	3,006	3,262	<i>Cash and cash equivalents</i>	2,067	2,390
Financial income	130	150	<i>Other current assets</i>	6,146	6,382
Financial expenses	(955)	(1,044)	Total assets	46,809	48,047
Share of results of companies accounted for using the equity method	(98)	(4)	Liabilities		
Net income before tax	2,083	2,364	Non-current liabilities	24,713	25,632
Income tax	(416)	(573)	<i>Financial liabilities</i> ⁽²⁾	9,480	13,147
Net income from continuing operations	1,667	1,791	<i>Other non-current liabilities</i>	15,233	12,485
Net income from discontinued operations	44	34	Current liabilities	7,176	8,134
Net income attributable to the parent	1,347	1,502	<i>Financial liabilities</i> ⁽²⁾	2,599	2,596
Repsol’s ownership interest ⁽⁴⁾	20%	30%	<i>Other current liabilities</i>	4,577	5,538
Share in net income ⁽⁴⁾	362	453	Total liabilities	31,889	33,766
Dividends	278	278	NET ASSETS	14,920	14,281
Other comprehensive income ⁽¹⁾	160	(91)	Repsol’s ownership interest	20%	30%
			Share in net assets	2,995	4,305
			Gain / (loss) ⁽³⁾	327	464
			Carrying amount of the investment	3,322	4,769

- (1) Relates to “*Income and expenses recognized directly in equity*” and “*Amounts transferred to the consolidated income statement*” in the consolidated statement of recognized income and expenses.
(2) Excludes trade and other accounts payable; and provisions.
(3) The gain corresponds to goodwill.
(4) This result was calculated on the basis of a 30% stake in 2016 up until the sale of 10% of GNF in September (see Note 4.1).

Lastly, as regards joint agreements and associated companies with a material role or significant relative importance: (i) there are no legal restrictions on the capacity to transfer funds; (ii) the financial statements that have been used refer to the same date as the financial statements of Repsol, S.A.; and (iii) there are no recognized losses.

(9) NON-CURRENT ASSETS AND LIABILITIES HELD FOR SALE

The main consolidated balance sheet line items classified as assets held for sale and related liabilities at December 31, 2016 and 2015 were as follows:

	€ Million	
	2016	2015
Goodwill	-	-
Property, plant and equipment, and other intangible assets	17	197
Other non-current assets	127	65
Assets	144	262
Non-current liabilities	(144)	(7)
Current liabilities	(2)	(1)
Liabilities	(146)	(8)
NET ASSETS	(2)	254

As of December 31, 2016, the headings for *non-current assets and liabilities held for sale* mainly include assets in Norway (Upstream segment), the sale of which awaits the fulfillment of certain conditions.

As of December 31, 2015 *Non-current assets held for sale* included €209 million relating to part of the assets

of the piped-gas business in Spain the sale of which was awaiting government authorizations. The sale of these assets was completed over the course of 2016 (see Note 4).

(10) FINANCIAL ASSETS

The breakdown of the different concepts that are included on the consolidated balance sheet is as follows:

	€Million	
	2016	2015
Non-current financial assets	1,204	715
Derivatives relating to non-current trade transactions ⁽¹⁾	-	4
Other current financial assets	1,280	1,237
Derivatives relating to current trade transactions ⁽²⁾	64	413
Cash and cash equivalents	4,687	2,448
Total	7,235	4,817

⁽¹⁾ Registered in heading "Other non-current assets" of the consolidated balance sheet.

⁽²⁾ Recorded in heading "Other receivables" of the consolidated balance sheet.

10.1) Classification of financial assets

The detail, by type of assets, of the Group's financial assets at December 31, 2016 and 2015, is as follows:

€Million	December 31, 2016 and 2015													
	Financial assets held for trading ⁽²⁾		Other financial assets at fair value through profit or loss ⁽³⁾		Financial assets available for sale ⁽⁴⁾		Loans and receivables		Held to maturity investments		Hedging derivatives		Total	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Equity instruments	-	-	-	-	123	82	-	-	-	-	-	-	123	82
Derivatives	-	4	-	-	-	-	-	-	-	-	-	-	-	4
Other financial assets	-	-	56	66	-	-	1,025	567	-	-	-	-	1,081	633
Long-term/Non-current	-	4	56	66	123	82	1,025	567	-	-	-	-	1,204	719
Derivatives	95	477	-	-	-	-	-	-	-	-	-	1	95	478
Other financial assets	-	-	10	11	-	-	1,247	1,170	4,679	2,439	-	-	5,936	3,620
Short-term / Current	95	477	10	11	-	-	1,247	1,170	4,679	2,439	-	1	6,031	4,098
TOTAL ⁽¹⁾	95	481	66	77	123	82	2,272	1,737	4,679	2,439	-	1	7,235	4,817

⁽¹⁾ Headings "Other non-current assets" and "Trade and other receivables" of the consolidated balance sheet include €23 million classified under long-term and €4,832 million classified under short-term in 2016 (2015: €75 million classified under long-term and €4,254 million classified under short-term), corresponding to commercial receivables not included in the breakdown of the financial assets in the previous table.

⁽²⁾ Derivatives not designated as hedging instruments are included (see Note 17).

⁽³⁾ Including, among others, interests in investment funds.

⁽⁴⁾ This heading includes minority financial investments in certain companies over which the Group does not have management influence.

In 2016 and 2015, current and non-current "Loans and receivables" include loans granted to Group companies that are not eliminated upon consolidation. They relate primarily to balances arising from transactions entered into with companies accounted for using the equity method, including the credit facility granted to Petroquiriquire (see Note 22), in the amount of €2,231 million at year-end 2016 and €1,734 million at year-end 2015; these amounts include impairment charges of €107 million and €94 million, respectively. These loans also include the vendor loans extended by the Group to the Petersen group in connection with the acquisition by the latter of a stake in YPF S.A. These loans were fully provisioned at December 31, 2016 and 2015 for €1,863 million.

The return accrued on "Loans and receivables" was equivalent to an average interest rate of 6.92% in 2016 and of 4.73% in 2015.

The maturity of non-current loans and receivables is the following:

Due date	€Million	
	2016	2015
2016	-	-
2017	-	254
2018	-	-
2019	289	281
2020	180	-
Later years	556	32
Total	1,025	567

The breakdown of the book value of the held to maturity investments at December 31, 2016 and 2015 is as follows:

	€Million	
	2016	2015
Temporary financial investments	2	2
Cash equivalents ⁽¹⁾	1,470	126
Cash at bank and in hand	3,207	2,311
Total	4,679	2,439

These financial investments have accrued an average interest of 0.09% and 0.25% in 2016 and 2015, respectively.

10.2) Fair value

The classification of the financial assets recognized in the financial statements at fair value, by fair value calculation method, is as follows:

€Million	Level 1		Level 2		Level 3		Total	
	2016	2015	2016	2015	2016	2014	2016	01 2015
Financial assets held for trading	6	298	89	183	-	-	95	481
Other financial assets at fair value through profit or loss	66	77	-	-	-	-	66	77
Financial assets available for sale ⁽¹⁾	1	1	-	-	-	-	1	1
Hedging derivatives	-	-	-	1	-	-	-	1
Total	73	376	89	184	0	0	162	560

Level 1: Valuations based on a quoted price in an active market for an identical instrument and relate mainly to derivatives held for trading and investments funds.

Level 2: Valuations based on a quoted price in an active market for similar financial assets or based on other valuation techniques that rely on observable market inputs.

Level 3: Valuations based on inputs that are not directly observable in the market.

⁽¹⁾ Does not include €22 million and €81 million in 2016 and 2015, respectively, related to investments in shares of companies that are recorded at acquisition cost in accordance with IAS 39.

The valuation techniques used for instruments classified under level 2, in accordance with accounting regulations, are based on the income approach, which entail the discounting to present value of future cash flows, either known or estimated, using discount curves from the market reference interest rates (in the case of derivative instruments, estimated using implicit forward curves offered in the market), including adjustments for credit risk based on the life of the instruments. In the case of options, price-setting models based on the Black & Scholes formula are used.

The most significant variables for valuing financial instruments vary depending on the type of instrument, but fundamentally include: exchange rates (spot and forward), interest rate curves, counterparty risk curves,

prices of equity securities and the volatilities of all the aforementioned factors. In all cases, market data is obtained from reputed information agencies or correspond to quotes issued by official bodies.

Loans and receivables and *held-to-maturity investments* are measured at amortized cost, which matches fair value.

(11) INVENTORIES

The breakdown of “*Inventories*” at December 31, 2016 and 2015 is as follows:

	€Million	
	2016	2015
Crude oil and natural gas	1,187	786
Finished and semi-finished goods	2,110	1,754
Supplies and other inventories	308	313
Total ⁽¹⁾	3,605	2,853

⁽¹⁾ Includes provisions for inventory impairment losses of €28 million at year-end 2016 (year-end 2015: €17 million). The impairment provisions recognized and reversed in 2016 amounted to -€7 million and €69 million, respectively (-€2 million recognized and €20 million reversed in 2015).

At December 31, 2016, the balance of *commodity* inventories, related to *trading* activity, at fair value less costs to sell amounted to €458 million, and the effect of their measurement at market value represented an income of €70 million. Recoverable amounts are calculated using market information and benchmarks. Specifically, forward price/benchmark price curves provided by the market as well as a benchmark time horizon for pricing purposes. The main variables used are: prices taken from official publications (Platt’s, Argus, OPIS, the brokerage community...) and historic or mark-to-market premiums, if available.

The Repsol Group complies, both at December 31, 2016 and December 31, 2015, with the legal requirements regarding minimum safety stocks established under prevailing legislation (see Appendix IV) through its Spanish Group companies.

(12) TRADE AND OTHER RECEIVABLES

The breakdown of this heading at December 31, 2016 and 2015 was the following:

	€Million	
	2016	2015
Trade receivables for sales and services (gross)	3,242	2,738
Doubtful accounts provision	(131)	(131)
Trade receivables	3,111	2,607
Other trade debtors and other receivables	1,395	1,337
Debtors relating to personnel transactions	42	43
Due from government bodies	284	268
Derivatives relating to commercial transactions (Notes 10 and 17)	64	413
Other debtors	1,785	2,061
Income tax assets	989	1,013
Trade and other receivables	5,885	5,681

The changes in the provision for doubtful accounts in 2016 and 2015 were as follows:

	€Million	
	2016	2015
Balance at the beginning of the year	131	122
Impairment losses recognized / (reversed)	(3)	13
Changes in the scope of consolidation	(1)	-
Translation differences	2	5
Reclassification and other changes	2	(9)
Balance at year-end	131	131

(13) EQUITY

	€Million	
	2016	2015
Net equity	28,487	26,843
Issued share capital	1,496	1,442
Share premium and reserves	24,331	26,258
Share premium ⁽¹⁾	6,428	6,428
Statutory reserve ⁽²⁾	259	259
Retained earnings and other reserves ⁽³⁾	17,644	19,571
Treasury shares and own equity instruments	(1)	(248)
Net income attributable to equity holders of the parent	1,736	(1,398)
Dividends and remuneration	(99)	(228)
Other equity instruments	1,024	1,017
Accumulated other comprehensive income	2,380	1,691
Minority interests	244	228
TOTAL EQUITY	31,111	28,762

⁽¹⁾ The restated Spanish Companies Act expressly permits the use of the share premium account balance to increase capital and establishes no specific restrictions as to its use.

⁽²⁾ Under the restated Spanish Companies Act, 10% of profit for each year must be transferred to the legal reserve until the balance of this reserve reaches at least 20% of share capital. The legal reserve can be used to increase capital provided that the remaining reserve balance does not fall below 10% of the increased share capital amount. Otherwise, until the legal reserve exceeds 20% of share capital, it can only be used to offset losses, provided that sufficient other reserves are not available for this purpose.

⁽³⁾ This comprises the adjustments related to the differences between the previous accounting principles and the IFRS, from events and transactions before the transition date to IFRS (January 1, 2004)

13.1) Share capital

The share capital at December 31, 2016 and 2015, registered within the Companies Register, consisted of 1,465,644,100 and 1,400,361,059 fully subscribed and paid up shares of €1 par value each, in book entry form, and all listed on the Spanish stock exchanges and the Buenos Aires Stock Exchange. The Company maintains an ADS program. Since March 9, 2011 its ADSs are traded on the OTCQX market.

Following the most recent bonus share issue, closed in January 2017, outlined below, the share capital of Repsol, S.A. is currently represented by 1,496,404,851 shares, each with a par value of €1. Under accounting regulations, because the abovementioned capital increase had been registered within the Companies Register before the Board of Directors authorized the consolidated financial statements for issue, this bonus share issue has been recognized in the Group's financial statements as of December 31, 2016.

At the Annual General Meeting held on May 20, 2016, the Company's shareholders approved two bonus share issues to execute the shareholder remuneration scheme “*Repsol Flexible Dividend*”¹, in substitution of what would have been the traditional final dividend from 2015 profits and the interim dividend from 2016 earnings, under which shareholders can instead choose between receiving their remuneration in cash (by selling their bonus share rights in the market or back to the Company) or in Company shares.

The first of these two bonus share issues took place between June and July 2016 and the second, between December 2016 and January 2017. The main characteristics of these issues are detailed below:

		June / July 2016	Dec. 2016 / Jan. 2017
REMUNERATION IN CASH	Shareholders accepting irrevocable purchase commitment ⁽¹⁾	35.46%	20.25%
	Deadline for requesting sale to Repsol at guaranteed fixed price	June 24	December 30
	Guaranteed fixed price per bonus share rights	€0.292 gross per right	€0.335 gross per right
	Gross value of Repsol's purchase of bonus share rights	€49 million	€99 million
REMUNERATION IN SHARES	Shareholders electing to receive new Repsol shares	64.54%	79.75%
	Number of warrants required for allotment of one new share	39	38
	New shares issued	23,860,793	30,760,751
	Approximate capital increase	1.65%	2.10%
	Capital increase end date	July 6	January 10

- ⁽¹⁾ Repsol has renounced the bonus share rights acquired by virtue of the above-mentioned purchase commitment and, by extension, the shares corresponding to those rights. The consolidated balance sheet as of December 31, 2016 recognizes the obligation to pay the shareholders that had accepted the irrevocable purchase commitment in the amount corresponding to Repsol's rights allocation (€99 million) as a reduction in equity under “*Dividends and remuneration*”.

According to the latest information available at the date of authorization of the accompanying consolidated financial statements for issue, the significant shareholders are:

Significant shareholders	total % of share capital Latest available information
Fundación Bancaria Caixa d'Estalvis y Pensions de Barcelona ⁽¹⁾	9.84
Sacyr, S.A. ⁽²⁾	8.20
Temasek Holdings (Private) Limited ⁽³⁾	4.49
Blackrock, Inc. ⁽⁴⁾	3.04

- ⁽¹⁾ Fundació Bancaria Caixa d'Estalvis i Pensions de Barcelona holds its interest through CaixaBank, S.A.
⁽²⁾ Sacyr, S.A. holds its investment through Sacyr Participaciones Mobiliarias, S.L., Sacyr Investments, S.A. and Sacyr Securities, S.A.
⁽³⁾ Temasek holds its investment through its subsidiary, Chembra Investment PTE, Ltd.
⁽⁴⁾ Blackrock stake is held through various funds and accounts managed by investment managers under their control. Information related to Blackrock, Inc. is based on the declaration presented by this entity to the CNMV on January 15, 2016, about the amount of share capital at the said date.

¹ Repsol executed its “*Repsol Flexible Dividend*” scheme for the first time in 2012, having been approved by its shareholders at the Annual General Meeting of May 31, 2012. This shareholder remuneration scheme materializes in bonus share issues charged against retained earnings and an irrevocable commitment on the part of Repsol to purchase the bonus share rights deriving under the equity issues at a guaranteed fixed price.

At December 31, 2016, the following Group companies' shares were publicly listed:

Company	Number of listed shares	% of share capital listed	Stock exchanges ⁽¹⁾	Year-end price	Last quarter average	Currency
Repsol, S.A.	1,465,644,100	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	13.42	12.75	euro
			Buenos Aires	213.00	206.04	peso
			OTCQX ⁽²⁾	14.10	13.76	dollar
Gas Natural SDG, S.A.	1,000,689,341	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	17.91	17.18	euro
Refinería La Pampilla, S.A.	3,534,890,000	100%	Lima stock exchange	0.23	0.24	sol

⁽¹⁾ Exchanges or markets for which the Group has specifically applied for admission to trading. Other exchanges, markets or multilateral trading platforms on which the shares may be traded without having been specifically requested by the Group are not included.

⁽²⁾ Repsol's American Depositary Shares (ADSs) are traded on the OTCQX, an OTC (over-the-counter) US trading platform.

13.2) Treasury shares and own equity investments

The main transactions undertaken by the Repsol Group involving treasury shares were as follows:

	2016			2015		
	No. of shares	€Million	% capital	No. of shares	€Million	% capital
Opening balance at beginning of the year	18,047,406	248	1.25%	7,689,371	127	0.56%
Open-market purchases	21,693,728	254	1.45%	20,480,001	301	1.42%
Open-market sales	(39,740,591)	(501)	2.66%	(10,642,495)	(174)	0.74%
Transfers of options over treasury shares	-	-	-	(400,000)	(6)	0.03%
Employee share acquisition plan ⁽¹⁾	725,352	8	0.05%	754,845	8	0.05%
Loyalty plan 2012-2015 ⁽¹⁾	-	-	-	54,435	0	0.00%
Loyalty plan 2013-2016 ⁽¹⁾	23,815	-	0.00%	-	-	-
Repsol Flexible Dividend ⁽²⁾	93,642	-	0.01%	920,529	-	-
Closing balance at year-end ⁽³⁾	94,185	1	0.01%	18,047,406	248	1.25%

Note: Transactions carried out exercising the powers delegated by the Company's shareholders at the Annual General Meeting of March 28, 2014, authorizing the Board of Directors, for a five-year period, to carry out the derivative acquisition of Repsol shares, directly or through subsidiaries, up to a maximum number of shares such that the sum of those acquired plus treasury shares already held by Repsol and any of its subsidiaries does not exceed 10% of the Company's capital, insofar as the price or value of the consideration delivered is not less than the par value of the shares or more than their quoted price on the stock exchange. The authorization was granted for five years running from the date of the General Shareholders' Meeting, and nullified the equivalent resolution ratified at the ordinary General Shareholders' Meeting held on April 30, 2010, in relation to any part thereof that had not been used.

⁽¹⁾ All of the shares acquired under the scope of the Share Acquisition Plan and the share purchase programs aimed at beneficiaries of the pluri-annual variable pay incentive plans have been delivered to the beneficiary employees (see Note 28.4).

⁽²⁾ New shares received under the "Repsol Flexible Dividend" scheme's bonus share issues corresponding to treasury shares.

⁽³⁾ Throughout 2016, Repsol Tesorería y Gestión Financiera, S.A. sold a total of 26 million Repsol, S.A. shares. In addition, Repsol Tesorería y Gestión Financiera, S.A. arranged equity swaps with financial institutions over a notional of 40 million of Repsol, S.A.'s shares under which there were transferred the voting rights and economic risk intrinsic to the underlying, which have been settled during the year.

13.3) Other equity instruments

On March 25, 2015, Repsol International Finance, B.V. ("RIF") issued perpetual subordinated bonds guaranteed by Repsol, S.A., with a nominal value of €1,000 million (redeemable at the request of the issuer

from year six or under certain circumstances stipulated in the bond terms and conditions).¹

This bond was placed with qualified investors and is traded on the Luxembourg stock exchange. It accrues a fixed annual coupon of 3.875% from the issuance date until March 25, 2021, which is payable to the bondholders annually from March 25, 2016; from March 25, 2021, it accrues a fixed annual coupon equivalent to the 6-year swap rate plus a spread.

The issuer can defer the coupon payments without being in breach of its covenants. Coupons so deferred will be cumulative but will have to be settled under certain instances defined in the related terms and conditions of the issuing.

This bond was recognized under “*Other equity instruments*”, included under equity in the consolidated balance sheet, considering that they do not meet the accounting conditions required to be treated as a Group’s financial liability (see section 17 of Note 2.2). Net finance expense associated with the coupon on the subordinated bond has been recorded under “*Retained earnings and other reserves*” amounting to €28 million net of tax.

13.4) Dividends and shareholder remuneration

During 2016 and 2015 the Company’s shareholders were also remunerated by means of the program denominated “*Repsol Flexible Dividend*” whose main characteristics are described in section 1. “*Share capital*” of this Note and whose figures are compiled in the following chart:

	No of bonus share rights sold to Repsol	Purchase commitment price (€/right)	Cash remuneration (€million)	New shares issued	Payment in shares (€million)
December 2014/January 2015	519,930,192	0.472	245	24,421,828	392
June/July 2015	502,021,533	0.484	243	25,666,842	422
December 2015/January 2016	489,071,582	0.466	228	41,422,248	425
June/July 2016	511,212,326	0.292	149	23,860,793	272

In addition, in January 2017, under the “*Repsol Flexible Dividend*” program, replacing what would have been the interim dividend from 2016 profits, Repsol paid out €9 million (€0.335 per right before withholdings) to those shareholders opting to sell their bonus share rights back to the Company and delivered 30,760,751 shares, worth €392 million, to those opting to take their dividend in the form of new Company shares.

At the date of the authorization for issue of these consolidated financial statements, the Company's Board of Directors is expected to submit a proposal to shareholders at the next Shareholder Annual Meeting to continue the “*Repsol Flexible Dividend*” program, through the implementation of a capital increase charged to voluntary reserves from retained earnings, on the same dates as those on which the company has traditionally paid the final dividend.

¹ On March 16, 2016, RIF and Repsol, S.A. undertook not to trigger early redemption if a credit rating agency were to assign to the bond a lower *equity* content than that assigned at the issue date as a result of applying a different valuation approach owing to changes in the credit rating accorded to the issuer and/or the guarantor (one of the early redemption triggers – “*Capital Events*” – available to the issuer, as set out in the terms and conditions of the issue).

13.5) Minority interests

The equity attributable to minority interests at year end 2016 and 2015 relates basically to the following companies:

	€Million	
	2016	2015
Petronor, S.A.	133	110
Refinería La Pampilla, S.A.	67	57
Repsol Comercial de Productos Petrolíferos, S.A.	31	31
Inch Cape Offshore ⁽¹⁾	-	21
Other companies	13	9
Total	244	228

⁽¹⁾ Company sold in May 2016 as part of the sale of its UK wind power business to the Chinese group SDIC Power (see Note 4).

(14) CURRENT AND NON CURRENT PROVISIONS

The breakdown of provisions at year-end and the changes in this heading in 2016 and 2015 are as follows:

	€Million			
	Current and non-current provisions for contingencies and expenses			
	Field dismantling costs	Onerous contracts	Other provisions	Total
Balance at January 1, 2015	454	1,159	1,013	2,626
Provisions charged to income statement ^{(1) (2)}	74	240	198	512
Use of provisions credited to income statement ⁽³⁾	(3)	(233)	(80)	(316)
Provisions released due to payment	(74)	(94)	(504)	(672)
Changes in the scope of consolidation ⁽⁴⁾	2,086	-	3,226	5,312
Translation differences	(94)	122	79	107
Reclassification and other changes	(213)	-	(152)	(365)
Balance at December 31, 2015	2,230	1,194	3,780	7,204
Provisions charged to income statement ^{(1) (2)}	103	209	816	1,128
Use of provisions credited to income statement ⁽³⁾	(36)	(3)	(517)	(556)
Provisions released due to payment ⁽⁵⁾	(57)	(220)	(585)	(862)
Changes in the scope of consolidation	(80)	-	1	(79)
Translation differences	99	32	94	225
Reclassification and other changes	76	(53)	(84)	(61)
Balance at December 31, 2016	2,335	1,159	3,505	6,999

⁽¹⁾ Includes €191 million and €123 million reflecting the discounting to present value of provisions in 2016 and 2015. In 2015, a change in the discount rate of +/-50bp would have the effect of decreasing/increasing provisions for dismantling costs by €124 million and €130 million, respectively.

⁽²⁾ In 2016, this heading mainly reflects the recognition of personnel restructuring provisions amounting to €479 million, and the provision of €4 million for drilling platform leases. In 2015, this heading includes a €160 million provision for exploration platform lease agreements.

⁽³⁾ In 2016, this item mainly reflects the impact associated with disinvestment in YPF as recognized in the heading "Net income attributable to equity holders of the parent from discontinued operations" in an amount of €99 million. In 2015, this heading reflects the reversal of €170 million of provisions for onerous contracts in Canada, mainly due to updated discount rates and lower cost estimates.

⁽⁴⁾ The heading "Changes in the scope of consolidation" mainly includes the provisions associated with the ROGCI business combination (see Note 4.2), which correspond to: i) dismantling of premises for hydrocarbon exploration and production amounting to €2,402 million; ii) tax contingencies (see Note 20) and legal contingencies (Note 29) and commitments relating to pensions and other provisions for an aggregate amount of €1,115 million; and iii) obligations associated with the stake in joint businesses amounting to €1,668 million, mainly obligations acquired in RSRUK for €1,515 million (see Note 8).

⁽⁵⁾ In 2016, this heading mainly reflects, under "Onerous contracts", payments for drilling platform leases and other long-term onerous contracts, and, under "Other provisions", personnel restructuring payments.

"Other provisions" includes mainly the provisions recognized to cover obligations deriving under tax claims (see Note 20), lawsuits and arbitration proceedings (Note 29), environmental risks (Note 31.2), consumption of CO₂ allowances (Note 31.5), pension commitments (Note 28.2), employee incentive schemes (Notes 28.3 and 28.4), personnel restructuring, and other provisions to cover obligations arising from the Group's interests in other companies.

In this context, during 2016, the necessary steps to materialize the workforce reduction announced under the scope of the 2016-2020 Strategic Plan have continued.

As recorded in the minutes of proceedings of the Oversight Committee for the Seventh Framework Agreement signed on June between union representatives and Repsol's management, it was decided that the most suitable mechanism to implement the workforce downsizing in Spain was to set in motion a collective layoff process.

The layoffs were processed at each affected company in accordance with prevailing labor law. The process was completed in July, with the signing of the certificate of completion of the consultation period and subsequent notification to the Ministry of Labor and Social Security. The criteria used to designate the affected employees included proximity to retirement age, depending on the company and workplace to which each was assigned.

At December 31, 2016, "Other provisions" includes restructuring charges calculated as agreed in as part of the above-detailed collective redundancy program in Spain in the amount of €12 million, a sum that represents the present value of the best estimate of future disbursements in respect of the people affected by the plan who will leave the company's employment. During 2016, as from initial recognition, €103 million has been paid out in this respect. The cash outlays corresponding to this provision are expected to run until 2022.

The next table provides an estimate of when the Group is likely to have the settlement timetable of provisioned contingencies and expenses recognized at year-end 2016. Nevertheless, due to the nature of the risks provisioned, these timing assessments are subject to uncertainty and changes that are beyond the Group's control. As a result, this schedule could change in the future according to the circumstances underpinning the estimates.

	€Million			Total
	Less than one year	From 1 to 5 years	More than 5 years and/or undetermined	
Provision for field dismantling costs	98	753	1,484	2,335
Provision for onerous contracts	159	463	537	1,159
Other provisions	615	2,003	887	3,505
TOTAL	872	3,219	2,908	6,999

(15) FINANCIAL LIABILITIES

This note discloses the categories of financial liabilities included in the balance sheet line-items outlined below:

	€Million	
	2016	2015
Non-current financial liabilities	9,482	10,581
Derivatives relating to non-current commercial transactions ⁽¹⁾	-	1
Current financial liabilities	6,909	7,073
Derivatives relating to current commercial transactions ⁽²⁾	282	129
TOTAL	16,673	17,784

⁽¹⁾ Recognized in “Other non-current liabilities” on the consolidated balance sheet.

⁽²⁾ Recognized in “Other payables” on the consolidated balance sheet.

15.1 Classification of financial liabilities

Following is a breakdown of the financial liabilities acquired, most of which are secured with a personal guarantee, at December 31, 2016 and 2015:

	December 31, 2016									
	Financial liabilities held for trading		Financial liabilities at amortized cost		Hedging derivatives		Total		Fair value	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Bank borrowings	-	-	1,491	1,543	-	-	1,491	1,543	1,496	1,543
Bonds and other securities	-	-	7,905	8,939	-	-	7,905	8,939	8,328	8,878
Derivatives	-	1	-	-	86	90	86	91	86	91
Other financial liabilities	-	-	-	9	-	-	-	9	-	9
Long-term/ non-current	-	1	9,396	10,491	86	90	9,482	10,582	9,910	10,521
Bank borrowings	-	-	837	1,707	-	-	837	1,707	837	1,707
Bonds and other securities	-	-	2,855	2,376	-	-	2,855	2,376	2,875	2,380
Derivatives	303	193	-	-	3	5	306	198	306	198
Other financial liabilities	-	-	3,193	2,921	-	-	3,193	2,921	3,193	2,921
Short-term/ current	303	193	6,885	7,004	3	5	7,191	7,202	7,211	7,206
TOTAL ⁽¹⁾	303	194	16,281	17,495	89	95	16,673	17,784	17,121	17,727

⁽¹⁾ At year-end 2016 this heading includes €1,550 million corresponding to “Other non-current liabilities” (year-end 2015: €1,540 million) and €08 and €06 million corresponding to “Other payables” related to finance leases carried at amortized cost that are not included in the table above.

In relation to liquidity risk, the distribution of funding by maturity at December 31, 2016 and 2015 is provided in Note 16.

The breakdown of average balances outstanding and cost by instrument is as follows:

	2016		2015	
	Average volume	Average cost	Average volume	Average cost
Bank borrowings	3,562	1.81%	3,304	1.60%
Bonds and other marketable securities	10,152	3.33%	10,324	3.76%
Other financial liabilities	2,984	1.83%	2,904	1.39%
TOTAL	16,698	2.74%	16,532	2.91%

Bank borrowings

This heading reflects the loans granted to the Group companies, mainly in Spain and Peru, by several banks in order to fund their projects and operations. It also includes drawdowns under short-term credit facilities extended by banks.

Bonds and other securities

Key issues, repurchases and redemptions carried out in 2016

- In January 2016, RIF issued €100 million of senior bonds guaranteed by Repsol, S.A. within the scope of its Euro 10,000,000,000 Guaranteed Euro Medium Term Note (EMTN) Program, due 2031 and carrying a fixed annual coupon of 5.375%, payable annually as from January 27, 2017.
- In February 2016, €50 million of fixed-annual 4.25% bonds issued by RIF within the EMTN Program in December 2011 were repaid at maturity.
- In March 2016, a nominal \$150 million of 8.5% bonds issued by ROGCI in March 2009 were repaid at maturity.
- In July 2016, RIF, within its EMTN Program, issued two senior bonds guaranteed by Repsol, S.A., one of them maturing at 2 years in an amount of €600 million and carrying a quarterly coupon of 3-month Euribor + 70 basis points, payable every quarter as from October 6, 2016, and a three-year bond in an amount of €100 million and carrying a fixed annual coupon of 0.125%, payable annually as from July 15, 2017.
- In 2016, ROGCI has repurchased bond issues due 2019, 2021, 2027, 2035, 2037, 2038 and 2042 with a total face value of \$631 million. The cancellation of the repurchased bonds has triggered the recognition of a €49 million pre-tax gain recognized in “*Impairment and gains/ (losses) on disposal of financial instruments*”.

The outstanding balance of the obligations and marketable securities at December 31 is as follows:

ISIN	Issuer	Date of issue	Currency	Nominal (million)	Average rate %	Maturity	Listed ⁽⁵⁾
US87425EAE32 ⁽³⁾	Repsol Oil & Gas Canada Inc.	Oct. '97	Dollar	55	7.250%	Oct. '27	-
XS0145515655	Repsol Oil & Gas Canada Inc.	Apr. '02	Sterling	250	6.625%	Dec. '17	LSE
US87425EAH62 ⁽³⁾	Repsol Oil & Gas Canada Inc.	May '05	Dollar	90	5.750%	May '35	-
US87425EAJ29 ⁽³⁾	Repsol Oil & Gas Canada Inc.	Jan. '06	Dollar	131	5.850%	Feb. '37	-
US87425EAK91 ⁽³⁾	Repsol Oil & Gas Canada Inc.	Nov. '06	Dollar	119	6.250%	Feb. '38	-
XS0287409212 ⁽¹⁾	Repsol International Finance, B.V.	Feb. '07	Euro	886	4.750%	Feb. '17	LuxSE
US87425EAL74 ⁽³⁾	Repsol Oil & Gas Canada Inc.	Jun. '09	Dollar	364	7.750%	Jun. '19	-
US87425EAM57 ⁽³⁾	Repsol Oil & Gas Canada Inc.	Nov. '10	Dollar	241	3.750%	Feb. '21	-
XS0733696495 ⁽¹⁾	Repsol International Finance, B.V.	Jan. '12	Euro	1,000	4.875%	Feb. '19	LuxSE
US87425EAN31 ⁽³⁾	Repsol Oil & Gas Canada Inc.	May '12	Dollar	97	5.500%	May '42	-
XS0831370613 ⁽¹⁾	Repsol International Finance, B.V.	Sep. '12	Euro	750	4.375%	Feb. '18	LuxSE
XS0933604943 ⁽¹⁾	Repsol International Finance, B.V.	May '13	Euro	1,200	2.625%	May '20	LuxSE
XS0975256685 ⁽¹⁾	Repsol International Finance, B.V.	Oct. '13	Euro	1,000	3.625%	Oct. '21	LuxSE
XS1148073205 ⁽¹⁾	Repsol International Finance, B.V.	Dec. '14	Euro	500	2.250%	Dec. '26	LuxSE
XS1207058733 ⁽²⁾	Repsol International Finance, B.V.	Mar. '15	Euro	1,000	4.500% ⁽⁴⁾	Mar. '75	LuxSE
XS1334225361 ⁽¹⁾	Repsol International Finance, B.V.	Dec. '15	Euro	600	2.125%	Dec. '20	LuxSE
XS1352121724 ⁽¹⁾	Repsol International Finance, B.V.	Jan. '16	Euro	100	5.375%	Jan. '31	LuxSE
XS1442286008 ⁽¹⁾	Repsol International Finance, B.V.	Jul. '16	Euro	600	3M Euribor+70 bp	Jul. '18	LuxSE
XS1451452954 ⁽¹⁾	Repsol International Finance, B.V.	Jul. '16	Euro	100	0.125%	Jul. '19	LuxSE

⁽¹⁾ Issues made under RIF's EMTN Program, which is guaranteed by Repsol, S.A., as renewed in September 2015.

⁽²⁾ Subordinated bond issued by RIF and guaranteed by Repsol, S.A. This issue does not correspond to any open-ended or shelf program.

⁽³⁾ Issues placed by ROGCI under the scope of the Universal Shelf Prospectus program in the United States and the Medium-Term Note Shelf Prospectus program in Canada.

⁽⁴⁾ Coupon scheduled for reset on March 25, 2025 and March 25, 2045.

⁽⁵⁾ LuxSE (Luxembourg Stock Exchange) and LSE (London Stock Exchange). Excludes unofficial trading platforms and OTC markets.

RIF runs a Euro Commercial Paper (ECP) Program, arranged on May 16, 2013 and guaranteed by Repsol, S.A., with a limit up to €2,000 million; the Program was updated on July 29, 2016. Under this program, a number of issues and liquidations were carried out, with an outstanding balance at December 31, 2016 of €1,473 million (€1,163 million at December 31, 2015).

Finally, ROGCI's U.S. Commercial Paper (USCP) Program, arranged in October 2011 for a maximum amount of \$1,000 million, was terminated in 2016. Issues made within this program had already been entirely liquidated by December 31, 2015.

Key issues, repurchases and redemptions carried out in 2015

- On March 25, 2015, Repsol International Finance B.V. (RIF) issued subordinated bonds due 2075, guaranteed by Repsol, S.A., with a nominal value of €1,000 million (redeemable at the request of the issuer from year ten or under certain circumstances stipulated in the bond terms and conditions).¹

The bonds, which were issued at 100% of par, were placed with qualified investors and are traded on the Luxembourg stock exchange. The issue accrues a fixed annual coupon of 4.5% from the issuance date until March 25, 2025, which is payable to the bondholders annually from March 25, 2016; from March 25, 2025, it accrues a fixed annual coupon equivalent to the 10-year swap rate plus a spread.

The issuer can defer the coupon payments without being in breach of its covenants. Coupons so deferred will be cumulative and will be paid under certain instances defined in the issuing terms and conditions.

- On May 15, 2015 a ROGCI bond issued in 2005 amounting €334 million with a coupon of 5.125% matured.
- In November 2015, ROGCI announced an offer to buy back five bond issues due 2027, 2035, 2037, 2038 and 2042 and carrying coupons of 7.25%, 5.75%, 5.85%, 6.25% and 5.5%, respectively. The buyback encompassed bonds with an aggregate nominal value of \$1,572 million at a discount to par of 14.5%, paying the respective bondholders on December 11.

On December 23, 2015, ROGCI agreed to buyback a 7.75% bond due 2019. As a result, it bought back bonds with a total nominal value of \$127 million, paying the respective bondholders on December 24.

The cancellation of the repurchased bonds triggered the recognition in the financial statements for 2015 of a €13 million pre-tax gain (recognized in "*Impairment and gains/(losses) on disposal of financial instruments*"), which is the difference between their carrying amount and the sum paid to partially buy back and cancel the bonds.

- On December 16, 2015, RIF, within its EMTN Program, issued a senior bond guaranteed by Repsol, S.A., maturing in 2020, in an amount of €600 million and carrying a fixed annual coupon of 2.12%, payable annually as from February 16, 2017.

Financial conditions and debt obligations

In general, the financial debt agreements include the early termination clauses customary in agreements of this nature.

The ordinary bonds issued by Repsol International Finance, B.V. (RIF) and guaranteed by Repsol, S.A. - with an aggregate face value at year-end of €6,736 million - contain certain early redemption and bond

¹ On March 16, 2016, RIF and Repsol, S.A. undertook not to trigger early redemption if a credit rating agency were to assign to the bond a lower equity content than that assigned at the issue date as a result of applying a different valuation approach owing to changes in the credit rating accorded to the issuer and/or the guarantor (one of the early redemption triggers – "*Capital Events*" – available to the issuer, as set out in the terms and conditions of the issue).

acceleration covenants (including cross-acceleration and cross-default clauses - applicable to the issuer and the guarantor) and a pledge not to encumber the assets of the issuer or guarantor to secure future bond issues. In the event of breach of any of these covenants, the trustee, at its sole discretion or at the behest of the holders of at least one-fifth of the bonds or on the basis of an extraordinary bondholder resolution, is entitled to declare the call of the bonds immediately. In addition, the holders of the bonds issued in 2012, 2013, 2014, 2015 and 2016 can elect to have their bonds called in the event of a change of control at Repsol or if, as a result of such change of control, Repsol's credit ratings are downgraded to below investment grade status.

Additionally, the €1,000 million subordinated bonds issued on March 25, 2015 by RIF and guaranteed by Repsol, S.A. do not have early redemption covenants other than in the event of dissolution or liquidation. The same conditions apply to the subordinated bond of €1,000 million described in Note 13.3.

The ordinary bonds issued by ROGCI - with an aggregate nominal value at year-end of €1,331 million - are not guaranteed by Repsol contain certain early redemption and bond acceleration covenants (including cross-acceleration or cross-default clauses - applicable to the issuer and its main subsidiaries), as well as an undertaking not to encumber the assets of the issuer and its main subsidiaries to secure other debts and obligations, including future bond issues.

On May 25, 2016, ROGCI cancelled a syndicated credit facility for \$3,000 million and a bilateral credit facility for \$200 million, both of which were available for use until March and October 2019, respectively. No drawings were outstanding on the cancellation date. The facilities carried a consolidated debt/cash flow covenant to the effect that, quarter by quarter, debt could not exceed cash flow by 3.5 times or more.

At the date of preparation the accompanying financial statements for issue, the Repsol Group was not in breach of any of its financial obligations or of any other obligation that could trigger the early repayment of any of its financial commitments.

At December 31, 2016 and 2015 there are no amounts secured by the Group companies in issuances, repurchases or redemptions made by associates, joint arrangements or companies that are not part of the Group.

Other financial liabilities

It includes the loans granted by Group companies that are not eliminated through the consolidation process; they consist primarily of transactions between entities consolidated using the equity method in the amount of €3,193 million at year-end 2016 and €2,930 million at year-end 2015. The loan granted by Repsol Sinopec Brasil S.A., via its subsidiary Repsol Sinopec Brasil B.V. to its shareholders (including the Repsol Group) in proportion to their respective shareholdings stands out. (see Note 8), which at December 31, 2016 and 2015 showed an outstanding balance for the Group of €2,942 million and €2,819 million, respectively. This loan is renewed annually and can be called according to agreed-upon authorization levels.

15.2 Fair value

The classification of the financial liabilities recognized in the financial statements at fair value, by fair value calculation method, is as follows:

	Level 1		Level 2		Level 3		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Financial liabilities held for trading	215	4	88	190	-	-	303	194
Hedging derivatives	-	-	89	95	-	-	89	95
TOTAL	215	4	177	285	-	-	392	289

Level 1: Valuations based on a quoted price in an active market for an identical instrument.

Level 2: Valuations based on a quoted price in an active market for similar financial assets or based on other valuation techniques that rely on observable market inputs.

Level 3: Valuations based on inputs that are not directly observable in the market.

The valuation techniques used for the instruments classified under level 2, in accordance with accounting regulations, are based on the income approach, which entail the discounting to present value of future cash flows, either known or estimated, using discount curves from the market reference interest rates (in the case of derivative instruments, estimated using implicit forward curves offered in the market), including adjustments for credit risk based on the life of the instruments. In the case of options, price-setting models based on the Black & Scholes formula are used.

The most significant variables for valuing financial liabilities vary depending on the type of instrument, but fundamentally include: exchange rates (spot and forward), interest rate curves, counterparty risk curves, prices of equity securities and the volatilities of all the aforementioned factors. In all cases, market data is obtained from reputed information agencies or correspond to quotes issued by official bodies.

(16) FINANCIAL RISKS¹

16.1) Financial risk management

Group business is exposed to different kinds of financial risk, including: market risk, liquidity risk and credit risk. Repsol has a risk management structure and systems that enable it to identify, measure and control the risks to which the Group is exposed.

16.1.1) Market risk

Market risk is the potential loss faced due to adverse movements in market variables. The Group is exposed to several types of market risks: exchange rate risk, interest rate risk and commodity risk.

The Company monitors exposure to market risk through ongoing sensitivity analysis. These strategies are complemented with other risk management measures when required by the nature of the risk exposure.

For each of the market risk factors detailed below, there is a table depicting the sensitivity of Group profit and equity (within the headings comprising “*Other comprehensive income*”) to the main risks to which its financial instruments are exposed, in accordance with the requirements stipulated in IFRS 7 *Financial instruments: data to be disclosed*.

This sensitivity analysis varies the inputs for the significant risk factors based on historical performance. The estimates made depict the impact of favorable and adverse changes. The impact on profit and/or equity is estimated as a function of the financial instruments held by the Group at each year end.

a) Exchange rate risk

The Group’s profit and equity are exposed to fluctuations in the exchange rates of the currencies in which it transacts. The Group’s most significant foreign currency exposure is to the US dollar.

Repsol obtains part of its financing in dollars (see Note 15), either directly or through the use of foreign exchange derivatives (see Note 17).

The sensitivity of net income and equity to exchange rate risk, as a result of the appreciation or depreciation of the euro against the dollar, on the financial instruments held by the Group at year end, is illustrated below:

¹Repsol has an integrated risk management model designed to anticipate, manage, and control risks from a global perspective. For further information on the integrated risk management model and the risk factors to which the Group is exposed, see section 8 “Risks” of the Management Report 2016 (<https://www.repsol.com>).

	Appreciation (+) / depreciation (-) in exchange rates	€Million	
		2016	2015
Effect on earnings after tax	5%	(27)	15
	-5%	30	(16)
Effect on equity	5%	202	186
	-5%	(223)	(205)

b) Interest rate risk

Fluctuations in interest rates can affect interest income and expense of financial assets and liabilities with variable interest rates; which can also impact the fair value of financial assets and liabilities with a fixed interest rate.

Repsol contracts interest rate derivatives to reduce the risk of changes in financial charges or the market value of its debt. These derivatives are designated in general as hedging instruments (see Note 17).

At year end 2016 and 2015, the net debt balance at fixed rates was €9,302 million and €10,697 million respectively. This is equivalent to 100% and 80%, respectively, of total net debt including interest rate derivatives.

The sensitivity of net income and equity, as a result of the effect of fluctuations in interest rates on the financial instruments held by the Group at year end, is illustrated in the following table:

	Increase (+) / decrease (-) in interest rates (basic points)	€Million	
		2016	2015
Effect on earnings after tax	+50	-	(10)
	-50	-	10
Effect on equity	+50	14	14
	-50	(14)	(14)

c) Commodity price risk

As a result of its trade operations and activities, the Group's results are exposed to volatility in the prices of oil, natural gas and their derivative products.

Repsol enters into derivative transactions to mitigate its exposure to price risk. These derivatives provide an economic hedge of the Group's results, although they are not always designated as hedging instruments for accounting purposes (see Note 17).

The approximate impact of a 10% increase or decrease in crude and oil product prices in the net income, as a result of its effects on the financial instruments held by the Group at year end 2016 and 2015, is illustrated in the following table:

	Increase (+) / decrease (-) in crude oil and byproducts prices	€Million	
		2016	2015
Effect on earnings after tax	+10%	(33)	(6)
	-10%	33	6

16.1.2) Liquidity risk

Liquidity risk is associated to the ability of the Group to finance its obligations at reasonable market prices, as well as to carry out its business plans with stable financing sources.

Repsol maintains, in line with its prudent financial policy, cash resources and other liquid financial instruments and undrawn credit lines sufficient to cover current debt maturities 1.3 times. The Group had unused credit lines amounting to €4,429 and €6,360 million at December 31, 2016 and 2015, respectively.

The tables below present an analysis on the maturities of the financial liabilities existing at December 31, 2016 and 2015:

December 31, 2016	Maturity (€million)						Total
	2017	2018	2019	2020	2021	Subsequent	
Trade payables	2,128	-	-	-	-	-	2,128
Other payables	4,365	-	-	-	-	-	4,365
Loans and other financial debts ⁽¹⁾	7,068	1,918	1,961	2,155	1,529	5,810	20,441
Derivatives ⁽²⁾	130	12	10	9	8	35	204

December 31, 2015	Maturity (€million)						Total
	2016	2017	2018	2019	2020	Subsequent	
Trade payables	1,799	-	-	-	-	-	1,799
Other payables	3,975	-	-	-	-	-	3,975
Loans and other financial debts ⁽¹⁾	7,215	1,825	1,326	2,096	2,231	7,236	21,929
Derivatives ⁽²⁾	83	13	11	9	8	35	159

Note: The amounts shown are the contractual undiscounted cash flows; therefore, they differ from the amounts included on the consolidated balance sheet.

⁽¹⁾ Corresponds to future maturities of amounts registered under the headings “*Non-current financial liabilities*” and “*Current financial liabilities*”, including interests or future dividends related to those financial liabilities. It does not include financial derivatives.

⁽²⁾ The contractual maturities of the derivatives included under this heading are outlined in Note 17. It does not include trade derivatives within “*Other non-current liabilities*” and “*Other payables*” on the consolidated balance sheet.

16.1.3) Credit risk

Credit risk is defined as the possibility of a third party not complying with his contractual obligations, thus creating losses for the Group.

Credit risk in the Group is measured and controlled in relation to the customer or individual third party. The Group has its own systems for the permanent credit evaluation of all its debtors and the determination of risk limits with respect to third parties, in line with best practices.¹

The exposure of the Group to credit risk is attributable, among others, to commercial debts from trading transactions, whose amounts are shown on the consolidated balance sheet net of allowances for impairment provisions for an amount of €4,746 million and €4,119 million, respectively at December 31, 2016 and 2015.

¹ The credit risk information set out in this section does not include credit risk of associates or joint ventures (see Note 22.3).

The following table shows the age of non-provisioned debt:

Time past due	€Million	
	2016	2015
Debt not fallen due	4,403	3,804
Debt fallen due 0-30 days	192	167
Debt fallen due 31-180 days	67	103
Debt fallen due more than 180 days ago	84	45
TOTAL	4,746	4,119

The Group periodically assesses the existence of objective evidence of impairment after a financial asset has been initially recognized; if it is determined that there is credit loss, the respective bad debt provisions are assigned. The assessed criteria for assigning these provisions include the following:

- The aging of the debt.
- The existence of bankruptcy proceedings.
- The analysis of the capacity of the customer to return the credit granted.

Note 12 “*Trade and other receivables*” includes the registered impairment losses on December 31, 2016 and 2015. These allowances represent the best estimates of the Group for the losses incurred in relation to its accounts receivable.

The Group’s exposure to credit risk also derives from debts with a financial nature which are carried on the consolidated balance sheet net of the corresponding impairment provisions. The breakdown of impaired financial assets and the impact on the consolidated income statement are provided in Note 10 *Financial assets*.

The maximum exposure (prior to impairment remeasurements) to credit risk of the Group, according to the type of financial instruments and without excluding the amounts covered by guarantees and other arrangements mentioned further on this note, is detailed below at December 31, 2016 and 2015:

Maximum exposure	Note	€Million	
		2016	2015
- Non-current financial assets ⁽¹⁾	10	3,174	2,613
- Trade receivables	12	4,960	4,249
- Derivatives	10	95	481
- Cash and cash equivalents	10	4,687	2,448
- Other current financial assets ⁽²⁾	10	1,249	1,172

⁽¹⁾ Not including derivatives. At both reporting dates, this item includes the loans granted to the Petersen group to fund the acquisition of its interest in YPF S.A.; these loans have been fully written down for impairment.

⁽²⁾ Mainly includes current loans and receivables.

The credit risk affecting liquid funds, derivatives and other financial instruments is generally more limited than the accounts trade receivables because the counterparties are banks or insurance entities that meet the standards of solvency in accordance with the internal valuation models and market conventions regulating these kinds of financial transactions. Likewise, the vast majority of the accounts receivable neither due nor provisioned have a credit quality assigned according to the valuations of the Group, based on the solvency analysis and the payment habits of each customer.

The Group’s credit risk on trade receivables is not significantly concentrated as it is spread out among a large number of customers and other counterparties. The maximum net exposure to a third party, including official bodies and public sector entities, does not exceed 9%, and no single private client accumulates risk exposure of more than 1%.

As a general rule, the Group establishes a bank guarantee issued by the financial entities as the most suitable instrument of protection from credit risk. In some cases, the Group has contracted insurance credit policies whereby this transfers partially to third parties the credit risk related to the business activity of some of their businesses.

As part of its business activities, the Group has guarantees extended by third parties in an aggregate amount of €3,992 million at December 31, 2016 and €3,798 million at December 31, 2015. Of this balance, the amount of trade receivables secured by guarantees stood at €801 million at December 31, 2016 and €715 million at December 31, 2015.

During 2016, the Group executed guarantees received for an amount of €6 million. During 2015 this figure was €12 million.

16.2) Capital management

Repsol, as an essential part of its strategy, has committed to a policy of financial prudence. The financial structure targeted is defined by this commitment of solvency and the aim to maximize shareholder returns, by optimizing the cost of capital.

Determination of the Group's target capital structure takes into consideration the leverage ratio defined as the ratio between net financial debt and net capital employed:

$$\text{Leverage ratio} = \frac{\text{Net Financial Debt}^{(1)}}{\text{Net Capital Employed}^{(2)}}$$

(1) The formula considers net and not gross debt to factor in the effect of financial investments. In keeping with its conservative financial policy, Repsol holds cash and cash equivalents and undrawn credit lines. As a result, the net debt leverage ratio provides a more accurate picture of the Group's financial solvency.

(2) Corresponds to the sum of net financial debt and equity.

The breakdown of the calculations of these ratios, based on the following consolidated balance sheet headings at year end 2016 and 2015, is as follows:

	€Million	
	2016	2015
Non-current financial liabilities	9,482	10,581
Current financial liabilities	6,909	7,073
Non-current financial assets	(1,204)	(715)
Less financial assets available for sale (see note 10)	83	82
Other current financial assets	(1,280)	(1,237)
Cash and cash equivalents	(4,687)	(2,448)
Exchange rate-driven and other derivatives (see note 17)	(87)	(92)
Joint venture net debt	(1,112)	(1,310)
Net financial debt ^{(1) (2)}	8,104	11,934
Equity	31,111	28,762
Net capital employed ^{(1) (3)}	39,215	40,696
Net financial debt / Net capital employed	20.7%	29.3%

(1) Figures calculated according to the Group's reporting model described in Note 2.3. For further information, see Appendix I "Alternative Performance Metrics" of the first-half 2016 Group management report (<https://www.repsol.com>).

(2) Does not include €1,758 million and €1,747 million, respectively, relating to debts for current and non-current financial leases (see Note 18).

(3) Net Capital employed in 2016 includes that corresponding to discontinued operations.

The trend and analysis of this ratio is monitored systematically. Moreover, leverage projections are performed as a key and restrictive input into Group investment decision-making and dividend policy.

(17) DERIVATIVE AND OTHER TRANSACTIONS

The table below reflects the impact on the consolidated balance sheet of derivative instruments at December 31, 2016 and 2015 as a result of changes in their fair value since their arrangement and their maturities:

€ Million

Classification	Non-current assets		Current assets		Non-current liabilities		Current liabilities		Total fair value	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
December 31										
Cash flow hedges	-	-	-	1	(86)	(90)	(3)	(3)	(89)	(92)
Interest rate	-	-	-	-	(86)	(90)	(2)	(3)	(88)	(93)
Exchange rate	-	-	-	-	-	-	-	-	-	-
Commodity price	-	-	-	1	-	-	(1)	-	(1)	1
Net investment hedges	-	-	-	-	-	-	-	(2)	-	(2)
Exchange rate	-	-	-	-	-	-	-	(2)	-	(2)
Other derivative transactions	-	4	95	477	-	(1)	(303)	(193)	(208)	287
Exchange rate	-	-	31	65	-	-	(22)	(64)	9	1
Commodity price	-	4	64	412	-	(1)	(281)	(129)	(217)	286
TOTAL ⁽¹⁾	-	4	95	478	(86)	(91)	(306)	(198)	(297)	193

⁽¹⁾ In 2016 and 2015, this heading includes derivatives with a negative measurement in respect of interest rates of -€7 million and -€8 million, respectively.

The breakdown of the impact of the fair value restatement of financial instruments on the consolidated income statement and on consolidated equity is as follows:

€ Million	Operating income		Financial result		Adjustment for changes in value	
	2016	2015 ⁽¹⁾	2016	2015	2016	2015
Cash flow hedges	(4)	25	(30)	(27)	18	562
Net investment hedges	(12)	(13)	-	-	(168)	(12)
Other transactions	(226)	380	189	1,045	-	-
Total	(242)	392	159	1,018	(150)	550

⁽¹⁾ In 2015, the fair value remeasurement of the Group's trading derivatives generated a pre-tax fair value gain of €03 million, which is recognized in "Other operating income" as well as a pre-tax fair value loss of €497 million, recognized under "Other operating expenses" in the accompanying income statement.

There follows a detailed disclosure of the Group's most significant transactions related to derivative financial instruments at year end 2016 and 2015.

17.1) Accounting hedges

The most significant transactions correspond to:

- Financial instruments designated as net investment hedge in certain dollar-denominated assets in the Upstream segment and whose notional as of this date is \$3,058 million (€2,722 million). As of December 31, 2015 the notional amount of net investment hedges came to \$296 million (€270 million).
- The hedges arranged in 2016 and 2015 over product prices corresponded mainly to hedges of dollar-denominated cash flows; the aim was to hedge gas price variability. These instruments matured within less than one year. At the reporting date, the notional amount stood at €28 million and fair value at -€1 million. As of December 31, 2015, the notional amount stood at €23 million and fair value at €1 million.

- Cash flow hedges in the form of interest rate swaps arranged in 2014 for a notional amount of €1,500 million to hedge future bond issues in late 2014 and early 2015 (see Note 15). Under these arrangements, the Group paid a weighted average interest rate of 1.762% and received 6-month EURIBOR. In 2016, these hedges generated a €15 million gain in profit and loss (€9 million in 2015). The fair value changes recognized in equity and pending to be reclassified to profit and loss stood at a loss of €92 million (after tax) at December 31, 2016 (€103 million after tax at December 31, 2015).
- A cash flow hedge in dollars in the form of interest rate swaps associated with the facility funding the investment in the Canaport LNG project (Canada), written over a notional amount of €352 million, maturing after 2019 and with a negative fair value at year-end of €8 million. At the reporting date, the notional amount stood at €353 million and negative fair value at €2 million.
- In March 2015, the Group made a deferred purchase using forward contracts and currency swaps of nominal amounts of \$8,289 million and CAD 201 million, designated as accounting cash flow hedges linked to the acquisition of ROGCI (see Note 4.2). The cumulative effect of marking to market recognized in equity under "Other comprehensive income" came to €25 million before tax, and was treated as an increase in the cost of acquisition.

17.2) Other derivative transactions

Repsol has arranged a series of derivatives to manage its exposure to foreign exchange rate and price risk that do not qualified as accounting hedges under IAS 39.

These derivatives include currency forward contracts which mature in less than a year, as part of the global strategy to manage the exposure to exchange-rate risk.

Additionally, for the coverage of the risk which derives from future physical transactions such as the selling and/or purchase of oil and other petroleum products, the Group has entered into futures and swap contracts.

A detail of these derivatives at year-end 2016 and 2015 is provided below:

€ Million	FAIR VALUE MATURITY											
	2016						2015					
	2017	2018	2019	2020	Subs.	Total	2016	2017	2018	2019	Subs.	Total
Exchange rate	9	-	-	-	-	9	1	-	-	-	-	1
Commodity price	(217)	-	-	-	-	(217)	283	3	-	-	-	286
Purchase contracts	620	-	-	-	-	620	(750)	-	-	-	-	(750)
Sale contracts	(676)	-	-	-	-	(676)	886	-	-	-	-	886
Options	-	-	-	-	-	-	(1)	-	-	-	-	(1)
Swaps	-	-	-	-	-	-	159	-	-	-	-	159
Forwards	(171)	-	-	-	-	(171)	2	-	-	-	-	2
Other ⁽¹⁾	10	-	-	-	-	10	(13)	3	-	-	-	(10)
TOTAL	(208)	-	-	-	-	(208)	284	3	-	-	-	287

⁽¹⁾ Corresponds to the market valuation of the contracts of purchase-sale of commodities, measured under IAS 39, as described in Note 2.25.

The physical units and the fair value of product price derivatives are itemized below:

	12/31/2016 (Physical units)	Fair value (€ million)		12/31/2015 (Physical units)	Fair value (€ million)
Purchase contracts		620	Purchase contracts		(750)
IPE GO (thousands of tons)	201	14	IPE GO (thousands of tons)	563	(40)
BRENT (thousands of barrels)	5,809	164	BRENT (thousands of barrels)	24,770	(241)
NYMEX HHO (thousands of gallons)	239	203	NYMEX HHO (thousands of gallons)	1,200,528	(402)
RBOB (thousands of gallons)	205	191	RBOB (thousands of gallons)	638,106	(58)
WTI (thousands of barrels)	797	39	WTI (thousands of barrels)	-	-
Other	n/a	9	Other	n/a	(9)
Sale contracts		(675)	Sale contracts		886
IPE GO (thousands of tons)	419	(20)	IPE GO (thousands of tons)	1,038	108
BRENT (thousands of barrels)	6,586	(174)	BRENT (thousands of barrels)	26,234	260
NYMEX HHO (thousands of gallons)	294	(207)	NYMEX HHO (thousands of gallons)	1,272,138	446
RBOB (thousands of gallons)	203	(192)	RBOB (thousands of gallons)	686,490	62
WTI (thousands of barrels)	255	(44)	WTI (thousands of barrels)	1,603	10
Physical SoNat (thousands of gallons)	110,771	37	Physical SoNat (thousands of gallons)	-	-
Physical Tenn 800Leg (thousands of gallons)	243,962	(25)	Physical Tenn 800Leg (thousands of gallons)	-	-
Physical Tenn 500Leg (thousands of gallons)	686,134	(17)	Physical Tenn 500Leg (thousands of gallons)	-	-
GO (thousands of tons)	417	(14)	GO (thousands of tons)	-	-
Physical Dom South (thousands of gallons)	70,992	(14)	Physical Dom South (thousands of gallons)	-	-
Other	n/a	(5)	Other	n/a	-
Swaps		(172)	Swaps		158
NAT GAS FUTS (MMBTU)	6,654,023	(36)	NAT GAS FUTS (MMBTU)	8,160,013	61
Fuel Oil (thousands of tons)	5,154	(57)	Fuel Oil (thousands of tons)	7,334	49
Crude (thousands of tons)	25,551	(54)	Crude (thousands of tons)	5,455	25
NAFTA (thousands of tons)	1,566	3	NAFTA (thousands of tons)	40,543	23
Jet (thousands of tons)	338	(1)	Jet (thousands of tons)	376	15
Other	n/a	(27)	Other	n/a	(14)
Other	n/a	10	Other	n/a	(9)
TOTAL		(217)	TOTAL		286

In 2016, the Group arranged short-term forward contracts and currency swaps that generated a pre-tax gain of €134 million, which is recognized in “*Change in fair value of financial instruments*” in the consolidated income statement.

(18) OTHER NON-CURRENT LIABILITIES

“*Other non-current liabilities*” includes the following items:

	€Million	
	2016	2015
Obligations under finance leases	1,550	1,540
Guarantees and deposits	121	143
Deferred income ⁽¹⁾	39	30
Other	299	229
Total	2,009	1,942

⁽¹⁾ Includes the amounts associated to the CO₂ emission allowances granted free of charge (see Note 6).

18.1) Obligations under finance leases

The breakdown of the amounts payable under finance leases at December 31, 2016 and 2015 is as follows:

	€Million		€Million	
	Lease payments		Present value of minimum lease payments	
	2016	2015	2016	2015
Within one year	221	218	208	207
From 2nd to 5th years, both inclusive	830	814	633	624
From 6th year onward	2,434	2,539	917	916
	3,485	3,571	1,758	1,747
Less:				
Future financial expenses	(1,727)	(1,824)		
Total	1,758	1,747		
Recognized as:			2016	2015
Non-current obligations under finance leases			1,550	1,540
Current obligations under finance leases (Note 19)			208	207
Total			1,758	1,747

The effective average interest rate on obligations under finance leases at December 31, 2016 was 9.04% (8.95 % at December 31, 2015).

The main liabilities related to finance leases shown in this heading at December 31 are as follows:

- On May 15, 2006 the Group signed an agreement with Emera Brunswick Pipeline Company, Ltd. for the transportation of natural gas through a pipeline that connects the Canaport plant with the US border. The agreement has an initial term of 25 years (renewable for up to an additional 30 years). It came into effect in July 2009. At December 31, 2016 and 2015, the amount recognized in this heading was \$466 million (€442 million) and \$476 million (€437 million), respectively.
- In addition, on April 21, 2006 the Group signed an agreement with Maritimes & North East Pipeline for the transportation of Canadian natural gas from the Canadian border to Dracut for an initial term of 25 years (renewable for up to an additional 30 years). The agreement became effective in March 2009. The corresponding liability recognized in this heading at year end 2016 and 2015 amounted to \$1,164 million (€1,104 million) and \$1,189 million (€1,092 million), respectively.

18.2) Guarantees and deposits

This heading includes, among others, deposits received by Repsol Butano, S.A. from the users of gas bottles in accordance with applicable legal regulations. These amounts are refundable when the corresponding contracts are cancelled.

(19) TRADE PAYABLES AND OTHER PAYABLES

Repsol had the following accounts payable classified under “Trade payables and other payables”:

	€Million	
	2016	2015
Trade payables	2,128	1,799
Obligations under finance leases (Note 18)	208	207
Tax payables	535	504
Derivative financial instruments (Note 17)	282	129
Other	3,340	3,134
Other payables	4,365	3,975
Current income tax liability	317	245
Total	6,810	6,019

The fair value of these current items does not differ significantly from their carrying amount.

Information regarding deferrals of payments settled with suppliers

The disclosures made in respect of the average payment term for trade payables are presented in keeping with the stipulations of additional provision three of Spanish Law 15/2010 (of July 5, 2010) (as amended by means of final provision two of Law 31/2014, of December 3, 2013) and prepared in keeping with the related resolution issued by the ICAC (acronym in Spanish for the Audit and Accounting Institute) in January 2016.

The information regarding the average term of payment to the suppliers of the Group's Spanish companies in 2016 pursuant to the sole additional provision of the above-mentioned resolution is as follows:

	Days	
	2016	2015
Average payment period to suppliers ⁽¹⁾	27	29
Ratio of paid transactions ⁽²⁾	27	29
Ratio of outstanding payment transactions ⁽³⁾	22	30

	€Million	
	2016	2015
Total payments	10,450	10,992
Total outstanding payments	219	193

⁽¹⁾ $((\text{Ratio of paid transactions} * \text{total amount of payments made}) + (\text{Ratio of Outstanding payment transactions} * \text{total outstanding payments})) / (\text{Total payments} + \text{total outstanding payments})$.

⁽²⁾ $\Sigma (\text{number of days of payment} * \text{amount of the transaction paid}) / \text{Total payments}$.

⁽³⁾ $\Sigma (\text{number of days outstanding payment} * \text{amount of the transaction outstanding payment}) / \text{Total outstanding payments}$.

According to the transitional provisions of Law 15/2010, the maximum legal payment deadline is 60 days.

(20) TAX SITUATION

20.1) Income tax

In the area of taxation and, particularly, of profits taxation, Repsol Group is subject to the legislation of several tax jurisdictions due to the broad geographic mix and the relevant international nature of the business activities carried out by the companies it comprises.

For this reason, the Repsol Group's effective tax rate is shaped by the breakdown of earnings obtained in each of the countries where it operates and, on occasion, by the taxation of said profits in more than one country (double taxation).

a) In Spain

Most of the entities resident in Spain for tax purposes are subject to taxation in Spain under Spain's special consolidated tax regime. Under this regime, the companies comprising the tax group jointly determine the Group's taxable profit and tax liability, which is then allocated to these companies following the criteria established by the ICAC (acronym in Spanish for the Audit and Accounting Institute) in relation to the recognition and determination of individual corporate tax liabilities.

Repsol, S.A. is the parent of Consolidated Tax Group 6/80, which comprises all of the companies resident in Spain that are at least 75%-owned, directly or indirectly, by the parent and that meet certain prerequisites. In 2015 the Tax Group was made up of 55 companies, the most significant of which are: Repsol, S.A. itself, Repsol Petróleo, S.A., Repsol Trading, S.A., Repsol Química, S.A., Repsol Butano, S.A., Repsol Exploración, S.A. and Repsol Comercial de Productos Petrolíferos, S.A.

Elsewhere, Petróleos del Norte, S.A. (Petronor) is the parent of Consolidated Tax Group 02/01/B, which includes Asfalnor, S.A. and applies the special regional tax regulations of Vizcaya for corporate income tax purposes.

Finally, the rest of the companies resident in Spain for tax purposes that are not included in either of the above tax groups determine their income tax individually.

The Spanish companies are taxed at the general rate of 25%, regardless of whether they pay tax as part of a tax group or individually. Exceptionally, Repsol Investigaciones Petrolíferas, S.A., which files its taxes on an individual basis under the Special Hydrocarbon Regime, is taxed at 30%, and the Petronor group, which applies the special regional regime of Vizcaya, is taxed at 28%.

The most relevant legislative reforms in Spain for the Repsol Group are summarized below:

- On September 30, 2016, there was introduced Royal Decree-law 2/2016, which alters the system of payments on account of corporate income tax. This Royal-Decree-law reintroduces to Spanish tax framework the system of "minimum payment" applicable to large companies (basically, 23% of accounting profits). For the Repsol Group, this measure means a considerable increase in payments on account of corporate income tax, which will not only anticipate payment of the final tax but also exceed it by far. These excess payments must be refunded by the tax administration.
- On December 2, 2016, the Council of Ministers adopted a package of tax measures, the most significant being those set out in Royal Decree-Law 3/2016. This Royal-Decree-law has introduced, with a variety of timeframes for application, (i) quantitative limits on the use of tax losses and double taxation tax credits from the tax quota, (ii) an obligation to reverse tax-deducted impairments of investments in subsidiaries, and (iii) restrictions on the use for tax purposes of tax losses generated on transfers of substantial shareholdings in affiliate entities or permanent establishments. Based on the best estimates and analysis performed, Repsol considers that these measures will lead to anticipated future cash outflows and the lengthening of the time horizon for using tax credits.

Finally, there was recently announced the judgment of the Court of Justice of the European Union of December 21, 2016 on whether or not the Spanish tax regime allowing deductibility of goodwill in major acquisitions involving non-resident entities (former article 12.5 of the Corporate Income Tax Law) constitutes "State aid". The decision is silent on the merits of the case; rather, it orders the court below (in this case, the General Court of the European Union) to rule upon the compatibility of this tax measure in the light of the ascertained definition of "selective advantage". The outcome of this process will not have an impact on the Group, because Repsol has made limited use of that incentive and, in any case, only in relation

to investments which in no event would be affected if the tax regime were finally held to constitute "State aid" (investments prior to December 21, 2007).

b) Other countries

The rest of the Group companies are subject to taxation in each of the countries in which they do business, applying the prevailing income tax rate under applicable local tax regulations. Group companies in some countries are also subject to a levy on minimum presumptive income in addition to income tax.

In turn, the Group companies resident in Spain that conduct some of their business in other countries are also subject to prevailing income tax in those countries in respect of the profits generated outside Spain. This is the case, for example, of the permanent establishments of the Spanish companies that carry out oil and gas exploration and production activities in other countries (including Libya, Algeria, Peru and Ecuador).

Below is a list of the statutory income tax rates applicable in the Group's main tax jurisdictions:

Country	Tax rate
Algeria ⁽¹⁾	30% - 38%
Bolivia	25%
Canada ⁽²⁾	27%
Ecuador	22%
United States ⁽³⁾	35%
Indonesia	40% - 48%
Libya	65%
Malaysia	38%
Norway	78%
The Netherlands	25%
Peru	28% - 30%
Portugal	22.5% - 29.5%
Timor - Leste	30%
Trinidad and Tobago	55% - 57.2%
Venezuela	34% (gas) and 50% (oil)
Vietnam	32% - 50%

⁽¹⁾ Plus tax on exceptional profits (TPE) by its acronym in Spanish.

⁽²⁾ Federal and provincial rate.

⁽³⁾ Federal rate.

20.2) Accrued income tax expense

The table below shows how the income tax expense accrued for accounting purposes in 2016 and 2015 was calculated, in keeping with the criteria outlined in section 24 of Note 2:

	€Million	
	2016	2015
Current income tax	(469)	181
Adjustments to current income tax ⁽¹⁾	(43)	(10)
Current income tax (a)	(512)	171
Deferred income tax	6	765
Adjustments to deferred income tax	115	60
Deferred income tax (b)	121	825
Accrued income tax (expense)/income (a+b)	(391)	996

⁽¹⁾ Correspond mainly adjustments from previous years and movements in provisions

The reconciliation of the income tax expense registered and that that would result from the application of the nominal tax rate existing in the country of the parent company (Spain) to the net profit before taxes and participated entities is as follows:

	€Million	
	2016	2015
Accounting net income before tax and before Group's results of companies accounted for using the equity method	1,677	(2,263)
Spain's corporate income tax rate ⁽¹⁾	25%	28%
Income tax (expense)/ income at nominal rate	(422)	634
Income (loss) taxed at rates other than the general Spanish rate	(56)	422
Tax credits	39	39
Non-deductible expenses	(50)	(14)
Tax losses for which no deferred tax asset was recognized	(143)	(100)
Remeasurement of deferred taxes due to exchange rate variations	(2)	(79)
Results exempted under double taxation treaties	91	117
Tax risk provision	(68)	-
Tax credit capitalization	203	-
Other items	17	(23)
Income tax (expense)/income	(391)	996

⁽¹⁾ Law 27/2014 was passed in Spain on November 28, 2014, establishing a statutory corporate tax rate of 28% in 2015 and 25% from 2016. The rate applicable under the Special Hydrocarbon Regime was also reduced to 33% in 2015 and 30% from 2016 on.

20.3) Deferred taxes

In 2016, the Group presents deferred tax assets and liabilities on a net basis in the same taxable entity. The breakdown of the deferred tax assets and deferred tax liabilities by underlying concept recognized in the accompanying balance sheet is shown below:

	€Million	
	2016	2015
Tax credits for losses, deductions and similar items	4,801	4,152
Provision for field dismantling costs	1,072	1,243
Other deferred taxes	634	570
Other provisions	378	259
Provisions for personnel	113	66
Depreciation/amortization scheduling differences	(3,631)	(3,147)
Total deferred taxes ⁽¹⁾	3,367	3,143

⁽¹⁾As a result of the acquisition of ROGCI, it was registered, for various items, a net deferred tax of €473 million on May 8, 2015.

The Repsol Group only recognizes deferred tax assets insofar as it is deemed probable that the entities (individually or on a consolidated basis) that have generated them will have sufficient taxable income in the future against which they can be utilized.

At each closing date, the consolidated entities reassess recognized deferred tax assets to verify that they still qualify for recognition and they make the appropriate adjustments on the basis of the outcome of the analysis performed. These analysis are based on: (i) the construction of hypotheses to analyze the existence of sufficient earnings for tax purposes that might offset such tax losses based on the approach used to ascertain the presence of indications of impairment in its assets (see Note 3); (ii) the assessment of earnings estimates for each entity or tax group in accordance with the Group's overall strategic plan; and (iii) the statute of limitations period and other utilization limits imposed under prevailing legislation in each country for the recovery of the tax credits.

The deferred tax assets corresponding to offsetable tax losses and tax credits pending application amount to €4,801 million and correspond mainly to:

- Spain. The tax assets recognized by Tax Group 6/80 amount to €1,694 million. On the basis of the Group's 2016-2020 strategic plan, it is estimated that most of these tax assets will be offset within a 10-

year period.

- United States. The tax assets recognized in the US amount to €2,106 million. The Group expects to have offset most of these tax assets within a 10-year period.
- Norway. The tax assets recognized in Norway amount to €198 million. The Group expects to have offset most of these tax assets within a 10-year period.
- Canada. The tax assets recognized in Canada amount to €389 million. The Group expects to have offset most of these tax assets within a 10-year period.

In addition, the Group has deferred tax assets that have not been recognized at year-end 2016 and 2015 of €3,821 million and €1,081 million respectively.

The Group has deferred tax liabilities not recognized of €3 million and €105 million at year-end 2016 and 2015 respectively. This relates to taxable temporary differences associated with investments in subsidiaries, associates and permanent establishments that qualify for the exemption provided for under IFRS.

20.4) Government and legal proceedings with tax implications

In accordance with prevailing tax legislation, tax returns cannot be considered final until they have been inspected by the tax authorities or until the inspection period in each tax jurisdiction has prescribed.

The years for which the Group companies have their tax returns open to inspection in respect of the main applicable taxes are as follows:

Country	Years open to inspection
Algeria	2012 – 2016
Australia	2012 – 2016
Bolivia	2011 – 2016
Canada	2007 – 2016
Colombia	2009 – 2015
Ecuador	2013 – 2016
Spain	2010 – 2016
United States	2011 – 2016
Indonesia	2011 – 2016
Libya	2009 – 2016
Malaysia	2012 – 2016
The Netherlands	2011 – 2016
Papua New Guinea	2013 – 2016
Peru	2012 – 2016
Portugal	2013 – 2016
Singapore	2012 – 2016
Timor - Leste	2011 – 2016
Trinidad and Tobago	2012 – 2016
Venezuela	2012 – 2016

Whenever discrepancies arise between Repsol and the tax authorities with respect to the tax treatment applicable to certain operations, the Group acts with the authorities in a transparent and cooperative manner in order to resolve the resulting controversy, using the legal avenues available to it with a view to reaching non-litigious solutions.

However, in this fiscal year, as in prior years, there are administrative and legal proceedings with tax implications that might be adverse to the Group's interest and that have given rise to litigious situations that could result in contingent tax liabilities. Repsol believes that it has acted lawfully in handling the foregoing matters and that its defense arguments are underpinned by reasonable interpretations of prevailing

legislation, to which end it has lodged appeals as necessary to defend the interests of the Group and its shareholders.

It is difficult to predict when these tax proceedings will be resolved due to the extensive appeals process. Based on the advice received from in-house and external tax experts, the company believes that the tax liabilities that may ultimately derive from these proceedings will not have a significant impact on the accompanying financial statements. In the Group's experience, the result of lawsuits claiming sizeable amounts have either tended to result in immaterial settlements or the courts have found in favor of the Group.

The Group's general criterion is to recognize provisions for tax-related proceedings that it deems it is likely to lose and does not recognize provisions when the risk of losing the case is considered possible or remote. Notwithstanding the above, in respect of the Talisman business combination (Note 4), in accordance with IFRS 3 *Business combinations*, the Group has provisioned contingencies whose probability of materialization is considered possible. The amounts to be provisioned are calculated on the basis of the best estimate of the amount needed to settle the lawsuit in question, underpinned, among others, by a case-by-case analysis of the facts, the legal opinions of its in-house and external advisors and prior experience in these matters.

The following are the main tax proceedings affecting the Group as of December 31:

Bolivia

Repsol E&P Bolivia, S.A. and YPFB Andina, S.A. are pursuing several lawsuits against administrative resolutions denying the possibility of deducting royalties and hydrocarbon interests for corporate income tax calculation purposes, prior to the nationalization of the oil sector.

The first lawsuits brought by Repsol E&P Bolivia S.A. and YPFB Andina, S.A. were resolved against Repsol's interest by the Supreme Court, whose judgement was later confirmed by the Constitutional Court.

The Company is involved in other litigation concerning the same matters, considering that its position is expressly endorsed by Law 4115 of September 26, 2009.

Brazil

Petrobras, as operator of block BM-S-9, in which Repsol has a 25% ownership interest, has been served by the Sao Paulo tax authorities of an infraction notice in relation to purported breaches of formal requirements related to the onshore-offshore movement of materials and equipment from/to the offshore drilling platform. The criterion adopted by Petrobras is in line with widespread industry practice. A court of first instance ruled in favor of the taxpayer. The State of Sao Paulo has lodged an appeal.

Secondly, Petrobras, as operator of the Albacora Leste, BM-S-7 and BMS-9 consortia, has received infraction notices with respect to several taxes for the period 2008 to 2012 in relation to payments to foreign companies for the chartering of exploration platforms and related services used at the above-listed blocks. On October 3, 2016, the administrative first-instance tribunal dismissed the application filed by Petrobras, which has lodged an appeal.

In addition, Repsol Sinopec Brasil received notices of infringement with respect to withholdings (2009 and 2011) in relation to payments to foreign companies for the chartering of exploration vessels and related services used at blocks BM S-48 and BM-C33, which Repsol Sinopec Brasil operates. The Company believes that its behavior is in line with widespread sector practice as well as compliant with the law. This case is currently being heard at an administrative federal tribunal of second instance.

Canada

The Canada Revenue Agency, or CRA, has disallowed the application of tax incentives related to the assets of the Canaport project. The Company has appealed the tax assessments (2005-2008). Canada's Tax Court ruled in favor of Repsol on January 27, 2015. However, this decision was appealed before the Federal Court of Appeal.

Furthermore, the CRA regularly inspects the Talisman Group companies resident in Canada. Since 2015, there are ongoing verification and investigation activities regarding the years 2006-2010.

Ecuador

The Ecuador internal revenue service (SRI) has disallowed the deduction from income tax (2003 to 2010) of payments for the transportation of crude oil to Ecuador company Oleoducto de Crudos Pesados, S.A. under a "Ship or pay" arrangement. The National Court of Justice has dismissed the appeals regarding 2003 and 2005 on procedural grounds, without addressing the merits of the case.

For the period 2004 to 2010, the SRI has also queried the criteria used to set the benchmark price applicable to sales of the output of Block 16, in which Repsol Ecuador, S.A. holds a 35% interest. The National Court of Justice has dismissed the appeal regarding 2005 on procedural grounds, without addressing the merits of the case.

Oleoducto de Crudos Pesados, S.A. (OCP), a 29.66% investee of Repsol Ecuador, S.A., is disputing with the government of Ecuador the tax treatment of subordinated debt issued to finance its operations. The National Court handed down a favorable ruling for this company, which the government appealed before the Constitutional Court. The Constitutional Court has set aside the National Court ruling and ordered a new ruling. The government also dismissed the National Court members who ruled in favor of the company. Later, the National Court has issued rulings in favor of the interests of SRI in respect of the 2003 to 2006 fiscal years. OCP's appeals to the Constitutional Court were dismissed. The government of Ecuador has been notified that an international arbitration action may be lodged.

Spain

In 2013 the main litigations deriving from the inspections of income tax returns from 1998 to 2001 and from 2002 to 2005 concluded. The corresponding decisions and rulings had the effect of cancelling 90% of the tax liability initially assessed by the tax authorities and that had been appealed by the Company. With regard to the penalties linked to those inspections, they have all been cancelled by the Courts.

Secondly, the assessments and penalties deriving from the inspections corresponding to the 2006-2009 corporate income tax and withholdings are still open to final administrative decision. The matters under discussion, which are mainly related to transfer pricing, foreign portfolio loss recognition, and investment incentives, imply a change in the tax authority's criteria with respect to earlier inspections. Repsol, in keeping with the reports provided by its internal and external tax advisors, believes that it has acted lawfully in these matters and, accordingly, does not expect them to result in liabilities that could have a significant impact on the Group's results. The Group will appeal the assessments handed down by the tax authorities as necessary in order to uphold and defend the Group's legitimate interests.

In relation to the sentence issued by the European Union Court of Justice on February 27, 2014, declaring the Tax on the Retail Sale of Certain Hydrocarbons (IVMDH for its acronym in Spanish) levied from 2002 to 2012, contrary to EU law, Repsol has initiated several proceedings against the Spanish tax authorities in order to uphold the interests of its customers and their right to seek the refund of the amounts incorrectly collected in this respect.

In 2016, the Spanish tax authorities continued an inspection of the Group's income tax, value added tax and other taxes and withholdings corresponding to fiscal years 2010 to 2013. Consensual tax assessments

have been signed in respect of withholdings.

Indonesia

The Indonesian Tax Authorities have been questioning various aspects of the taxation of permanent establishments that the Group holds in the country. These proceedings are pending appeals in administrative tribunals or resolution in the courts.

Malaysia

Repsol Oil & Gas Malaysia Ltd. and Repsol Oil & Gas Malaysia (PM3) Ltd., the Group's operating subsidiaries in Malaysia, have received notifications from the *Inland Revenue Board (IRB)* in respect of the years 2007, 2008 and 2011 questioning, primarily, the deductibility of certain costs. These proceedings are being heard at an administrative instance before court hearing.

Timor - Leste

The authorities of Timor-Leste have questioned the deduction by Repsol Oil & Gas Australia (JPDA 06-105) Pty Limited of certain expenses for income tax purposes. This issue is at a stage of debate with the authorities; no final administrative decision has been issued, nor is any court proceedings in progress.

Trinidad and Tobago

In 2015, BP Trinidad & Tobago LLC, a company in which the Repsol Group has a 30% interest along with BP, signed an agreement with the local authorities (*Board of Inland Revenue*), resolving most of the matters under dispute in relation to several taxes and for the years 2003-2009: "Petroleum Profit Tax" (income tax), "Supplemental Petroleum Tax" (production tax), non-resident personal income tax withholdings and the issues recurring in the years not subject to inspection (2010-2014).

Subsequently, the Administration has issued a new tax assessment requiring additional payments in relation to the 2007-2009 exercises (which were included in the above agreement and therefore were considered reviewed and already closed). BP Trinidad & Tobago LLC filed the appropriate administrative appeal and in 2016 the Administrative Tribunal allowed it, accepting the argument that such periods were already closed.

In view of the uncertainty concerning the materialization of the existing tax contingencies associated with lawsuits and other tax matters, the Group has recognized provisions that are deemed adequate to cover those tax contingencies. The amount recognized in the balance sheet at December 31, 2016 stands at €1,376 million (year-end 2015: €1,524 million).

(21) OPERATING REVENUES AND EXPENSES

21.1) Sales and services rendered and other income

The distribution by geography of the caption “*Sales and Services rendered and other income*” headings on the accompanying consolidated income statement, depending on the markets to which they correspond, is as follows:

Geographic area	€Million	
	2016	2015
Spain	20,727	20,816
European Union	4,885	6,473
OECD countries	3,190	4,704
Other countries	5,887	7,744
Total	34,689	39,737

This heading includes excise tax and similar taxes levied on the production and/or sale of oil and gas products amounting to €6,249 million in 2016 and €6,205 million in 2015.

21.2) Income from reversal of impairment provisions and on disposal of non-current assets

Income includes the following items:

	€Million	
	2016	2015
Gains on disposal of assets	1,002	551
Income from reversal of impairment provisions	623	110
Total	1,625	661

In 2016, the gain recognized on non-current asset disposals corresponds primarily to (see Note 4.1): i) the sale of part of the piped gas business assets in Spain amounting to €464 million; ii) sale of 10% of the stake in Gas Natural SDG, S.A. for €233 million; iii) sale of the wind power business in the United Kingdom for €101 million; iv) sale of the LPG business in Peru and Ecuador for €129 million; v) divestment of Repsol E&P T&T Limited in the amount of €17 million; and vi) divestment of the Tangguh LNG project in the amount of €21 million.

In 2015, the gain recognized on non-current asset disposals corresponded primarily to: i) sale of the Group's interest in Compañía Logística de Hidrocarburos, S.A. (“CLH”) for €293 million, ii) the sale of exploration licenses in Canada amounting to €60 million, iii) the sale of part of the piped gas business assets in Spain amounting to €51 million and iv) various purchase and sale transactions of Gas Natural SDG, S.A.’s shares for €109 million.

21.3) Other operating income

This caption reflects, inter alia, income recognized on the remeasurement of trade derivatives (see Note 17) and the reversal of provisions, taken to the income statement (see Note 14).

In addition, in 2016 “*Other operating income*” includes €80 million corresponding to liability claims in respect of the detriment caused by the application of the maximum sale prices for regulated bottled LPG formula established in Spanish Ministerial Order ITC/2608/2009 (which was subsequently struck down by a Supreme Court decision dated June 19, 2012) during the fourth quarter of 2009 and 2010 (see Note 29 and Appendix IV), as well as €21 million of statutory interest relating to court proceedings to recover damages caused by the Order.

In 2015, €37 million of income was recognized in relation to the detriment caused by application of the formula referred to above throughout 2011 and the first three quarters of 2012.

This heading also includes grants released to income in the amount of €25 and €28 million in 2016 and 2015, respectively.

21.4) Supplies

“Supplies” heading includes the following items:

	€Million	
	2016	2015
Purchases	24,325	28,028
Changes of inventory	(710)	805
Total	23,615	28,833

The heading “Supplies” includes excise tax and similar taxes levied on the production and/or sale of oil and gas products disclosed in section “Sales and Services rendered and other income” of this note.

21.5) Personnel expenses

“Personnel expenses” heading includes the following items:

	€Million	
	2016	2015
Salaries and others	2,045	1,624
Social security expenses	456	505
Total	2,501	2,129

In 2016, “Salaries and others” includes the workforce restructuring charges deriving mainly from the collective redundancy program in Spain (see Note 14), the adjustments for workforce restructuring in other countries and the changes made to the management team.

21.6) Other operating expenses

The “Other operating expenses” heading includes the following items:

	€Million	
	2016	2015
Transportation and freight costs	1,166	1,356
Taxes other than income tax	320	318
External services	3,551	3,852
Supplies	736	912
Operator expenses ⁽¹⁾	533	514
Services provided by independent professionals	470	488
Leases and fees	406	434
Repairs and maintenance	340	360
Advertising	76	105
Insurance premiums	80	82
Banking and similar services	29	30
Other	881	927
Other expenses	893	929
Total	5,930	6,455

⁽¹⁾ Includes, among other items, the cost of agency services at CLH facilities, product bottling, storage, loading, transportation and dispatch services.

The operating leases itemized in the above table primarily reflect leases with service stations. None of these leases particularly stands out from the rest.

The non-cancellable future minimum payments tied to these leases as of December 31, 2016 are specified below:

	€Million
2017	276
2018	179
2019	159
2020	148
2021	141
Subsequent years	719
TOTAL	1,622

21.7) Exploration expenses

The geographical distribution of costs taken to the income statement in respect of exploration activities (see Note 2.2.8.c) is as follows:

	€Million	
	2016	2015
Europe	133	350
The Americas	173	732
Africa	140	602
Asia	6	118
Oceania	89	3
Total	541	1,805

Exploration costs amounted to €541 million and €1,805 million in 2016 and 2015, of which €241 million and €793 million, respectively, are recognized in the heading "Depreciation and amortization of non-current assets" and €6 million and €782 million under "Impairment losses recognized and losses on disposal of non-current assets" in 2016 and 2015 respectively.

For more information, see the Information on oil and gas exploration and production activities (non-audited information) published as complementary information through an official notice as of the date of release of this document (<https://www.repsol.com>).

21.8) Impairment losses recognized and losses on disposal of non-current assets

This heading encompasses the following concepts:

	€Million	
	2016	2015
Impairment losses recognized	905	3,870
Losses on disposal of assets	42	54
Total	947	3,924

(22) ASSET IMPAIRMENT

22.1) Asset impairment test

The Group has assessed the recoverable amount of cash-generating units as per the methodology described in Note 3 and the predictable economic scenarios of its business plans. The main hypotheses are as follows:

a) Price trend:

	2017	2018	2019	2020	2021	Following
Brent (\$/barrel)	55	65	75	85	87	+2%
HH (\$/ MBtu)	3.2	3.7	4.2	4.8	4.9	+2%

b) Discount rates ⁽¹⁾:

	2016	2015
UPSTREAM ⁽²⁾		
Latin America / Caribbean	7.7% - 19%	7.7% - 14.4%
Europe, Africa and Brazil	7.0% - 13%	6.9% - 12.2%
North America	7.9% - 8.1%	8.0% - 8.2%
Asia and Russia	8.3% - 11.8%	8.4% - 12.2%
DOWNSTREAM ⁽³⁾		
	4.2% - 9.6%	4.2% - 9.9%

⁽¹⁾ In 2016, there were no significant changes in country risk vs. 2015 except for Venezuela (see section 2 of this Note), or significant beta variations between 2016 and 2015 and, therefore, its effect on WACC variation is not significant.

⁽²⁾ Discount rates in US dollars.

⁽³⁾ Discount rates in euros and US dollars.

In 2016, provisions have been recognized, net of reversals, for the impairment of value of assets amounting to €488 million (€4,135 million in 2015¹), of which €276 million correspond mainly to intangible assets and items of property, plant and equipment (see Notes 6 and 7) and €187 million reflect impairment losses of investments accounted for using the equity method (see Note 8).

Upstream assets

The Group has written its *Upstream* assets down for net impairment by €255 million. These charges mainly affect:

- North America (€132 million), which includes: (i) impairments of non-conventional assets in the light of the expected performance of production profiles, and (ii) reversal of the impairment provision for the Greater Edson area in the amount of €85 million, owing mainly to the expected cost savings garnered by enhanced operational efficiency.
- Latin America (€85 million), comprising: (i) asset impairments in Venezuela (€196 million) due to an increase in the discount rate as a result of the progress of country risk indicators (19% vs. 14.4% in 2015); and (ii) reversal of the impairment provision for the Akacias field in the amount of €17 million, owing to lower estimated operating costs.
- Other countries (€38 million), mainly South East Asia and North Africa.

In 2015, impairment amounted to €3,633 million due to the significant decrease in expected future prices and the increase in discount rates (North America: €1,080 million; South East Asia: €554 million; Latin America: €834 million; Europe and North Africa: €383 million; and exploration assets: €782 million).

The recoverable amount of the impaired assets totals €10,689 million.

Downstream assets

In the *Downstream* segment, lower energy and commodity prices involve, in general terms, an increased value of the Group's businesses.

However, an impairment loss has been recognized on *Gas&Power* assets in North America (the Canaport regasification plant and associated gas pipeline transport commitments) in the amount of €175 million as a result of the outlook for gas margins (€362 million in 2015). In 2016, the discount rate used to calculate the recoverable amount of these assets was 5.5%.

¹ In 2015, -€3,760 million refer to intangible assets and items of property, plant and equipment (see Notes 6 and 7) and €375 million refer to impairment losses of investments accounted for using the equity method (see Note 8).

22.2) Sensitivities

The impact of a change in the estimated future prices and discount rates used (see Note 3) would affect the amount of the impairment of the Repsol Group assets. The principal sensitivities to these variations, without bearing in mind the possible adjustments of the operative plans that would allow mitigating the negative impact of the above mentioned variations, are indicated in the table below:

	Increase (+) / decrease (-)	€Million	
		Operating income	Net income
Changes in crude oil and gas prices	+10%	1,191	874
	-10%	(2,454)	(1,836)
Changes in the discount rate	+100b.p.	(1,038)	(778)
	-100b.p.	753	588

22.3) Geopolitical risks

Repsol is exposed to risks arising from unique economic, social and political circumstances that may arise in certain countries (unexpected regulatory changes; highly volatile exchange rate; high inflation; possibility of economic and financial crises or political instability or social tensions and political unrest, etc.) and adversely affect Repsol's business.

When testing its assets for impairment, Repsol considers the geopolitical risks it is exposed to either by estimating cash flows or by calculating its discount rates.

According to the ratings in the *Country Risk Rating* of *IHS Global Insight* and the *Country Risk Score* of the *Economist Group*, the Repsol Group is exposed to a particular geopolitical risk in Venezuela, Libya, Algeria and Ecuador.

Venezuela

Repsol has major presence in Venezuela where it operates through its mixed oil companies E.M. Petroquiriquire, S.A. and E.M. Petrocarabobo, S.A. and gas licensees Quiriquire Gas, S.A., and Cardón IV, S.A. (see Note 8). Average production in Venezuela, mainly gas, in 2016 was 76.2 thousand barrels of oil equivalent/day (47.7 in 2015) and its proven reserves as of December 31 amounted to 595 million barrels of oil equivalent.

Repsol's exposure to Venezuela at December 31, 2016 amounts to approximately €2,273 million and mainly comprises dollar-denominated financing extended to the Venezuelan subsidiaries.

Venezuela has a regulated exchange system that has been recently devalued, an economy burdened with high inflation and an oil sector with heavy government intervention and stakeholding.

- Exchange system. Venezuela introduced a currency exchange control regime in February 2003 which is managed by the Central Bank of Venezuela and the Ministry of Economy and Finance. These authorities have issued various resolutions governing the ways in which currency can be bought and sold in Venezuela. More recently, Foreign Exchange Agreement No. 35 took effect on March 10, 2016, establishing a new currency regime encompassing two distinct exchange rates: (i) Protected (DIPRO): initially set at 10Bs/\$ and applicable only to goods, services and remittances qualifying as 'priority'; and (ii) a supplementary rate (DICOM): a floating yet controlled rate applicable in general. Its initial quote was 207Bs/\$; as of December 31, 2016, it was 674Bs/\$.

In addition, Foreign Exchange Agreement No. 9 has applied to the revenue generated by mixed-ownership companies from oil and gas exports since 2004. This revenue can be kept in currency accounts abroad with a view to servicing payments and outlays that have to be made outside of

Venezuela. Exchange Rate Agreement No. 37, which took effect on May 27, 2016, allows privately-held companies that hold gas permits (Cardón IV, S.A.) to hold the dollars generated by their activities outside of Venezuela for the purpose of serving payments and outlays that have to be made outside of Venezuela. The above Agreement further stipulates that these companies may not acquire currency using the official exchange systems.

Against this backdrop, Repsol uses the U.S. dollar as the functional currency of most of its oil and gas exploration and production businesses in Venezuela (most notably, through its equity-accounted interests in Cardón IV, S.A., Empresa Mixta Petroquiriquire, S.A. and Empresa Mixta Petrocarabobo, S.A.). However, for tax purposes, the bolívar is the benchmark currency for tax settlement.

In companies with the bolívar as the functional currency (mostly Quiriquire Gas, S.A), Repsol has used the DICOM exchange rate for bolivar/euro exchange for the preparation of these financial statements.

- Inflation. According to data published by the Central Bank, inflation was 68.5% in 2014 and 180.9% in 2015. In 2016, the Central Bank of Venezuela has not officially released the cumulative inflation figures; however, according to unofficial reports, cumulative inflation on December 31, 2016 estimates around at 525.1%.
- Public regulation and stake in the Oil & Gas sector. Repsol operates through mixed companies whose incorporation and conditions for carrying out primary activities need to first be approved by the National Assembly. As for the other companies, such as Cardón IV and Quiriquire Gas, their licenses are granted by the Oil Ministry. See Appendix IV for more information on the legal framework for mixed companies and the regulatory framework in force in Venezuela.

In 2016 and 2015, asset impairments were recognized in Venezuela for €196 million and €408 million respectively.

On October 6, 2016, Petroquiriquire, S.A., Repsol and PDVSA signed a range of agreements to shore up the financial structure of Petroquiriquire, S.A. and enable it to implement its business plan. The agreements involve (i) extension by Repsol of a credit facility for up to \$1,200 million, backed by a guarantee given by PDVSA, to be used to pay dividends owed to Repsol and for Petroquiriquire, S.A.'s capital and operating expenditures; and (ii) an undertaking given by PDVSA to transfer to Petroquiriquire, S.A. the proceeds of crude oil sale contracts or other transactions in a sufficient amount to pay for the public-private venture's ("mixed enterprise") capital and operating expenditures to the extent not covered by the financing from Repsol, as well as debt service and payment of Repsol's dividends generated in each fiscal year. As of December 31, drawdowns of this credit facility amount to \$544 million, mostly referring to the payment to Repsol of due dividends from 2010-2013.

Libya

Repsol operates in Libya since the 1970s when it started exploring in the Sirte Basin. As of December 31, 2016, Repsol has acreage on two contractual areas (with exploration, development and production activities) and proven reserves amount to 97 million barrels of oil equivalent.

Repsol's equity exposure in Libya as of December 31 amounts to around €10 million.

In 2013 and 2014, due to the country's instability, on an intermittent basis, unscheduled partial or full production stoppages occurred that affected the fields in blocks NC-115 and NC-186, located in the Murzuq basin.

Due to the worsening of safety conditions, production was interrupted from November 2014 to late December 2016 (in fields A of block NC-115, M and H). On January 4, 2017, production was also resumed at the I/R field (blocks NC-186 and NC-115), and is expected to resume at block NC-186 in the course of

2017.

Algeria

Repsol has two exploration blocks in Algeria (Boughezoul and S.E. Illizi) as well as six production/development blocks (Reggane, Greater MLN, EMK, Menzel Ledjmet Sud-Est, Ourhoud and Tin Fouyé Tabankort (TFT)).

In 2016, average production in Algeria came to 16.8 thousand barrels of oil equivalent per day (14.6 thousand in 2015) from blocks Greater MLN, Tin Fouyé Tabankort (TFT) and Menzel Ledjmet Sud-Est.

As of December 31, 2016, net proven reserves amount to 27.4 million barrels of oil equivalent. Around 50% of the net proven reserves refer to the gas project now under development in Reggane, which allows for the development of six fields (Reggane, Kahlouche, Kahlouche Sud, Sali, Tiouliline and Azrafil Sudest), located in the Algerian Sahara in the Reggane basin. Repsol holds a 29.25% stake in the consortium that is to develop the project, alongside the Algerian state-owned company Sonatrach (40%), Germany's RWE Dea AG (19.5%), and Edison of Italy (11.25%).

Repsol's equity exposure amounts of €32 million.

Ecuador

Repsol has exploration and production rights over two blocks (Block 16 and Block 67/Tivacuno) in the form of service provision contracts. Additionally, it has a 29.66% stake in Oleoductos de Crudos Pesados de Ecuador, S.A. (OCP), the operator of the country's oil pipeline.

Average production in Ecuador in 2016 was 7.6 thousand barrels of oil equivalent/day and its proven reserves as of December 31 amounted to 8 million barrels of oil equivalent.

The investment accounting value in Ecuador is nil.

Brexit

As a result of a referendum held on June 23, 2016, the United Kingdom intends to exit the European Union, and the country is now in the process of deciding on and negotiating the terms of its departure. The consequences of Brexit remain uncertain. There may be effects on the value of sterling versus the euro, access to the EU single market in terms of free movement of goods and capital and freedom to provide services, or on the value of investments in that country, among other factors. However, as to the extraction, transportation and marketing of oil and gas, no material change is expected, because the UK Government has maintained sovereignty and control over key aspects with an industry-wide impact, such as the process of mining rights licensing and the tax framework within which oil companies do business in the country.

After the sale of the offshore wind power business in the United Kingdom (see Note 4), the Group's exposure is limited to its stake in *Repsol Sinopec Resources UK Limited* (RSRUK), which operates a mature business and whose functional currency is the dollar. The carrying amount of the investment in RSRUK is nil, and provisions have been recognized in respect of the attached obligations (see Note 8).

(23) FINANCE INCOME AND EXPENSES

The breakdown of finance income and expenses in 2016 and 2015 is as follows:

	€Million	
	2016	2015
Finance income	140	118
Finance expenses	(493)	(519)
Net interest expense	(353)	(401)
Due to interest rates	1	8
Fair value measurement of financial instruments	1	8
Due to exchange rates	226	833
Fair value measurement of financial instruments	132	1,037
Translation differences	94	(204)
Other positions	56	7
Change in fair value of financial instruments	56	7
Income from positions ⁽¹⁾	283	848
Effect of discounting provisions to present value	(175)	(121)
Capitalized interests ⁽²⁾	133	140
Finance leases	(143)	(147)
Impairment and gains (losses) on disposal of financial instruments ⁽³⁾	48	170
Other income	36	32
Other expenses	(63)	(60)
Other financial income and expenses	(122)	(5)
FINANCIAL RESULT	(234)	461

⁽¹⁾ This heading includes exchange gains and losses generated by the measurement and settlement of foreign-currency denominated monetary items (see section 2.4 of Note 2) as well as the gains and losses recognized as a result of the measurement and settlement of derivatives.

⁽²⁾ Capitalized interests is recognized in the consolidated income statement under “*Finance expenses*”.

⁽³⁾ In 2016 and 2015, this heading mainly reflects the €9 million and €13 million gain generated by the buyback of Talisman bonds, respectively.

(24) EARNINGS PER SHARE

The earnings per share figures for 2016 and 2015 are detailed below:

Earnings per share (EPS)	2016	2015
Net income attributable to the parent (€Million)	1,736	(1,398)
Adjustment of interest expense of perpetual subordinated bonds (€Million)	(28)	(22)
Weighted average number of shares outstanding (Million shares) ⁽¹⁾	1,478	1,487
EPS basic and diluted (€/share)	1.16	(0.95)

⁽¹⁾ The number of shares outstanding at December 31, 2015 stood at 1,441,783,307. However, the weighted average number of shares outstanding used to calculate earnings per share at year-end includes the effect of the bonus share issues carried out under the scope of the “*Repsol Flexible Dividend*” shareholder remuneration scheme, as stipulated in applicable accounting regulations (see Note 2 “*Basis of presentation*”).

(25) CASH FLOW FROM OPERATING ACTIVITIES

The composition of the heading “Cash flows from operating activities” regarding the ongoing activities of the consolidated cash flow statement in the years 2016 and 2015 is as follows:

	Notes	€Million	
		2016	2015
Net income before tax		1,871	(2,352)
Adjustments to net income:		2,547	6,081
Depreciation and amortization of assets	6 and 7	2,529	3,124
Net charges in operating provisions	14 and 22	1,017	3,869
Results on sale of non-commercial assets	4 and 21	(960)	(471)
Financial result	23	234	(461)
Share of results of companies accounted for using the equity method after tax	8	(194)	89
Other adjustments (net)		(79)	(69)
Changes in working capital:		(517)	1,370
Increase / Decrease of accounts receivables		(215)	1,007
Increase / Decrease of inventories		(757)	1,232
Increase / Decrease of accounts payables		455	(869)
Other cash-flows from operating activities:		(11)	(163)
Dividends received		920	363
Income tax received / (paid)		(264)	(128)
Other proceeds from / (payments for) from operating activities		(667)	(398)
Cash Flow from operating activities		3,890	4,936

(26) INFORMATION ON RELATED PARTY TRANSACTIONS

Repsol carries out transactions with related parties on an arm's length basis. The transactions performed by Repsol, S.A. with its Group companies and those performed by the Group companies among themselves form part of the Company's ordinary course of business in terms of their purpose and conditions.

For the purposes of presenting this information, the following are considered to be related parties:

- a. Significant Shareholders: at December 31, 2016, the Company's significant shareholders that are deemed related parties are:

Significant shareholders	total % of share capital December 31, 2016 ⁽¹⁾
Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona ⁽²⁾	10.05
Sacyr Vallehermoso, S.A. ⁽³⁾	8.34
Temasek Holdings (Private) Limited ⁽⁴⁾	4.79

Note: Data available to the Company at December 31, 2016 based on the most recent information furnished by Spain's central counterparty clearing house (Iberclear for its acronym in Spanish) and the information submitted by the shareholders to the Company and to the National Securities Market Commission (CNMV for its abbreviation in Spanish).

⁽¹⁾ Data prior to the close of the scrip issue detailed in section 13.1 Share capital.

⁽²⁾ Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona holds its interest through CaixaBank, S.A.

⁽³⁾ Sacyr, S.A. holds its investment through Sacyr Participaciones Mobiliarias, S.L., Sacyr Investments, S.A. y Sacyr Securities, S.A.

⁽⁴⁾ Temasek holds its investment through its subsidiary, Chembra Investment PTE, Ltd.

- b. Directors and executives: includes members of the Board of Directors as well as members of the Corporative Executive Committee whose members are considered as “executives” for purposes of this section (see Note 27.4).

- c. People, companies or entities within the Group: includes transactions with Group companies or entities for the part not eliminated in the consolidation process, corresponding mainly to transactions undertaken with companies consolidated using the equity method.

Income, expenses and other transactions recorded at December 31 with related party transactions are as follows:

€Million	2016				2015			
	Significant shareholders	Executive and Directors	People, companies or entities within the Group	Total	Significant shareholders	Executive and Directors	People, companies or entities within the Group	Total
EXPENSES AND INCOME								
Financial expenses	7	-	56	63	15	-	41	56
Transfer of R+D and license agreements	-	-	-	-	-	-	1	1
Leases	1	-	2	3	1	-	3	4
Services received	18	-	168	186	14	-	306	320
Purchase of goods (finished or in-progress) ⁽²⁾	-	-	1,433	1,433	-	-	6,409	6,409
Losses from derecognition or disposal of assets	-	-	3	3	-	-	-	-
Other expenses	23	-	1	24	20	-	1	21
TOTAL EXPENSES	49	-	1,663	1,712	50	-	6,761	6,811
Financial income	1	-	134	135	39	-	94	133
Management or cooperation agreements	-	-	-	-	-	-	5	5
Leases	1	-	4	5	1	-	4	5
Services rendered	7	-	4	11	8	-	7	15
Sale of goods (finished or in-progress) ⁽³⁾	125	-	511	636	96	-	645	741
Gains from derecognition or disposal of assets	-	-	233	233	-	-	52	52
Other income	-	-	68	68	-	-	93	93
TOTAL INGRESOS	134	-	954	1,088	144	-	900	1,044

€Million	2016				2015			
	Significant shareholders	Executive and Directors ⁽¹⁾	People, companies or entities within the Group	Total	Significant shareholders	Executive and Directors ⁽¹⁾	People, companies or entities within the Group	Total
OTHER TRANSACTIONS								
Purchase of property, plant and equipment, intangible assets and other assets	67	-	2	69	70	-	-	70
Finance agreements: credits and capital contributions (lender) ⁽⁴⁾	-	-	4,057	4,057	-	-	2,559	2,559
Finance lease agreements (lessor)	-	-	2	2	-	-	4	4
Disposal of property, plant and equipment, intangible assets and other assets	32	-	124	156	23	-	23	46
Finance agreements: credits and capital contributions (lessor) ⁽⁵⁾	454	-	4,229	4,683	565	-	3,925	4,490
Guarantees given ⁽⁶⁾	308	-	2,182	2,490	335	-	2,389	2,724
Guarantees received	45	-	4	49	63	-	4	67
Commitments acquired ⁽⁷⁾	235	-	10,394	10,629	2,233	-	7,608	9,841
Cancelled commitments / guarantees	-	-	-	-	-	-	-	-
Dividends and other profit distributed ⁽⁸⁾	266	-	-	266	350	-	24	374
Other transactions ⁽⁹⁾	1,018	-	-	1,018	1,386	-	-	1,386

⁽¹⁾ Includes transactions performed at December 31 with executives and directors not included in Note 27 on the remuneration received by executives and directors, and would correspond to the outstanding balance at the reporting date of the loans granted to members of senior management and the corresponding accrued interest, as well as dividend and other remuneration received as a result of holding shares of the Company.

⁽²⁾ As of December 31, the column headed "People, companies or entities within the Group" primarily includes goods purchased from Gas Natural Fenosa (GNF), BPRY Caribbean Ventures LLC (BPRY) and Repsol Sinopec Brasil (RSB), in the amounts of €87 million, €184 million and €478 million, respectively, in 2016 (€72 million, €424 million and €490 million in 2015, respectively) (see Note 8).

⁽³⁾ Mainly includes product sales to the Gas Natural Fenosa (GNF) Group, Iberian Lube Base Oil, S.A. (ILBOC) and BPRY Caribbean Ventures LLC (BPRY) amounting to €176 million, €143 million and €104 million, respectively, in 2016 and €226 million, €184 million and €153 million, respectively, in 2015.

⁽⁴⁾ Includes loans extended to Group companies with entities consolidated using the equity method (see Note 18), and these entities' undrawn credit lines.

⁽⁵⁾ At December 31, the "Significant shareholders" column includes the drawdown limit of €358 million at both year-ends on credit lines extended by La Caixa. The "People, companies or entities within the Group" column primarily includes the loan granted by Repsol Sinopec Brasil S.A. to its shareholders (see Note 15, "Financial liabilities") and undrawn credit lines awarded to

- companies consolidated using the equity method.
- (6) In 2016 and 2015, this heading includes €1,365 million and €1,370 million, respectively, corresponding to three guarantees provided by Repsol S.A. in relation to the lease agreements on three floating platforms entered into by its subsidiary Guará B.V. In addition, as of December 31, 2016 and 2015, it includes €86 million and €834 million, respectively, corresponding to the counter guarantees issued by Repsol Oil&Gas Canada, Inc. associated with bank guarantees issued on behalf of its subsidiary Repsol Sinopec Resources UK Ltd (RSRUK) covering decommissioning obligations arising from their exploration activity in the North Sea (see Note 30.2).
- (7) In 2016, corresponds to purchase commitments outstanding at December 31 (see Note 30.1).
- (8) The amounts recorded under dividends and other profit distributions include the amounts corresponding to the sale to Repsol, at the guaranteed fixed price, of free-of-charge allocation rights as part of the bonus share capital increases closed in January and July 2016 (and in the 2015 table: January and July 2015) as part of the *Repsol Flexible Dividend* shareholder remuneration program (see Note 13.4). In contrast, this heading does not include the amounts corresponding to the sale to Repsol, at the guaranteed fixed price, of bonus share rights as part of the bonus share issue closed in January 2017 (and in the item 2015: January 2016), which in the case of the significant shareholders amounted to €7 million (€167 million in 2015). These rights are recognized as an account payable at December 31, 2015. Nor does it include the Repsol shares subscribed as a result of the aforementioned bonus share issues.
- (9) In 2016 and 2015, this heading primarily includes remunerated accounts and deposits in the amount of €78 million and €26 million respectively and interest rate hedges in the amount of €80 million arranged with La Caixa Group in both periods.

(27) REMUNERATION OF THE MEMBERS OF THE BOARD OF DIRECTORS AND EXECUTIVES

27.1) Remuneration of the members of the Board of Directors

- a) Due to membership of the Board of Directors

In accordance with Article 45 of the Articles of Association, the Directors, in their capacity as members of the Board and in exchange for discharging the supervisory and decision-making duties intrinsic to Board membership, are entitled to receive a fixed annual payment that may not exceed the ceiling established to this end at the Annual General Meeting or on the Director Remuneration Policy; it is up to the Board of Directors to determine the precise amount payable within that limit and its distribution among the various Directors, factoring in the positions and duties performed by each within the Board and its Committees, the membership of the Committees, the positions held by each one of them on the Board and any other objective circumstance considered as relevant.

The upper limit established in the Director Remuneration Policy approved at the Annual General Meeting held on April 30, 2015, under item nineteen of the corresponding agenda, is €8.5 million.

The amount of remuneration accrued in 2016 by the members of the Board of Directors in their capacity as Board members against the aforesaid assignment amounted to €7.252 million, the detail being as follows:

<i>Board of directors</i>	Remuneration for membership of Governing Bodies (€)						TOTAL
	Board	Delegate C.	Audit C.	Nomination C.	Remuneration C.	Sustainab. C.	
Antonio Brufau Niubó	(1)	(1)	-	-	-	-	2,389,818
Luis Suárez de Lezo Mantilla	176,594	176,594	-	-	-	-	353,188
Josu Jon Imaz San Miguel	176,594	176,594	-	-	-	-	353,188
Henri Philippe Reichstul	176,594	176,594	-	-	-	-	353,188
Javier Echenique Landiribar	176,594	-	88,297	-	-	44,148	309,039
Artur Canulla Font	176,594	176,594	-	22,074	22,074	-	397,337
Gonzalo Gortázar Rotaecche (2)	176,594	58,865	-	16,556	22,074	33,111	307,200
José Manuel Loureda Mantiñán	176,594	-	-	22,074	22,074	44,148	264,891
Luis Carlos Croissier Batista	176,594	-	88,297	-	-	44,148	309,039
Isidro Fainé Casas (3)	117,729	117,729	-	-	-	-	235,459
Ángel Duráñez Adeva	176,594	-	88,297	-	-	-	264,891
M ^a Isabel Gabarró Miquel	176,594	-	-	22,074	22,074	44,148	264,891
Antonio Massanell Lavilla (4)	58,865	-	-	7,358	-	14,716	80,939
Mario Fernández Pelaz	176,594	-	88,297	22,074	22,074	-	309,039
Manuel Manrique Cecilia	176,594	176,594	-	-	-	-	353,188
Rene Dahan	176,594	176,594	-	-	-	-	353,188
J. Robinson West	176,594	176,594	-	-	-	-	353,188

Note: In accordance with the scheme adopted by the Board of Directors, and at the proposal of the Remuneration Committee, the amount due annually in 2016 came to: (i) 176,594 euros for membership of the Board of Directors; (ii) 176,594 euros for membership of the Delegate Committee; (iii) 88,297 euros for membership of the Audit and Control Committee; (iv) 44,148 euros for membership of the Sustainability Committee; (v) 22,074 euros for Membership of the Nomination Committee; and (vi) 22,074 euros for Membership of the Remuneration Committee.

- (1) Mr. Brufau stepped down from his executive duties on April 30, 2015; on that same date the Annual General Meeting voted in favor of his re-election as non-executive Chairman of the Board of Directors, similarly approving his new remuneration terms and conditions, applicable from May 1, 2015 and comprising fixed annual remuneration (before tax) of €2,5 thousand. The amounts received by Mr. Brufau for membership of the boards and committees of other Repsol Group companies, joint agreements or associates are deducted from that sum. The table above includes, accordingly, the remuneration received by Mr. Brufau in his capacity as Chairman of the Board of Directors and of the Delegate Committee of Repsol, net of remuneration accrued in his capacity as member of the Board of Directors of Gas Natural (see Note 26.1.c below). Also, in-kind remuneration and payments on account/withholdings related to in-kind remuneration totaled €0.530 million.
- (2) Gonzalo Gortázar Rotaecbe was appointed to the Delegate Committee on September 28, 2016.
- (3) Isidro Fainé Casas resigned from office as a Director of Repsol, S.A. and member of the Delegate Committee on September 21, 2016.
- (4) Antonio Massanell Lavilla was appointed to the Board of Directors of Repsol, S.A. and to its Nomination Committee and its Sustainability Committee on September 28, 2016.

Additionally, it should also be noted that:

- The members of the Board of Directors of the parent company have not been granted any loans or advances by any Group company, joint agreement or associate.

The non-executive Directors only receive the fixed remuneration indicated in the table above and are excluded from the schemes financed by the Company to provide coverage in the event of termination, death or other developments and from the Company's short and long term performance-based bonus schemes. As regards the Chairman of the Board of Directors, see note (1) of the table of remuneration for being part of the Administration Bodies, in this section.

- No Group company, joint arrangement or associated company has pension or life insurance obligations to any former or current member of the Board of Directors of the parent company, except in the case of the Chairman of the Board, the Chief Executive Officer and the General Counsel Secretary, whose remunerations are subject to the commitments set forth in their respective contracts for services, as described further on.

b) Due to the holding of executive positions and performing executive duties

In 2016, remuneration accrued by members of the Board for the performance of executive duties was as follows:

€Million	Josu Jon Imaz San Miguel	Luis Suárez de Lezo Mantilla
Fixed cash remuneration	1.200	0.983
In-kind remuneration and bonuses ⁽¹⁾	1.453	1.548

- (1) Includes, among other items, life and disability insurance and health insurance, as well as variable annual and multi-annual remuneration, as well as additional shares corresponding to the settlement of the third cycle of the Share Acquisition Plan by the beneficiaries of the multi-year variable remuneration programs, as detailed in section e).

The above amounts do not include the amounts detailed in sections d) below.

c) Due to membership of the Boards of Directors of subsidiaries

The remuneration accrued in 2016 by the members of the parent's Board of Directors in their capacity as directors of other Group companies, joint arrangements and associates amounted to €0.369 million, according to the following detail:

	Euros
	Natural Gas
Antonio Brufau Niubó ⁽¹⁾	110,182
Josu Jon Imaz San Miguel ⁽¹⁾	92,000
Luis Suárez de Lezo Mantilla	166,500

⁽¹⁾ The remuneration earned for membership of the Board of Directors of Gas Natural is deducted from the performance-based pay received by Mr. Brufau as President of the Board of Directors of Repsol, S.A. On September 21, 2016, Mr. Brufau resigned from his position as a Director of Gas Natural SDG, S.A and Mr. Imaz was appointed Director on that same date.

d) Due to contributions to pension plans, long-service bonuses and welfare plans

The cost in 2016 of the contributions made to pension plans, long-service bonuses and welfare plans of the Group Executive Directors amounted to:

	€Million
Josu Jon Imaz San Miguel	0.253
Luis Suárez de Lezo Mantilla	0.202

e) Share purchase program for beneficiaries of the pluri-annual variable pay incentive plans

On May 31, 2016, the vesting period concluded for the third cycle of the share purchase program for beneficiaries of the pluri-annual variable pay incentive plans (see Note 28.4.i). Upon vesting, Josu Jon Imaz became entitled to the receipt of 2,060 shares (before withholdings), valued at a unit price of 11.88 euros per share. Luis Suárez de Lezo became entitled to receive 549 shares (before withholdings) at the same valuation.

27.2) Indemnity payments to Board Members

None of the Directors received any indemnity payment from Repsol in 2016.

27.3) Other transactions with directors

During 2016, Repsol's Directors did not conclude any material transaction with the Company or any of the Group companies outside the ordinary course of business or on terms other than those afforded to customers or other than on an arm's length basis.

The Chief Executive Officer and the General Counsel Secretary signed up for the 2014-2017 and 2015-2018 cycles of the Share Purchase Plan for Beneficiaries of the Pluri-Annual Variable Remuneration Program, as detailed in Note 28. The Chief Executive Officer also signed up for the 2016-2019 cycle of the same Plan.

In 2016, the Board of Directors has not been made aware of any situation of direct or indirect conflict of interest. Nevertheless, in accordance with article 229 of the Companies Act, in that fiscal year resolutions of the Board and of the Nomination Committee regarding related-party transactions, re-election of Directors and appointments to positions within the Board were adopted in the absence of the Director affected by the relevant proposed resolution.

In addition, the Executive Directors did not participate in the approval of the Board of Directors resolutions regarding their compensation for the performance of executive duties at the Company.

27.4) Remuneration of key management personnel

a) Scope

For reporting purposes in this section, Repsol considers “*key management personnel*” to be the members of the Corporate Executive Committee. In 2016, a total of 11 persons formed the Corporate Executive Committee. The term “*key management personnel*”, made purely for reporting purposes, neither substitutes nor comprises a benchmark for interpreting other senior management pay concepts applicable to the Company under prevailing legislation (e.g. Royal Decree 1382/1985), nor does it have the effect of creating, recognizing, amending or extinguishing any existing legal or contractual rights or obligations.

This section itemizes the remuneration accrued in 2016 by the people who, at some juncture during the period and during the time they occupied such positions, were members of the Corporate Executive Committee. Unless indicated otherwise, the compensation figures provided for “*key management personnel*” do not include the compensation accrued by people who are also directors of Repsol, S.A.; the director compensation disclosures for these individuals are included in section 1 of this note.

b) Wages and salaries, executive welfare plan, pension fund and insurance premiums.

The total remuneration accrued in 2016 by key management personnel who formed part of the Corporate Executive Committee is as follows:

	€Million
Salary	5.129
Attendance fees	0.324
Variable remuneration ⁽¹⁾	7.598
In-kind remuneration ⁽²⁾	0.407
Executive welfare plan	1.056

⁽¹⁾ This consists of an annual bonus, and a multi-annual bonus, calculated both as a given percentage of the fixed remuneration earned on the basis of the degree to which certain targets are met. This amount includes the liquidation of the variable remuneration programs of the key management personnel who have been dismissed by the company during 2016, in accordance with the rules established in said programs.

⁽²⁾ Includes, inter alia, vested entitlement to 7,126 additional shares (before withholdings) at the end of the vesting period for the third cycle of the share purchase plan for beneficiaries of the pluri-annual variable remuneration programs, valued at 11.88 euros per share, representing an equivalent amount of 84,653 euros. It also includes contributions to pension plans for executives (see section 19 of Note 2 and Note 28), and the amount of premiums paid for life and disability insurance, amounting to €0.194 million.

c) Advances and loans granted

No advances or loans have been granted to management as of December 31, 2016.

27.5) Indemnity payments to key management personnel

Key management personnel are entitled under their contracts to severance pay if their employment is terminated for any reason other than breach of executive duties, retirement, disability or their own free will without reference to any of the indemnifiable events specified in the contracts.

The Group has arranged a collected insurance agreement to assure such benefits for Corporate Executive Committee members with the title General Manager, and for Directors that have performed executive duties.

In 2016, the compensation by the Group's key management personnel in the form of termination benefits and compensation for non-compete clauses totaled €13.8 million.

27.6) Other transactions with key management personnel

During 2016, Repsol's key management personnel did not conclude any material transaction with the Company or any of the Group companies outside the ordinary course of business or on terms other than those afforded to customers or other than on an arm's length basis.

Notwithstanding the above, executive personnel signed up for the 2014-2017, 2015-2018 and 2016-2019 cycles of the Share Purchase Plan by the Beneficiaries of the Pluri-Annual Variable Remuneration Program, as detailed in Note 28.

27.7) Civil liability insurance

The Repsol Group subscribed a civil liability policy for Board members, the executive officers referred to in Note 27.4.a, and the rest of officers and people executing such functions, for a total premium of €2.2 million. This policy also covers the Group companies under specific circumstances and conditions.

(28) PERSONNEL OBLIGATIONS

28.1) Defined contribution pension plans

Repsol has defined mixed modality plans for certain employees in Spain, which conform to current legislation. Specifically, this refers to pension plans with defined contributions for retirement and defined contributions for permanent disability and death. For the death and permanent disability contingencies, the pension funds are covered by insurance policies arranged with an outside insurer. Additionally, outside Spain, certain Group subsidiaries have defined contribution pension plans for their employees.

The annual cost charged to "*Personnel expenses*" in the consolidated income statement in relation to the defined contribution pension plans detailed above amounted to €58 million in 2016 and €61 million in 2015.

Executives of the Repsol Group in Spain are beneficiaries of an executive pension plan that complements the standard pension plan denominated "Plan de previsión de Directivos" (Management remuneration plan) which covers the participant retirement, disability and death. Repsol makes defined contributions based on a percentage of participants' salaries. The plan guarantees a fixed return equivalent to 125% the prior year National Consumer Price Index. The plan is instrumented through collective insurances that cover pension obligations, subscribed with an insurance entity. Premiums paid under these policies finance and externalize the Group's commitments in respect of ordinary contributions, as well as the fixed return mentioned above.

The cost of this plan recognized under "*Personnel expenses*" in the consolidated income statement in 2016 and 2015 was €17 million, both periods.

28.2) Defined benefit pension plans

Repsol has arranged defined benefit pension plans for certain groups of employees. The amount charged to the Group's income statement in 2016 and 2015 was €6 million and €3 million respectively, while the related balance sheet provision at year-end 2016 and 2015 stood at €87 million and €88 million, respectively (see Note 14 "*Current and non-current provisions*").

28.3) Pluri-annual variable remuneration

The company has implemented a loyalty building program aimed at senior executives and other persons

occupying positions of responsibility in the Group, consisting of medium/long-term incentives as part of their benefit package. The purpose of this program is to strengthen the identification of executives and managers with shareholders' interests, based on the company's medium and long-term earnings sustainability as well as the compliance with the Strategic Plan, while at the same time facilitating the retention by the Group of key personnel.

At year end, the 2013-2016, 2014-2017, 2015-2018 and 2016-2019 pluri-annual variable remuneration programs are in force. The 2012-2015 plan was closed, as originally stipulated, on December 31, 2015 and its beneficiaries perceived their bonuses during 2016.

The four plans of this type in force (specific multi-annual variable remuneration plans) are independent of each other but their main characteristics are the same. Fulfillment of the respective objectives tied to each program entitles the beneficiaries of each plan to receive an amount of multi-annual variable remuneration in the first four months of the year following the last year of the plan. However, receipt of this incentive payment is tied to the beneficiary remaining in the Group's employ until December 31 of the last year of the plan, except in the special cases envisaged in the terms and conditions of the related plan.

If the incentive is to be received, the amount determined at the time the pluri-annual incentive is applied a first variable coefficient on the basis of the extent to which the objectives set are achieved, and then a second variable coefficient tied to the beneficiary's average individual performance under the Management through Commitments scheme during the years used for benchmarking under each incentive program.

None of these plans involves the delivery of shares or options and the incentive payments are not tied to the value of Repsol shares. However, some plans may involve targets pegged to Repsol's stock price performance.

To reflect the commitments assumed under these incentive plans, the Group recognized a provision charge of €16 and €23 million in the 2016 and 2015 consolidated income statement, respectively. In 2016 and 2015 the Group had recognized provisions totaling €0 million and €2 million to meet its obligations under all the aforementioned plans respectively, to fulfill all the plans described above.

28.4) Share Purchase Plans for the Beneficiaries of the Pluri-annual Variable Remuneration Programs and Share Acquisition Plans

i.) "Share Purchase Plan for Beneficiaries of the Pluri-Annual Variable Remuneration Program"

This Plan allows for investment in Repsol, S.A. shares of up to 50% of the total pluri-annual gross variable remuneration received. Its aim is to promote the alignment of beneficiaries (including Executive Directors and Corporate Executive Committee members) with the long-terms interests of both the Company and its shareholders. If the beneficiaries continue to hold the shares so acquired for three years after they are purchased and the rest of the Plan terms and conditions are met, the Company will provide them with one additional share for every three initially acquired.

The beneficiaries qualifying as Senior Management, defined to this end as the Executive Directors and the other Members of the Corporate Executive Committee, for the cycles approved at the Annual General Meeting of May 20, 2016, are subject to an additional performance requirement in order to qualify for receipt of these additional shares, namely overall satisfaction of at least 75% of the targets set in the multi-year bonus remuneration program closed in the year immediately preceding that of delivery of the shares.

At the date of preparation of the accompanying consolidated financial statements for issue, the fourth, fifth and sixth cycles of this Plan were in force (2014-2017, 2015-2018 and 2016-2019); key data for these cycles are provided below:

	No. of participants	Total initial investment (No. of shares)	Average price (€/share)	Maximum commitment to deliver shares
Fourth cycle (2014-2017)	218	150,271	20.72	50,026
Fifth cycle (2015-2018)	219	170,302	17.41	56,698
Sixth cycle (2016-2019)	132	160,963	11.38	53,604

During this sixth cycle, the current members of the Corporate Executive Committee have acquired a total of 68,218 shares.

As a result of this Plan, at December 31, 2016 and 2015, the Group had recognized an expense under “*Personnel expenses*” with a counterbalancing entry under “*Other reserves*” in equity of €0.4 million and €0.6 million, respectively.

In addition, the third cycle of the Plan vested on May 31, 2016. As a result, the rights of 173 beneficiaries to 31,269 shares vested (receiving a total of 23,815 shares net of the payment on account of the personal income tax to be made by the Company). Specifically, the rights of the members of the Corporate Executive Committee and the rest of the Executive Directors to 9,735 shares also vested (net of the withholding retained by the Company, these individuals received a total of 6,739 shares).

ii.) “Share Acquisition Plan”

The Share Acquisition Plans were approved at the Annual General Meetings of April 15, 2011 (the 2011-2012 Share Acquisition Plan), May 31, 2012 (the 2013-2015 Share Acquisition Plan) and April 30, 2015 (the 2016-2018 Share Acquisition Plan).

These Plans are targeted at employees of the Repsol Group in Spain and is designed to enable those so wishing to receive a portion of their remuneration in Repsol, S.A. shares up to an annual limit of €2,000. The shares to be delivered will be valued at Repsol, S.A.’s closing share price on the continuous Spanish stock market on each date of delivery to the beneficiaries.

In 2016 the Group purchased 725,352 shares of Repsol, S.A. for €8 million for delivery to employees. Under the scope of the 2015 Plan, the Group acquired 754,845 shares from Repsol, S.A. for a total of €9 million (see Note 13).

The members of the Corporate Executive Committee acquired a total of 6,438 shares in accordance with the plan terms and conditions in 2016.

The shares to be delivered under both schemes i) and ii) may be sourced from Repsol’s directly or indirectly held treasury shares, new-issued shares or from third party entities with whom the Group has entered into agreements to guarantee coverage of the commitments assumed.

(29) LITIGATION

As of December 31, 2016, Repsol's consolidated balance sheet includes provisions for lawsuits totaling €125 million (this figure excludes the provisions for tax contingencies itemized in Note 20.4).

The Repsol Group companies are party to judicial and arbitration proceedings arising in the ordinary course of their business activities. The most significant of these and their status at the issuance date of the consolidated financial statements are summarized below.

United Kingdom

Addax arbitration (in relation to the purchase of Talisman Energy (UK) Limited)

On July 13, 2015, Addax Petroleum UK Limited (“Addax”) and Sinopec International Petroleum Exploration and Production Corporation (“Sinopec”) filed a “Notice of Arbitration” against Talisman Energy Inc. (now known as “ROGCI”) and Talisman Colombia Holdco Limited (“TCHL”) in connection with the purchase of 49% shares of TSEUK (now known as “RSRUK”). ROGCI and TCHL filed their response to the Notice of Arbitration on October 1, 2015. On May 25, 2016, Addax and Sinopec filed the Statement of Claim, in which they seek, in the event that their claims were confirmed in their entirety, repayment of their initial investment in RSRUK, which was executed in 2012 through the purchase of 49% of RSRUK from TCHL, a wholly-owned subsidiary of ROGCI, together with any additional investment, past or future, in such company, and further for any loss of opportunity, and which they estimate in a total approximate amount of \$5,500 million. The Arbitral Tribunal has decided, among other procedural matters, the bifurcation of the proceedings: the hearing on liability issues will take place from January 29 to February 20, 2018, and, if necessary, the hearing on the assessment of any damages will take place later at an as yet unspecified date – we estimate this would be early 2019. The Company maintains its opinion that the claims included in the Statement of Claim are without merit.

“Galley” pipeline lawsuit

In August 2012, a portion of the Galley pipeline, in which Repsol Sinopec Resources UK Limited (“RSRUK”, formerly known as Talisman Sinopec Energy UK Limited, “TSEUK”), has a 67.41% interest, suffered an upheaval buckle.

In September 2012, RSRUK filed a claim seeking coverage of the damages and losses sustained as a result of the incident from the insurance company Oleum Insurance Company (“Oleum”), a wholly-owned subsidiary of ROGCI, which in turn owns 51% of RSRUK. In July 2014, RSRUK presented Oleum with a \$351 million claim for property damage and business disruption.

To date, the documentation delivered by RSRUK in support of its claim has proven insufficient to conclude on the existence of coverage under the policy.

RSRUK filed a request for arbitration on August 8, 2016, and the arbitration court has been constituted. The arbitration hearing will take place in London and the law governing the merits of the case will be the law of the State of New York.

United States of America

The Passaic River / Newark Bay lawsuit

The events underlying this litigation related to the sale by Maxus Energy Corporation (“Maxus”) of its former chemicals subsidiary, Diamond Shamrock Chemical Company 97 (“Chemicals”) to Occidental Chemical Corporation (“OCC”). Maxus agreed to indemnify Occidental for certain environmental contingencies relating to the business and activities of Chemicals prior to September 4, 1986. After that (1995), Maxus was acquired by YPF S.A. (“YPF”) and subsequently (in 1999) Repsol S.A. acquired YPF.

In December 2005, the New Jersey Department of Environmental Protection (“DEP”) and the New Jersey Spill Compensation Fund (together, the “State of New Jersey”) sued Repsol YPF S.A. (today called Repsol, S.A., hereinafter, “Repsol”), YPF, YPF Holdings Inc. (“YPFH”), CLH Holdings (“CLHH”), Tierra Solutions, Inc. (“Tierra”), Maxus and OCC for the alleged contamination caused by the former Chemicals old plant which allegedly contaminated the Passaic River, Newark Bay and other bodies of water and properties in the vicinity (the Passaic River and Newark Bay litigation). In August 2010, the scope of the suit was expanded to include YPF International, S.A. (“YPFI”), and Maxus International Energy Company

(“MIEC”).

On September 26, 2012 OCC lodged a Second Amended Cross Claim (the "*Cross Claim*") against Repsol, YPF, Maxus, Tierra and CLHH (all of which together “the Defendants”).

Between June 2013 and August 2014, the Defendants signed different agreements with the State of New Jersey, in which they do not acknowledge liability and through certain payments in exchange for the withdrawal by the State of New Jersey of its proceedings against them.

On January 29, 2015 the judge ruled on certain Motions to Dismiss submitted by the Defendants against Cross Claim, dismissing, in full or in part, without scope for re-admission, 10 of the 12 claims presented by OCC. On July 1, 2015 the judge fixed a new procedural calendar and indicated the hearing for June, 2016.

On November 27, 2015 the parties formulated various Motions for Summary Judgment, and on January 14, 2016 the Special Master issued her recommendations on these Motions, allowing the ones submitted by Repsol in relation to its characterization as alter ego to Maxus and rejecting OCC’s against Repsol’s claim vis-a-vis OCC in respect of the \$65 million paid pursuant to the agreement with the State of New Jersey.

The Presiding Judge decided on April 5, 2016 to uphold all of the recommendations issued by the Special Master, thereby dismissing in full OCC’s suit against Repsol. His decision can be appealed. On June 16, 2016, the Special Master allowed the Motion for Summary Judgment presented by Repsol with regard to its claim against OCC for the \$65 million paid as part of the settlement reached with the State of New Jersey. On January 30, 2017, OCC appealed the Special Master’s recommendation. On June 17, 2016, Maxus filed for bankruptcy protection before the United States Bankruptcy Court for the District of Delaware, also seeking a stay of the main litigation, a petition the Court must rule on.

Spain

Litigation relating to the application of Order ITC/2608/2009 of September 28

In February 2017 notice was received of four judgments of the Supreme Court affirming the decisions of the lower courts and an earlier holding of the Supreme Court’s own, recognizing Repsol Butano, S.A.’s entitlement to an indemnity for the detriment caused by the formula determining the maximum retail prices for regulated bottled LPG, set out in Order ITC/2608/2009 of September 28, which was struck down by the Supreme Court itself in its judgment of June 19, 2012, increased by statutory late payment interest (see Note 21.3).

(30) COMMITMENTS AND GUARANTEES

30.1) Contractual commitments

At December 31, 2016, the Repsol Group has contractually committed to the following purchases, investment and other expenditures:

Purchase, investment and expenditure commitments	€Million					Subs. Years	Total
	2017	2018	2019	2020	2021		
Purchase commitments	3,638	1,185	846	830	847	14,155	21,501
Crude oil and other ^{(1) (3)}	2,889	302	193	200	202	2,718	6,503
Natural gas ^{(2) (3)}	749	883	653	630	645	11,437	14,998
Investment commitments ⁽⁴⁾	958	605	307	267	260	360	2,757
Service commitments ⁽⁵⁾	507	284	224	189	157	1,321	2,681
Transport commitments ⁽⁶⁾	177	169	112	108	95	387	1,048
TOTAL	5,280	2,242	1,489	1,394	1,359	16,223	27,987

Note: commitments consist of future unconditional obligations (non-cancellable, or cancellable only under certain circumstances), as a result of commercial agreements in which fixed total amounts are not stipulated. These commitments were quantified using Repsol's best estimates, and, in case fixed total amounts were not stipulated, price estimates and other variables for calculating the recoverable amount of the assets (see Notes 3 and 22). In relation to operating lease commitments, see Note 21.6.

- (1) In 2016 and 2015 this heading mainly includes the commitments for the purchase of products needed to operate the Group's refineries in Spain and the commitments assumed under crude oil purchase contracts with the Pemex Group (open-ended), with the Saudi Arabian Oil Company (renewed annually) and with the Repsol Sinopec Brasil Group (expires 2020), committing to the acquisition in 2017 of 166,667, 65,934 and 12,603 barrels per day, respectively. In 2016, this caption also includes the new crude oil purchase agreement with Overseas Petroleum and Investment Corporation (expires 2018), with a committed volume for 2017 of 3,978 barrels per day.
- (2) Primarily includes commitments to purchase liquefied natural gas in North America amounting to around €14,000 million, acquired of two contracts signed in 2013 for a volume of 75.7 Tbtu annually, with deliveries from 2017, one of them signed with the group Gas Natural Fenosa. It also included commitments in Spain made with Gas Natural Fenosa for the contract to supply natural gas to Repsol refineries.
- (3) Committed crude oil and gas volumes are as follows:

Purchase commitments	Units	2017	2018	2019	2020	2021	Subs. Years	Total
Crude oil	kbbbl	39,199	1,637	197	196	195	1,313	42,737
Natural gas								
Natural gas	Tbtu	115	123	40	7	7	30	321
Liquefied natural gas	Tbtu	44	55	80	79	82	1,225	1,564

- (4) Includes mainly investment commitments in Algeria, Malaysia, Venezuela, and Bolivia in the amount of €166 million, €374 million, €359 million and €345 million, respectively. In 2016, we should note the commitment acquired as a result of extending the production-sharing contract ("PSC") of the PM3 CCA production block in Malaysia until December 31, 2027, with minimum committed work amounting to \$175 million (€166 million) at December 31, 2016. A payment of \$57 million (€54 million), in installments, shall be made until 2020 for extending the contract.
- (5) It includes, primarily, services for processing gas associated with gas purchases in Downstream North America amounting to €1,204 million, and associated with oil and gas exploration and productions activities in the *Upstream* segment totaling €32 million.
- (6) It includes, primarily, oil and gas pipeline transportation commitments in North America, Peru and Ecuador amounting to around €1,000 million.

30.2) Guarantees

At December 31, 2016, Repsol Group companies' most significant guarantees for the obligations of third parties or of companies whose assets, liabilities and earnings are not presented in the consolidated financial

statements (joint-ventures and associates) were:

- For the lease over 3 floating production platforms in connection with development of the BMS-9 field, Repsol Sinopec Brasil (RSB, see Note 8), which is 60%-owned by Repsol, S.A. and 40%-owned by China Petrochemical Corporation (CPC), assumed liability for 25% of the obligations of Guara B.V., corresponding to its ownership interest in that company, in respect of which the Group has issued the guarantees described below.

A guarantee for \$633 million corresponding to 100% of RSB's interest in Guara B.V., for which Repsol holds a counter guarantee from CPC in respect of the latter's 40% interest in RSB, and 2 additional guarantees, in amounts of \$544 million and \$515 million, corresponding to the 15% interest held indirectly by the Group in Guar  B.V..

The guaranteed amounts decrease annually over the 20-year term of the contracts.

- For its 29.66% shareholding in Oleoducto de Crudos Pesados de Ecuador, S.A. (OCP), covering the construction, abandonment and environmental and operational risks related to the pipeline in an amount of \$30 million.
- For its 50% interest in Card n IV, covering the risk of confiscation, expropriation, nationalization, or any measure designed to restrict use of the drilling unit introduced by the Venezuelan government or acts of insurgency or terrorism, for \$90 million.
- For the sale of LNG assets to Shell (see Note 4 to the 2015 consolidated financial statements), two guarantees: one granted to Gas Natural Fenosa SDG covering the supply obligations of Shell Spain LNG SAU (formerly, Repsol Comercializadora de Gas, S.A.) to Gas Natural SDG and another to Atlantic LNG 4 Company of Trinidad & Tobago covering the payment obligations of Repsol LNG T&T Ltd. under a gas processing contract. The Group has the benefit of an indemnification commitment from Shell covering any liabilities Repsol may incur as a result of these guarantees.
- To cover 51% of the dismantling obligations of Repsol Sinopec Resources UK Ltd (see Note 8) in the North Sea, guarantees given by Repsol Oil & Gas Canada, Inc. amounting to  501 million.

Additionally, in line with widespread industry practice, the Group grants guarantees and commitments to indemnify to cover obligations arising from the ordinary course of its business, from the sale of assets and from potential liabilities deriving from its activities, including those of an environmental nature.¹ At the date of issue of these consolidated financial statements, the probability of a breach that would trigger liability for these commitments to any material extent is remote.

(31) ENVIRONMENTAL INFORMATION^{2, 3, 4}

The criteria used to measure environmental costs are established in the "Repsol Safety and Environmental Cost Guide," which adapts the American Petroleum Institute (API) guidelines to the Group's operations and technical approach.

¹Guarantees granted in the ordinary course of business comprise a limited number of guarantees totaling 118 million euros in value. Outstanding guarantees relating to asset sales come to 8 million euros. Environmental guarantees are formally granted in the ordinary course of hydrocarbon exploration and production, where the probability of occurrence of the collateralized contingencies is remote, and the related amounts are unascertainable.

²The information contained in this Note does not include the environmental assets and expenditure of ROGCI purchased or incurred prior to the business combination (see Note 4); it only reflects the assets acquired and expenses incurred after May 8 as it was impossible to individually determine the value of the environmental assets acquired pursuant to this business combination.

³For further information on safety and the environment, see section 6.2 of the Management Report for 2016.

⁴As to the regulatory framework applicable to safety and the environment, see Appendix IV "Regulatory Framework".

31.1) Environmental Assets

The breakdown of the cost of the environmental assets identified and the related accumulated depreciation at December 31, 2016 and 2015 is as follows:

	€Million					
	2016			2015		
	Cost	Accumulated amortization	Net	Cost	Accumulated amortization	Net
Atmosphere protection	444	(264)	180	432	(252)	180
Water management	507	(353)	154	499	(340)	159
Product quality	1,945	(946)	999	1,800	(886)	914
Soil and dismantling	158	(65)	93	161	(58)	103
Energy saving and efficiency	431	(162)	269	395	(147)	248
Waste management	42	(20)	22	41	(19)	22
Contingencies and spills	67	(7)	60	56	(5)	51
Other	236	(122)	114	257	(134)	123
TOTAL	3,830	(1,939)	1,891	3,641	(1,841)	1,800

The cost includes €254 million of assets under construction at December 31, 2016 and €502 million at December 31, 2015.

Among the most significant environmental investments made in 2016, it is worth highlighting the ones dedicated to improving environmental quality of oil products, increasing energy saving and efficiency, minimizing emissions, improving contingency systems and spill prevention systems, and optimizing water consumption.

Key environmental investments in 2016 include two major projects: the fuel quality upgrade project at the La Pampilla Refinery in Peru, with an investment of €125 million, and the comprehensive coastal protection plan in Tarragona, worth €7 million.

Furthermore, in 2016 an investment of €36 million was allocated to energy efficiency projects: highlights included a project worth €15 million at the Petronor refinery to reduce emissions by replacing steam turbines with electric motors, and projects at Tarragona and Cartagena – worth €4 million and €2 million, respectively – to enhance heat recovery by modifying the technology of the air pre-heaters in the furnaces of some of their units.

Finally, at the Tarragona refinery, in 2016 an investment was made of €5 million to reduce atmospheric emissions of nitrogen oxide.

31.2) Environmental provisions

Repsol recognizes the provisions required to cover the measures aimed at preventing and repairing environmental impact, whose estimate is based on technical and economic criteria. These provisions are presented under “*Current and non-current provisions*” on the balance sheet and under the “*Other provisions*” column in the table reconciling the movement in provisions in Note 14.

The changes in the environmental provisions in 2016 and 2015 were as follows:

	€Million	
	2016	2015
Opening balance	59	49
Period provisions charged to income	6	18
Provisions released with a credit to income	(13)	(2)
Payment	(6)	(5)
Reclassifications and other movements	88	(1)
Closing balance	134	59

In addition, 21% of provisions within “Provisions for field dismantling” (see Note 14) are environment-related.

The insurance policies cover, subject to terms and conditions, civil liability for pollution on land and at sea and certain liabilities vis-a-vis the authorities pursuant to the Environmental Liability Act, all of which derived from accidental, sudden and identifiable events, in keeping with habitual industry practice and applicable legislation.

31.3) Environmental Expenses

In 2016 and 2015 environmental expenses amounted to €155 million and €170 million, respectively, classified as “Supplies” and “Other operating expenses.” These expenses include €75 and €82 million of expenses for the allowances needed to cover CO₂ emissions made in each of 2016 and 2015, although the net impact on the income statement was a net expense of €17 million and €20 million, respectively.

Environmental expenditure in 2016 and 2015 includes the following items: other work carried out to enhance air quality in the amount of €25 and €22 million, respectively; water management in the amount of €18 and €19 million, respectively; waste management totaling €12 million in both years; and soil and other restoration work for €9 and €14 million, respectively.

31.4) Carbon emission allowances

The provision movements recognized in respect of CO₂ emission allowances used in 2016 and 2015 is as follows:

	€Million	
	2016	2015
Opening balance	83	55
Period provisions charged to income ⁽¹⁾	72	82
Reclassifications and other movements ⁽²⁾	(83)	(54)
Closing balance	72	83

⁽¹⁾ Corresponds to the expense incurred to acquire the allowances needed to cover the Group's CO₂ emissions.

⁽²⁾ In 2016 and 2015, corresponds to the derecognition of allowances used to cover emissions made in 2015 and 2014, respectively (see Note 6).

During 2016 and 2015 the companies comprising the consolidation scope recognized emission allowances allocated free of charge under the Spanish National Allocation plan equivalent to 8 and 9 million tons of CO₂ respectively, initially measured at €68 and €62 million (see Note 6).

The net total result of the CO₂ management effort, including the portfolio of allowances held for trading, equated to an expense of €17 million in 2016 and an expense of €7 million in 2015.

In 2016, the Refining and Chemicals businesses operated within Phase III of the EU ETS. There is a deficit between the allowances available under Phase II, increased by the allocation for emissions under Phase III, and real emission figures. The Company has continued to implement the new 2014-2020 Energy and Carbon

Plan, which supports energy-saving and CO₂ emission-cutting plans, which helps build a more sustainable business and reduces the cost of compliance with Phase III. The reductions achieved in 2016 are in line with the long-term reduction trend envisaged under this Plan.

(32) OTHER INFORMATION

32.1) Staff

Repsol Group employed a total of 24,535 people at December 31, 2016, geographically distributed as follows: Spain (16,399 employees), North America (1,590 employees), South America (3,718 employees), Europe, Africa and Brazil (1,669 employees), Asia and Russia (1,094 employees) and Oceania (65 employees). Average headcount in 2016 was 26,422 employees and in 2015 was 27,566 employees.

In compliance with Organic Law 3/2007, dated March 22, which promotes true equality between men and women, published in the BOE (Official State Gazette) issued on March 23, 2007, the following tables reflect the Group's total headcount distributed by professional categories and gender at year end 2016 and 2015:

	2016		2015	
	Men	Women	Men	Women
Managers	229	46	274	49
Senior line personnel	1,669	641	2,001	669
Other line personnel	7,511	4,467	8,860	4,709
Operating staff (manual workers, administrative)	6,510	3,462	7,022	3,527
Total	15,919	8,616	18,157	8,954

The Repsol Group¹ employed a total of 582 people of differing abilities at year-end 2016 (2.4% of its workforce).

In Spain in 2016, using the computation criteria stipulated in Spanish law on the rights of people with disability and their integration, the Group surpassed the legally required percentage threshold: its differently-abled workforce accounted for 2.7% of the total in Spain, namely 498 direct hires and 37 FTEs employed using alternative mechanisms.

32.2) Fees paid to auditors

The approved fees for audit services, professional services related to the audit and other non-audit services provided during the year to Repsol Group companies by Deloitte Group companies and their controlled entities, as well as the fees for similar services provided by other audit firms and their controlled entities, are shown below:

€Million	Principal auditor ⁽¹⁾		Other auditors ⁽²⁾	
	2016	2015	2016	2015
Fees for audit services	5.9	7.6	3.1	4.1
Professional fees related to the audit	1.1	1.6	0.2	0.3
Other service fees	0.5	0.7	0.2	0.3
Total	7.5	9.9	3.5	4.7

⁽¹⁾ The sum of these figures does not represent more than 10% of total revenue of the auditor (Deloitte, S.L.) and its organization as a whole.

⁽²⁾ Mainly includes fees due to EY for audit work and other services provided to Repsol Oil&Gas Canada, Inc. and its subsidiaries.

¹ In 2015, information does not include Repsol Oil&Gas Canada, Inc. and its subsidiaries.

32.3) Research, development and innovation

The expense recognized in the income statement in connection with research and development activities amounted to €73 million in 2016 and €90 million in 2015. For further information, see section 6.4 of the Management Report 2016 (<https://www.repsol.com>).

(33) SUBSEQUENT EVENTS

- On February 16, 2017 a bond issued by RIF in February 2007 in the amount of €886 million, carrying a fixed annual coupon of 4.75%, matured.

(34) EXPLANATION ADDED FOR TRANSLATION TO ENGLISH

These consolidated financial statements are prepared on the basis of IFRSs, as endorsed by the European Union, and Article 12 of Royal Decree 1362/2007. Consequently, certain accounting practices applied by the Group may not conform to other generally accepted accounting principles in other countries.

APPENDIX I: MAIN COMPANIES COMPRISING THE REPSOL GROUP AT DECEMBER 31, 2016

Name	Parent Company	Country	Activity	Consolidation method ⁽¹⁾	December 2016		December 2016	
					% of control participation ⁽²⁾	% of participation Total Group	Equity ⁽³⁾	Share capital ⁽³⁾
UPSTREAM								
AESA - Construcciones y Servicios Bolivia, S.A.	Repsol Bolivia, S.A.	Bolivia	Transport of hydrocarbons ⁽⁴⁴⁾	F.C.	99.00	99.00	0	0
Agri Development, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for the production of crude oil and natural gas	E.M.(J.V.)	10.00	6.00	910	0
Akakus Oil Operations, B.V.	Repsol Exploración Murzuq, S.A.	Netherlands	Exploration and production of hydrocarbons	E.M.	49.00	49.00	0	0
Amulet Maritime Ltd.	TEGSI (UK), Ltd.	United Kingdom	Ship vetting service ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
BP Trinidad & Tobago, Llc. ⁽⁴³⁾	BPRY Caribbean Ventures, Llc.	USA	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	30.00	1	0
BPRY Caribbean Ventures, Llc.	Repsol Exploración S.A.	USA	Exploration and production of hydrocarbons	E.M.(J.V.)	30.00	30.00	1,571	2,165
Cardón IV, S.A.	Repsol Venezuela Gas, S.A.	Venezuela	Exploration and production of hydrocarbons	E.M.(J.V.)	50.00	50.00	(28)	4
CSJG Eurotek - Yugra	Repsol Exploración Karabashsky, B.V.	Russia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	102	0
Dubai Marine Areas, Ltd.	Repsol Exploración S.A.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾⁽⁴⁵⁾	E.M.(J.V.)	50.00	50.00	2	0
Equion Energia Ltd.	Talisman Colombia Holdco Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	49.00	49.00	350	0
FEHI Holding S.a.r.l.	TE Holding S.a.r.l.	Luxembourg	Holding company	F.C.	100.00	100.00	3,368	212
Foreland Oil Ltd. ⁽¹⁰⁾	Rift Oil, Ltd.	British Virgin Islands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(144)	127
Fortuna Resources (Sunda) Ltd. ⁽¹⁰⁾	Talisman UK (South East Sumatra) Ltd.	British Virgin Islands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	50	0
Guará, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Plataforma para la producción de crudo y gas natural	E.M.	25.00	15.00	1,765	0
MC Akrep, Llc.	AR Oil & Gaz, B.V.	Russia	Servicios de gestión de empresas del JEV	E.M.(J.V.)	100.00	49.01	0	0
Occidental de Colombia LLC	Repsol International Finance, B.V.	USA	Holding company	E.M.(J.V.)	25.00	25.00	132	100
OJSC Eurotek	AR Oil & Gaz, B.V.	Russia	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	49.01	114	21
Paladin Resources Ltd.	TE Holding S.a.r.l.	United Kingdom	Holding company	F.C.	100.00	100.00	(491)	314
Petrocarabobo, S.A.	Repsol Exploración S.A.	Venezuela	Exploration and production of hydrocarbons	E.M.(J.V.)	11.00	11.00	666	589
Petroleum, S.A. Emp. Mixta	Repsol Exploración S.A.	Venezuela	Exploration and production of hydrocarbons	E.M.(J.V.)	40.00	40.00	514	247
Quiriquire Gas, S.A. Emp. Mixta	Repsol Venezuela, S.A.	Venezuela	Exploration and production of hydrocarbons	E.M.(J.V.)	60.00	60.00	2	0
Repsol Alberta Shale Partnership ⁽¹⁵⁾	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	931	1,111
Repsol Angola 22, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(51)	274
Repsol Angola 35, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	79	128
Repsol Angola 37, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	13	255
Repsol Angostura, Ltd.	Repsol Exploración S.A.	Trinidad & Tobago	Exploration and production of hydrocarbons	F.C.	100.00	100.00	16	28
Repsol Aruba, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3	6
Repsol Bulgaria, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	50	74
Repsol Canada Energy Partnership ⁽¹⁶⁾	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	8,312	2,743
Repsol Canadá Inversiones, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	7,576	0
Repsol Central Alberta Partnership ⁽¹⁵⁾	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Repsol Ductos Colombia, S.A.S. ⁽⁵⁾	Talisman Colombia Holdco Ltd.	Colombia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	36	-
Repsol E&P Bolivia, S.A.	Repsol Bolivia, S.A.	Bolivia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	599	144
Repsol E&P Canada, Ltd.	Repsol Exploración S.A.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3	99
Repsol E&P Eurasia, Llc.	Repsol Exploración S.A.	Russia	Exploration and production of hydrocarbons	F.C.	99.99	99.99	0	0
Repsol E&P USA, Inc.	Repsol USA Holdings Corporation	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3,120	3,118
Repsol E&P USA Holdings, Inc. ⁽⁵⁾	Repsol Oil & Gas Holdings USA, Inc.	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1,943	1,795
Repsol Ecuador, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(386)	6
Repsol Energy North America Corporation	Repsol USA Holdings Corporation	USA	LNG marketing	F.C.	100.00	100.00	(293)	271
Repsol Exploración 17, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Repsol Exploración Argelia, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	705	5
Repsol Exploración Atlas, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3	2
Repsol Exploración Boughezoul, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Repsol Exploración Caribe, S.L. ⁽²⁰⁾	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Repsol Exploración Cendrawasih I, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	28
Repsol Exploración Cendrawasih II, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	14
Repsol Exploración Cendrawasih III, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	4
Repsol Exploración Cendrawasih IV, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	6
Repsol Exploración Colombia, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	105	3
Repsol Exploración East Bula, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	4
Repsol Exploración Guharb, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3	0
Repsol Exploración Guinea, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Repsol Exploración Guyana, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	12	0
Repsol Exploración Irlanda, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	11	0
Repsol Exploración Karabashsky, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	261	259
Repsol Exploración Kazakhshtan, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	8	0
Repsol Exploración Liberia, B.V. ⁽⁷⁾	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	4	62
Repsol Exploración México, S.A. de C.V.	Repsol Exploración S.A.	Mexico	Exploration and production of hydrocarbons	F.C.	100.00	100.00	27	21
Repsol Exploración Murzuq, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	261	10
Repsol Exploración Perú, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	225	20
Repsol Exploración Seram, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(4)	4
Repsol Exploración Sierra Leona, S.L.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	7	3
Repsol Exploración Tobago, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Repsol Exploración Venezuela, B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	35	302
Repsol Exploración, S.A.	Repsol S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	6,577	25
Repsol Exploration Australia, Pty. Ltd.	Repsol Exploración S.A.	Australia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	24
Repsol Exploration Namibia Pty, Ltd.	Repsol Exploración S.A.	Namibia	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(14)	0
Repsol Investigaciones Petrolíferas, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	448	226
Repsol Libreville, S.A. avec A.G.	Repsol Exploración S.A.	Gabon	Exploration and production of hydrocarbons	F.C.	100.00	100.00	49	60
Repsol LNG Holdings, S.A.	Repsol Exploración S.A.	Spain	Hydrocarbons commercialization	F.C.	100.00	100.00	2	2
Repsol Louisiana Corporation	Repsol USA Holdings Corporation	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	31	98
Repsol Norge, AS	Repsol Exploración S.A.	Norway	Exploration and production of hydrocarbons	F.C.	100.00	100.00	71	0
Repsol OCP de Ecuador, S.A.	Repsol Ecuador, S.A.	Spain	Operation of an oil pipeline	F.C.	100.00	98.36	9	0
Repsol Offshore E & P USA, Inc.	Repsol USA Holdings Corporation	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	13	31
Repsol Oil & Gas Australia (JPDA 06-105) Pty Ltd. ⁽³⁶⁾	Paladin Resources Ltd.	Australia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(50)	151
Repsol Oil & Gas Australasia Pty Ltd. ⁽³⁹⁾	Talisman International Holdings, B.V.	Australia	Shared portfolio and service company	F.C.	100.00	100.00	(65)	0
Repsol Oil & Gas Canada, Inc. ⁽¹²⁾	Repsol Energy Resources Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(1,322)	4,271
Repsol Oil & Gas Holdings USA Inc. ⁽⁴²⁾	FEHI Holding S.a.r.l.	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	4,597	2,038
Repsol Oil & Gas Malaysia (PM3) Ltd. ⁽¹⁸⁾	Repsol Oil & Gas Malaysia Holdings Ltd.	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	147	11
Repsol Oil & Gas Malaysia Holdings Ltd. ⁽¹⁹⁾	Talisman Oil, Ltd.	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(356)	44
Repsol Oil & Gas Malaysia Ltd. ⁽¹⁷⁾	Repsol Oil & Gas Malaysia Holdings Ltd.	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	139	0
Repsol Oil & Gas Niugini Kimu Alpha Pty Ltd. ⁽⁵⁴⁾	Repsol Oil & Gas Niugini Ltd.	Australia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(1)	5
Repsol Oil & Gas Niugini Kimu Beta Ltd. ⁽⁵⁵⁾	Repsol Oil & Gas Niugini Ltd.	Papua New Guinea	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(1)	13
Repsol Oil & Gas Niugini Ltd. ⁽⁵³⁾	Repsol Oil & Gas Papua Pty., Ltd.	Papua New Guinea	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(258)	20
Repsol Oil & Gas Niugini Pty Ltd. ⁽⁵⁸⁾	Talisman International Holdings, B.V.	Australia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(150)	45
Repsol Oil & Gas Papua Pty Ltd. ⁽⁵⁷⁾	Repsol Oil & Gas Niugini Pty Ltd.	Australia	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	2
Repsol Oil & Gas USA LLC. ⁽⁴¹⁾	Repsol E&P USA Holdings Inc.	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	2,564	1,920
Repsol Oriente Medio, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	62	0
Repsol Servicios Colombia, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	0
Repsol Sinopec Alpha Ltd. ⁽²³⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	(67)	9
Repsol Sinopec Beta Ltd. ⁽²⁴⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	(1)	5
Repsol Sinopec Brasil, S.A.	Repsol S.A.	Brasil	Exploitation and commercialization of hydrocarbons	E.M.(J.V.)	60.01	60.01	7,220	8,547

Name	Parent Company	Country	Activity	Consolidation method ⁽¹⁾	December 2016		December 2016	
					% of control participation ⁽²⁾	% of participation Total Group	Equity ⁽³⁾	Share capital ⁽³⁾
Repsol Sinopec Resources UK Ltd. ⁽²⁵⁾	Talisman Colombia Holdco Ltd.	United Kingdom	Exploración y producción de hidrocarburos	E.M.	51.00	51.00	744	4,508
Repsol Sinopec LNS Ltd. ⁽²⁶⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	E.M.(J.V.)	100.00	51.00	9	5
Repsol Sinopec North Sea Ltd. ⁽²⁷⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	(987)	3
Repsol Sinopec Oil Trading Ltd. ⁽²⁸⁾	Repsol Sinopec North Sea Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	(751)	0
Repsol Sinopec Pension and Life Scheme Ltd. ⁽²⁹⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	E.M.(J.V.)	100.00	51.00	-	-
Repsol Sinopec Transportation (UT) Ltd. ⁽³⁰⁾	Repsol Sinopec North Sea Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	E.M.(J.V.)	100.00	51.00	(11)	7
Repsol Sinopec Trustees (UK) Ltd. ⁽³¹⁾	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	E.M.(J.V.)	100.00	51.00	-	-
Repsol Surorient Ecuador, S.A.	Repsol Exploración S.A.	Spain	Exploration and production of hydrocarbons	F.C.	100.00	100.00	1	2
Repsol U.K., Ltd. ⁽⁵⁾	Repsol Exploración S.A.	United Kingdom	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(1)	1
Repsol USA Holdings Corporation	Repsol Exploración S.A.	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	2,832	3,320
Repsol Venezuela Gas, S.A.	Repsol Venezuela, S.A.	Venezuela	Exploration and production of hydrocarbons	F.C.	100.00	100.00	237	1
Repsol Venezuela, S.A.	Repsol Exploración Venezuela, B.V.	Venezuela	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(316)	16
Repsol Wild River Partnership ⁽¹⁴⁾	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Rigel Petroleum (NI) Ltd.	Rigel Petroleum UK Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	E.M.(J.V.)	100.00	51.00	4	0
Rigel Petroleum UK Ltd.	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	39	3
Rock Solid Images US Group, Inc.	Repsol USA Holdings Corporation	USA	Development of applications in the field of geophysics	E.M.	30.00	30.00	(2)	52
Saneco	AR Oil & Gaz, B.V.	Russia	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	49.01	110	0
Santiago Oil Company, Ltd.	Equion Energía, Ltd.	Cayman Islands	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	49.00	n/d	n/d
SC Repsol Baiçoi, S.R.L.	Repsol Exploración S.A.	Romania	Exploration and production of hydrocarbons	F.C.	100.00	100.00	16	43
SC Repsol Pitesti, S.R.L.	Repsol Exploración S.A.	Romania	Exploration and production of hydrocarbons	F.C.	100.00	100.00	6	12
SC Repsol Targoviste, S.R.L.	Repsol Exploración S.A.	Romania	Exploration and production of hydrocarbons	F.C.	100.00	100.00	46	50
SC Repsol Targu Jiu, S.R.L.	Repsol Exploración S.A.	Romania	Exploration and production of hydrocarbons	F.C.	100.00	100.00	3	7
Servicios Administrativos Cuenca de Burgos S.A. de C.V.	Repsol Exploración S.A.	Mexico	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Talisman (Algeria) B.V.	Talisman Middle East, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	210	0
Talisman (Asia) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(145)	0
Talisman (Block K 39) B.V.	Talisman K. Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(10)	0
Talisman (Block K 44) B.V.	Talisman K. Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	14	0
Talisman (Block K 9) B.V.	Talisman Global Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾⁽⁴⁵⁾	F.C.	100.00	100.00	0	0
Talisman (Colombia) Oil & Gas Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	588	802
Talisman (Corridor) Ltd. ⁽⁴⁶⁾	Fortuna International (Barbados), Inc	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	957	45
Talisman (Jambi Merang) Ltd.	Talisman International Holdings, B.V.	United Kingdom	Exploration and production of hydrocarbons	F.C.	100.00	100.00	79	77
Talisman (Ogan Komering) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	198	131
Talisman (Pasangkayu) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(62)	30
Talisman (Sageri) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(90)	-
Talisman (Sumatra) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman (Vietnam 133 & 134) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	36	22
Talisman (Vietnam 15-2/01) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	318	502
Talisman (Vietnam 46/02) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	56	56
Talisman Andaman B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	32	0
Talisman Colombia B.V.	TE Colombia Holding, S.a.r.l.	Netherlands	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	609	0
Talisman Colombia Holdco Ltd.	TE Holding S.a.r.l.	United Kingdom	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	4,613	4,448
Talisman Banyumas B.V.	Talisman International Holdings, B.V.	United Kingdom	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0
Talisman East Jabung B.V.	Talisman International Holdings, B.V.	United Kingdom	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(3)	0
Talisman East Tanjung B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(1)	0
Talisman Energy DL, Ltd.	Repsol Sinopec Resources UK Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾⁽⁴⁵⁾	E.M.(J.V.)	100.00	51.00	-	-
Talisman Energy Investments Norge AS	Talisman Perpetual (Norway) Ltd.	Norway	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	3
Talisman Energy NS, Ltd.	Repsol Sinopec Resources UK, Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾⁽⁴⁵⁾	E.M.(J.V.)	100.00	51.00	-	-
Talisman Energy Tanguh B.V.	Talisman Energy (Sahara) B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(2)	0
Talisman Global Holdings B.V.	Talisman International Holdings, B.V.	Netherlands	Holding company	F.C.	100.00	100.00	1,481	0
Talisman Holding International S.a.r.l.	Repsol Oil & Gas Canada Inc.	Luxembourg	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman Java B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman K Holdings B.V.	Talisman Global Holdings, B.V.	Netherlands	Holding company	F.C.	100.00	100.00	667	0
Talisman Middle East B.V.	Talisman Global Holdings, B.V.	Netherlands	Holding company	F.C.	100.00	100.00	977	0
Talisman North Jabung Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(7)	-
Talisman Ocesa Pipelines Holdings AG	Talisman Colombia B.V.	Switzerland	Holding company	F.C.	100.00	100.00	(281)	18
Talisman Oil Ltd.	Fortuna International Petroleum Corporation	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	77	102
Talisman Peru B.V.	Talisman Global Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(129)	62
Talisman Resources (Bahamas) Ltd. ⁽⁹⁾	Paladin Resources Ltd.	Bahamas	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	7	0
Talisman Resources (North West Java) Ltd.	Talisman UK (South East Sumatra) Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	35	0
Talisman Sadang B.V.	Talisman International Holdings, B.V.	Netherlands	Exploración y producción de hidrocarburos ⁽⁴⁴⁾⁽⁴⁵⁾	F.C.	100.00	100.00	0	0
Talisman Sakakemang B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	78	0
Talisman Sierra Leone B.V.	TE Global Holding, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman South Mandar B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman South Sageri B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman Sumatra B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman Transggsindo Ltd. ⁽⁴⁶⁾	Fortuna International (Barbados), Inc.	Barbados	Holding company	F.C.	100.00	100.00	2	28
Talisman UK (South East Sumatra) Ltd.	Paladin Resources, Ltd.	United Kingdom	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	54	0
Talisman Vietnam Ltd.	Talisman Oil, Ltd.	Barbados	Exploration and production of hydrocarbons	F.C.	100.00	100.00	7	0
Talisman Vietnam 05-2/10 B.V.	TV 05-2/10 Holding, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(2)	0
Talisman Vietnam 07/03 B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	139	0
Talisman Vietnam 07/03-CRD Corporation LLC	Talisman International Holdings, B.V.	USA	Exploration and production of hydrocarbons	F.C.	100.00	100.00	187	49
Talisman Vietnam 135-136 B.V.	TV 135-136 Holding, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	283	0
Talisman Vietnam 146-147 B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	58	0
Talisman Vietnam 45 B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
Talisman Vietnam 46-07 B.V.	Talisman International Holdings, B.V.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	1	0
Talisman West Bengara B.V.	Repsol Exploración S.A.	Netherlands	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0
TNO (Tafneftodacha)	AR Oil & Gaz, B.V.	Russia	Exploration and production of hydrocarbons	E.M.(J.V.)	99.54	48.78	256	0
Transportadora Sulbrasileira de Gas, S.A.	Tucunaré Empreendimentos e Participações, Ltda.	Brazil	Construcción y explotación de un gasoducto	E.M.(J.V.)	25.00	25.00	0	21
Transworld Petroleum (U.K.)	Repsol Sinopec North Sea Ltd.	United Kingdom	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	51.00	(53)	1,170
Triad Oil Manitoba Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	6	0
YPFB Andina, S.A.	Repsol Bolivia, S.A.	Bolivia	Exploration and production of hydrocarbons	E.M.(J.V.)	48.33	48.33	929	168
YPFB Transierra, S.A.	YPFB Andina, S.A.	Bolivia	Transport of hydrocarbons by pipeline and pipeline	E.M.	44.50	21.51	156	76
504744 Alberta Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	(8)	0
7308051 Canada Ltd	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	(87)	278
8441251 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	12	11
8441316 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	0	-
8787352 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons	F.C.	100.00	100.00	2	2
8787387 Canada Ltd	Repsol Oil & Gas Canada, Inc.	Canada	Exploration and production of hydrocarbons ⁽⁴⁴⁾	F.C.	100.00	100.00	-	-
Vung May 156-159 Vietnam B.V. ⁽⁵⁾	Repsol Exploración, S.A.	Netherlands	Exploration and production of hydrocarbons	F.C.	100.00	100.00	0	0

*Translation of a report originally issued in Spanish
In the event of discrepancy, the Spanish language version prevails*

Name	Parent Company	Country	Activity	Consolidation method ⁽¹⁾	December 2016		December 2016		
					% of control participation ⁽²⁾	% of participation Total Group	Equity ⁽³⁾	Share capital ⁽³⁾	
DOWNSTREAM									
Abastecimentos e Serviços de Aviação, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of petroleum products	E.M.	50.00	50.00	0	0	
Air Miles España, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Travel Club Program. Loyalty services	E.M.	25.00	24.17	12	0	
Arteche y García, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	100.00	96.67	0	0	
Asfalnor, S.A.	Petróleos del Norte, S.A.	Spain	Distribution and commercialization of asphalt products	F.C.	100.00	85.98	0	0	
Asfaltos Españoles, S.A.	Repsol Petróleo, S.A.	Spain	Asphalts	(4)	50.00	49.99	31	9	
Benzirep-Vall, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	100.00	96.67	0	0	
Caiaigeste - Gestao de Areas de Serviço, Lda.	GESPOST	Portugal	Operation and management of service stations	E.M.	50.00	50.00	0	0	
Camps Estaciones de Servicio, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Operation and management of service stations	F.C.	100.00	96.67	105	8	
Carburants i Derivats, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Andorra	Distribution of petroleum products	E.M.	33.25	32.14	2	0	
Cogeneración Gequisa, S.A.	General Química	Spain	Production of electrical energy and steam	E.M.	39.00	19.50	9	2	
Compañía Anónima de Revisiones y Servicios, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	95.00	91.84	3	1	
Compañía Auxiliar de Remolcadores y Buques Especiales, S.A.	Repsol Petróleo, S.A.	Spain	Tugboats	F.C.	100.00	99.19	7	0	
Distribuidora Andalucía Oriental, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Marketing of fuels	E.M.(J.V.)	50.00	48.34	2	1	
Distribuidora de Petróleos, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Marketing of fuels	F.C.	85.00	82.17	0	0	
Dynasol Altamira, S.A. de C.V. ⁽⁴³⁾	Dynasol Elastómeros, S.A. de C.V.	Mexico	Provision of services	E.M.	100.00	50.00	1	0	
Dynasol China, S.A. de C.V. ⁽⁴³⁾	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Provision of services	E.M.	99.99	49.99	6	6	
Dynasol Elastómeros, S.A. de C.V.	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Production and commercialization of chemical products	E.M.	100.00	50.00	97	30	
Dynasol Elastómeros, S.A.U.	Dynasol Gestión, S.L.	Spain	Production and commercialization of chemical products	E.M.	100.00	50.00	50	17	
Dynasol Gestión Mexico, S.A.P.I. de C.V. ⁽⁴³⁾	Dynasol Química, S.A.	Mexico	Shared portfolio and service company	E.M.	50.00	50.00	193	193	
Dynasol Gestión, S.L.	Repsol Química, S.A.	Spain	Shared portfolio and service company	E.M.	50.00	50.00	137	42	
Dynasol, LLC.	Dynasol Gestión, S.L.	USA	Marketing of petrochemical products	E.M.	100.00	50.00	0	0	
Energy Express S.L.U.	Societat Catalana de Petrolis, S.A.	Spain	Operation and management of service stations	F.C.	100.00	92.08	(2)	1	
Estación de Servicio Barajas, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Instalación y explotación de estaciones de servicio	F.C.	96.00	92.80	3	1	
Estaciones de Servicio El Robledo, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations ⁽⁴⁴⁾	F.C.	100.00	96.67	0	0	
Gas Natural West África S.L.	Repsol LNG Holding, S.A.	Spain	Exploration and production of hydrocarbons	E.M.(J.V.)	100.00	72.06	0	0	
Gastream México, S.A. de C.V.	Repsol S.A.	Mexico	Other activities ⁽⁴⁴⁾	F.C.	100.00	100.00	(1)	27	
General Química, S.A.U.	Dynasol Gestión, S.L.	Spain	Manufacture and sale of petrochemical products	E.M.	100.00	50.00	44	6	
Gestão e Admin. de Postos de Abastecimento, Unipessoal, Lda. GESPOST	Repsol Portuguesa, S.A.	Portugal	Marketing of petroleum products	F.C.	100.00	100.00	4	0	
Gestión de Puntos de Venta GESPEVEVA, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Service Station Management	E.M.(J.V.)	50.00	48.34	53	39	
Grupo Repsol del Perú, S.A.C.	Repsol Perú B.V.	Perú	Shared Services. Society	F.C.	100.00	100.00	2	0	
Iberian Lube Base Oil Company, S.A.	Repsol Petróleo, S.A.	Spain	Development and production of lubricating bases	(4)	30.00	29.99	196	180	
Ibil, Gestor de Carga de Vehículo Eléctrico, S.A.	Repsol Nuevas Energías, S.A.	Spain	Exploitation of recharging points for electric vehicles	E.M.(J.V.)	50.00	50.00	4	9	
Industrias Negromex, S.A. de C.V. ⁽⁴³⁾	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Manufacture of synthetic rubber	E.M.	99.99	49.99	92	53	
Insa Altamira, S.A. de C.V. ⁽⁴³⁾	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Provision of permanent staff	E.M.	99.99	49.99	2	1	
Insa Gpro (Nanjing), Synthetic Rubber Co., Ltd. ⁽⁴³⁾	Dynasol China, S.A. de C.V.	China	Fabricación, busca y desarrollo, venta de caucho sintético.	E.M.	50.00	24.99	0	0	
Insa, Llc. ⁽⁴³⁾	Dynasol Gestión, S.L.	USA	Marketing of rubber NBR products	E.M.	100.00	50.00	8	11	
Liaoning North Dynasol Synthetic Rubber Co., Ltd. ⁽⁴³⁾	Dynasol Gestión, S.L.	China	Manufacture, search and development, sale of synthetic rubber.	E.M.	50.00	25.00	100	114	
North Dynasol Shanghai Business Consulting Co Ltd. ⁽⁴³⁾	Dynasol Gestión, S.L.	China	Marketing of rubber products	E.M.	50.00	25.00	0	0	
Petróleos del Norte, S.A.	Repsol S.A.	Spain	Construction and operation of an oil refinery.	F.C.	85.98	85.98	967	121	
Petronov Innovación, S.L. ⁽⁵⁾	Petróleos del Norte, S.A.	Spain	Investigation activities	F.C.	100.00	85.98	0	0	
Polidux, S.A.	Repsol Química, S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	18	17	
Principle Power (Europe), Ltd.	Principle Power, Inc.	United Kingdom	Electricity production	E.M.(J.V.)	100.00	24.79	23	0	
Principle Power Portugal Unipessoal, Lda.	Principle Power, Inc.	Portugal	Electricity production	E.M.(J.V.)	100.00	24.79	-23	0	
Principle Power, Inc.	Repsol Energy Ventures S.A.	USA	Holding of group of companies	E.M.	24.79	24.79	1	34	
Refinería La Pampilla, S.A.A.	Repsol Perú B.V.	Peru	Refining and commercialization of hydrocarbons	F.C.	82.39	82.39	396	785	
Repsol Butano, S.A.	Repsol S.A.	Spain	LPG commercialization	F.C.	100.00	100.00	1,047	59	
Repsol Canada, Ltd. General Partner	Repsol Exploración S.A.	Canada	LNG regasification	F.C.	100.00	100.00	4	5	
Repsol Chemie Deutschland, GmbH	Repsol Química, S.A.	Germany	Marketing of chemical products	F.C.	100.00	100.00	2	0	
Repsol Chile, S.A.	Repsol S.A.	Chile	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	8	9	
Repsol Comercial de Productos Petrolíferos, S.A.	Repsol Petróleo, S.A.	Spain	Marketing of petroleum products	F.C.	99.78	96.67	1,096	335	
Repsol Comercial, S.A.C.	Refinería La Pampilla S.A.A.	Peru	Marketing of fuels	F.C.	100.00	82.38	94	80	
Repsol Directo, Lda.	Repsol Portuguesa, S.A.	Portugal	Distribution and marketing of petroleum products	F.C.	100.00	100.00	0	0	
Repsol Directo, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of petroleum products	F.C.	100.00	96.67	2	0	
Repsol Eléctrica de Distribución, S.L.	Repsol Petróleo, S.A.	Spain	Distribution and supply of electricity	F.C.	100.00	100.00	6	0	
Repsol Energy Canada, Ltd.	Repsol Exploración S.A.	Canada	LNG marketing	F.C.	100.00	100.00	(1,514)	788	
Repsol Energy Ventures, S.A.	Repsol Nuevas Energías, S.A.	Spain	Development of new energy projects	F.C.	100.00	100.00	3	2	
Repsol Exploration Advanced Services, AG	Repsol Exploración S.A.	Switzerland	Society providing human resources services	F.C.	100.00	100.00	1	0	
Repsol Gas Portugal, S.A.	Repsol Butano, S.A.	Portugal	LNG marketing	F.C.	100.00	100.00	41	1	
Repsol GLP de Bolivia, S.A.	Repsol Butano, S.A.	Bolivia	LPG commercialization ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0	
Repsol Italia, SpA	Repsol S.A.	Italy	Marketing of petroleum products	F.C.	100.00	100.00	46	2	
Repsol Lubrificantes e Especialidades, S.A.	Repsol Petróleo, S.A.	Spain	Manufacture and commercialization of petroleum products	F.C.	100.00	99.97	60	5	
Repsol Lubrificantes e Especialidades Brasil Participações, Ltda.	Repsol Lubrificantes e Especialidades, S.A.	Brazil	Production and marketing of lubricants	F.C.	100.00	100.00	(1)	0	
Repsol Lusitania, S.L.	Repsol S.A.	Spain	Holding company	F.C.	100.00	99.97	84	0	
Repsol Marketing, S.A.C.	Repsol Perú B.V.	Peru	Holding company	F.C.	100.00	100.00	7	3	
Repsol Maroc, S.A.	Repsol Butano, S.A.	Morocco	Marketing of LPG ⁽⁴⁴⁾	E.M.	99.96	99.96	0	1	
Repsol Moray Firth, Ltd.	Repsol U.K. Round 3, Ltd.	United Kingdom	Development of offshore energy ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0	
Repsol Nuevas Energías, S.A.	Repsol S.A.	Spain	Manufacture, distribution and sale of biofuels	F.C.	100.00	100.00	101	1	
Repsol Perú, B.V.	Repsol S.A.	Netherlands	Holding company	F.C.	100.00	100.00	239	181	
Repsol Petróleo, S.A.	Repsol S.A.	Spain	Import of products and operation of refineries	F.C.	99.97	99.97	3,223	218	
Repsol Polímeros, S.A.	Repsol Química, S.A.	Portugal	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	494	222	
Repsol Portuguesa, S.A.	Repsol S.A.	Portugal	Distribution and marketing of petroleum products	F.C.	100.00	100.00	387	59	
Repsol Química, S.A.	Repsol S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	876	60	
Repsol St. John LNG, S.L.	Repsol LNG Holding, S.A.	Spain	Conducting sector studies	F.C.	100.00	100.00	0	0	
Repsol Trading Perú, S.A.C.	Repsol Trading, S.A.	Peru	Trading and transport	F.C.	100.00	100.00	4	4	
Repsol Trading Singapore Pte., Ltd.	Repsol Trading, S.A.	Singapore	Trading and transport	F.C.	100.00	100.00	(5)	0	
Repsol Trading USA Corporation	Repsol USA Holdings Corporation	USA	Trading and transport	F.C.	100.00	100.00	(58)	0	
Repsol Trading, S.A.	Repsol S.A.	Spain	Supply, Trading, Trading and Transportation	F.C.	100.00	100.00	355	0	
Repsol U.K. Round 3, Ltd.	Repsol Nuevas Energías, S.A.	United Kingdom	Offshore wind power development ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0	
Rocsole, Ltd. ⁽⁵⁾	Repsol Energy Ventures S.A.	Finland	Development of technology	E.M.	15.63	15.63	3	5	
Saint John Gas Marketing Company	Repsol St. John LNG, S.L.	USA	Investment project liquefaction plant in Canada	F.C.	100.00	100.00	0	2	
Saint John LNG Development Company, Ltd.	Repsol St. John LNG, S.L.	Canada	Investment project liquefaction plant in Canada	F.C.	100.00	100.00	0	4	
Servicios de Seguridad Mancomunados, S.A.	Repsol Petróleo, S.A.	Spain	security	F.C.	100.00	99.98	1	0	
Servicios Logísticos Combustibles de Aviación, S.L.	Repsol Lubrificantes e Especialidades, S.A.	Spain	Transport of petroleum products of aviation	E.M.(J.V.)	50.00	49.29	24	4	
Servicios y Operaciones de Perú S.A.C.	Repsol Perú B.V.	Peru	Other activities ⁽⁴⁴⁾	F.C.	100.00	100.00	0	0	
Sociedade Abastecedora de Aeronaves, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of petroleum products	E.M.	25.00	25.00	0	0	
Sociedade Açoreana de Armazenagem de Gas, S.A.	Repsol Gas Portugal, S.A.	Portugal	GNP commercialization	E.M.	25.07	25.07	4	1	
Societat Catalana de Petrolis, S.A. (PETROCAT)	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of petroleum products	F.C.	94.94	92.08	(5)	6	
Solgas Distribuidora de Gas, S.L.	Repsol Butano, S.A.	Spain	GNP commercialization	F.C.	100.00	100.00	1	1	
Solred, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Management of means of payment in Service Stations	F.C.	100.00	96.67	29	7	
Spléta Produtos Petrolíferos Unipessoal, Lda. ⁽⁴³⁾	Repsol Gas Portugal, S.A.	Portugal	GNP commercialization	F.C.	100.00	100.00	1	0	
Terminales Canarias, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Storage and distribution of petroleum products	E.M.(J.V.)	50.00	48.34	28	20	
The Repsol Company of Portugal, Ltd.	Repsol S.A.	Portugal	Leasing of logistics assets in Portugal	F.C.	100.00	100.00	2	1	
Tucunare Empreendimentos e Participações, Ltda.	Repsol Perú, B.V.	Brazil	Support Services and Administrative Infrastructure	F.C.	100.00	100.00	6	5	
Windplus, S.A.	Repsol Nuevas Energías, S.A.	Portugal	Development of technology for wind generation	E.M.	20.60	19.70	3	1	

*Translation of a report originally issued in Spanish
In the event of discrepancy, the Spanish language version prevails*

Name	Parent Company	Country	Activity	Consolidation method ⁽¹⁾	December 2016		December 2016	
					% of control participation ⁽²⁾	% of participation Total Group	Equity ⁽³⁾	Share capital ⁽³⁾
CORPORACIÓN								
Albatros, S.à.r.l.	Repsol S.A.	Luxembourg	Holding company	F.C.	100.00	100.00	170	0
AR Oil & Gaz, B.V.	Repsol Exploración S.A.	Netherlands	Holding company	E.M.(J.V.)	49.01	49.01	835	0
Carbón Black Española, S.A.	Repsol S.A.	Spain	Holding company	F.C.	100.00	100.00	64	0
Edwards Gas Services LLC	Repsol Oil & Gas USA LLC.	USA	Holding company	E.M.	50.00	50.00	75	54
FEX GP Llc. ⁽¹¹⁾	Repsol Oil & Gas USA LLC.	USA	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	1	1
Fortuna Finance Corporation S.ar.l.	TE Holding S.ar.l.	Luxembourg	Financial	F.C.	100.00	100.00	0	0
Fortuna International (Barbados) Inc. ⁽⁴⁶⁾	Talisman International (Luxembourg), S.ar.l.	Barbados	Holding company	F.C.	100.00	100.00	145	72
Fortuna International Petroleum Corporation	Repsol Oil & Gas Canada Inc.	Barbados	Holding company	F.C.	100.00	100.00	1,099	609
Gas Natural SDG, S.A. ⁽⁶⁾	Repsol S.A.	Spain	Generation of electricity and wind and gas sale	E.M.	20.07	20.07	19,005	1,001
Gaviota RE, S.A. ⁽⁸⁾	Albatros, S.à.r.l.	Luxembourg	Insurance and reinsurance.	F.C.	100.00	100.00	256	14
Greenstone Assurance, Ltd.	Gaviota RE, S.A.	Bermudas Islands	Insurance and reinsurance (company in run-off situation)	F.C.	100.00	100.00	4	4
Oleoducto de Crudos Pesados, Ltd.	Repsol OCP de Ecuador, S.A.	Cayman Islands	Holding company	E.M.	29.66	29.66	(266)	95
Oleum Insurance Company Ltd.	Repsol Oil & Gas Canada Inc.	Barbados	Insurance and reinsurance.	F.C.	100.00	100.00	474	3
Repsol Bolivia, S.A.	Repsol S.A.	Bolivia	Provision of services	F.C.	100.00	100.00	522	253
Repsol Energy Resources Canada, Inc.	Repsol Canadá Inversiones, S.A.	Canada	Holding company	F.C.	100.00	100.00	7,349	9,221
Repsol Gestión de Divisa, S.L. ⁽¹²⁾	Repsol S.A.	Spain	Financial	F.C.	100.00	100.00	0	0
Repsol International Finance, B.V.	Repsol S.A.	Netherlands	Provision of services	F.C.	100.00	100.00	1,210	338
Repsol Netherlands Finance, BV	Repsol International Finance, B.V.	Netherlands	Financial	F.C.	100.00	100.00	180	0
Repsol Oil & Gas RTS Sdn.Bhd. ⁽²¹⁾	TE Holding S.ar.l.	Malaysia	Shared Services Society	F.C.	100.00	100.00	(12)	7
Repsol Oil & Gas SEA Pte. Ltd. ⁽²²⁾	TE Holding S.ar.l.	Singapore	Shared Services Society	F.C.	100.00	100.00	3	1
Repsol Services Company	Repsol USA Holdings Corporation	USA	Provision of services	F.C.	100.00	100.00	51	42
Repsol Sinopec Brasil, B.V.	Repsol Sinopec Brasil, S.A.	Netherlands	Servicios financieros	E.M.(J.V.)	100.00	60.01	5,281	4,935
Repsol Tesorería y Gestión Financiera, S.A.	Repsol S.A.	Spain	Treasurer of Group companies	F.C.	100.00	100.00	539	0
Rift Oil Ltd.	Talisman International Holdings, B.V.	United Kingdom	Holding company	F.C.	100.00	100.00	41	48
Talisman Energy (Sahara) B.V.	Talisman International Holdings, B.V.	Netherlands	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	181	0
Talisman Finance (UK) Ltd.	TEGSI (UK), Ltd.	United Kingdom	Financial ⁽⁴⁴⁾	F.C.	100.00	100.00	0	2
Talisman International (Luxembourg), S.ar.l. ⁽⁴⁰⁾	Repsol Oil & Gas Canada Inc.	Luxembourg	Holding company	F.C.	100.00	100.00	(13)	73
Talisman International Holdings B.V.	TE Holding S.ar.l.	Netherlands	Holding company	F.C.	100.00	100.00	2,913	927
Talisman Perpetual (Norway) Ltd.	TE Holding S.ar.l.	United Kingdom	Holding company ⁽⁴⁴⁾	F.C.	100.00	100.00	1	1
TE Capital S.ar.l.	TE Holding, S.ar.l.	Luxembourg	Financial	F.C.	100.00	100.00	1,255	8
TE Finance S.ar.l.	TE Holding, S.ar.l.	Luxembourg	Financial	F.C.	100.00	100.00	2,252	0
TE Holding S.ar.l.	Repsol Oil & Gas Canada, Inc.	Luxembourg	Financial Holding company	F.C.	100.00	100.00	15,720	2,135
TEGSI (UK) Ltd.	TE Holding, S.ar.l.	United Kingdom	Shared Services Society ⁽⁴⁴⁾	F.C.	100.00	100.00	3	5
TV 05-2/10 Holding B.V.	Talisman International Holdings, B.V.	Netherlands	Holding company	F.C.	100.00	100.00	79	0
TV 135-136 Holding B.V.	Talisman International Holdings, B.V.	Netherlands	Holding company	F.C.	100.00	100.00	93	0

⁽¹⁾ Consolidation method:

F.C.: Fully consolidated

E.M.: Equity method. Joint ventures are identified with the initials "J.V."

⁽²⁾ Percent (direct and indirect) stake in a subsidiary held by the parent company directly above it in the Group structure.

⁽³⁾ Equity and issued share capital figures used in the process of Group consolidation. Companies with a functional currency other than the euro have had their figures translated at the exchange rate prevailing at the reporting date. Figures rounded up to the nearest half million euros.

⁽⁵⁾ Companies joining the Repsol Group in 2016 (see Appendix Ib).

⁽⁶⁾ The parent company of a group of more than three hundred companies, as shown in its consolidated financial statements (www.portal.gasnatural.com).

⁽⁷⁾ This company has a branch in Liberia that is now in the process of de-registration.

⁽⁸⁾ This company owns minority interests in Oil Casualty Insurance, Ltd (1.86%) and Oil Insurance, Ltd (5.86%), registered in Bermuda.

⁽⁹⁾ Though formed in the Bahamas, this company is tax-resident in the United Kingdom.

⁽¹⁰⁾ Though formed in the British Virgin Islands, these companies are tax-resident in the United Kingdom.

⁽¹¹⁾ Formerly named Fex GP, Inc., this company is the parent of FEX L.P., domiciled in the United States.

⁽¹²⁾ Formerly Talisman Energy, Inc., this company is the parent of Repsol Groundbirch Partnership, formerly Talisman Groundbirch Partnership, domiciled in the United States.

⁽¹³⁾ Formerly, Talisman Alberta Shale Partnership

⁽¹⁴⁾ Formerly, Talisman Wild River Partnership

⁽¹⁵⁾ Formerly, Talisman Central Alberta Partnership

⁽¹⁶⁾ Formerly, Talisman Energy Canada

⁽¹⁷⁾ Formerly, Talisman Malaysia, Ltd.

⁽¹⁸⁾ Formerly, Talisman Malaysia (PM 3), Ltd.

⁽¹⁹⁾ Formerly, Talisman Malaysia Holdings, Ltd.

⁽²⁰⁾ Formerly, Repsol Exploración Suriname, S.L.

⁽²¹⁾ Formerly, Talisman RTC Sdn. Bhd.

⁽²²⁾ Formerly, Talisman Sea Pte, Ltd.

⁽²³⁾ Formerly, Talisman Sinopec Alpha, Ltd.

⁽²⁴⁾ Formerly, Talisman Sinopec Beta, Ltd.

⁽²⁵⁾ Formerly, Talisman Sinopec Energy UK, Ltd.

⁽²⁶⁾ Formerly, Talisman Sinopec LNS, Ltd.

⁽²⁷⁾ Formerly, Talisman Sinopec North Sea, Ltd.

⁽²⁸⁾ Formerly, Talisman Sinopec Oil Trading, Ltd.

⁽²⁹⁾ Formerly, Talisman Sinopec Pension and Life Scheme, Ltd.

⁽³⁰⁾ Formerly, Talisman Sinopec Transportation (UT), Ltd.

⁽³¹⁾ Formerly, Talisman Sinopec Trustees (UK), Ltd.

⁽³²⁾ Formerly, Repsol LNG, S.L.

⁽³³⁾ Formerly, Talisman Energy Niugini Ltd

⁽³⁴⁾ Formerly, Talisman Energy Kimu Alpha Pty Ltd

⁽³⁵⁾ Formerly, Talisman Energy Kimu Beta Ltd

⁽³⁶⁾ Formerly, Talisman Resources (JPDA 06-205) Pty Ltd.

⁽³⁷⁾ Formerly, Papua Petroleum Pty Ltd.

⁽³⁸⁾ Formerly, Talisman Niugini Pty Ltd.

⁽³⁹⁾ Formerly, Talisman Australasia Pty Ltd

⁽⁴⁰⁾ Formerly, Talisman International (Barbados) Inc.

⁽⁴¹⁾ Formerly, Talisman Energy USA Inc.

⁽⁴²⁾ Formerly, Fortuna Energy Holding Inc.

⁽⁴³⁾ Share capital and equity figures reflect 2015 data.

⁽⁴⁴⁾ Society with no activity.

⁽⁴⁵⁾ Society in liquidation process.

⁽⁴⁶⁾ These companies, incorporated legally in Barbados, are domiciled fiscally in the Netherlands.

APPENDIX Ib: MAIN CHANGES IN THE CONSOLIDATION SCOPE

For the year ended December 31, 2016

a) *Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:*

31.12.16								
Name	Country	Parent company	Concept	Date	Consolidation method ⁽¹⁾	% of voting rights acquired	% of voting rights in the entity post-acquisition ⁽²⁾	
Repsol UK, Ltd.	United Kingdom	Repsol Exploración, S.A.	Constitution	jan-16	F.C.	100.0%	100.0%	
Rocsole, Ltd.	Finland	Repsol Energy Ventures, S.A.	Adquisition	jan-16	E.M.	15.63%	15.63%	
Inch Cape Offshore, Ltd.	United Kingdom	Wind Farm Energy U.K., Ltd.	Increase part.	jan-16	F.C.	49.00%	100.00%	
Repsol Ductos Colombia, S.A.S.	Colombia	Talisman Colombia Holdco, Ltd.	Constitution	apr-16	F.C.	100.00%	100.00%	
Vung May 156-159 Vietnam B.V. ⁽³⁾	Netherlands	Repsol Exploración, S.A.	Constitution	jun-16	F.C.	100.00%	100.00%	
Petronor Innovación, S.L.	Spain	Petróleos del Norte, S.A.	Constitution	oct-16	F.C.	100.00%	100.00%	
Repsol E&P USA Holdings, Inc.	USA	Repsol Oil & Gas Holdings USA, Inc.	Constitution	dec-16	F.C.	100.00%	100.00%	

⁽¹⁾ Consolidation method:
F.C.: Fully consolidated
E.M.: Equity method.

⁽²⁾ Percent (direct and indirect) stake in a subsidiary held by the parent company directly above it in the Group structure.

⁽³⁾ Brought within scope of consolidation in the course of the year. Previously inactive.

Legal and tax domicile changes

Name	Previous jurisdiction of residence	New jurisdiction of residence	Date
Repsol Company of Portugal, Ltd. ⁽¹⁾	United Kingdom	Portugal	jan-16
Talisman International (Luxembourg), S.a.r.l. ⁽²⁾	Barbados	Luxembourg	dec-16
Repsol Oil & Gas USA, Llc. ⁽³⁾	USA (Delaware)	USA (Texas)	dec-16
Repsol Oil & Gas Holdings USA, Inc. ⁽⁴⁾	USA (Delaware)	USA (Texas)	dec-16
FEX GP, Llc. ⁽⁵⁾	USA (Delaware)	USA (Texas)	dec-16

⁽¹⁾ Change of tax residence, legal domicile is still the United Kingdom.

⁽²⁾ Formerly, Talisman International (Barbados), Inc

⁽³⁾ Formerly, Talisman Energy USA, Inc

⁽⁴⁾ Formerly, Fortuna Energy Holdings, Inc

⁽⁵⁾ Formerly Fex GP, Inc., this company is the parent of FEX L.P., whose registration has also been moved to Texas, USA.

b) *Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:*

31.12.16							
Name	Country	Parent company	Concept	Date	% of voting rights sold or retired	% of total voting rights done post-alienation	Profit/(loss) generated €Million
Moray Offshore Renewables, Ltd.	United Kingdom	Repsol Moray Firth, Ltd.	Alienation	jan-16	33.36%	0.00%	7
Alsugas Gaviota, S.L.	Spain	Repsol Tesorería y Gestión Financiera, S.L.	Liquidation	mar-16	100.00%	0.00%	-
Talisman Energy Norge AS	Norway	Talisman Middle East B.V.	Liquidation	mar-16	100.00%	0.00%	-
Talisman Oil & Gas (Australia) Pty, Ltd.	Australia	Paladin Resources Limited	Alienation	apr-16	100.00%	0.00%	(9)
Beatrice Offshore Windfarm, Ltd.	United Kingdom	Beatrice Wind, Ltd.	Alienation	may-16	25.00%	0.00%	Note (2)
Inch Cape Offshore, Ltd.	United Kingdom	Wind Farm Energy U.K., Ltd.	Alienation	may-16	100.00%	0.00%	Note (2)
Beatrice Wind, Ltd ⁽³⁾	United Kingdom	Wind Farm Energy U.K., Ltd.	Alienation	may-16	100.00%	0.00%	Note (2)
Wind Farm Energy U.K., Ltd ⁽⁴⁾	United Kingdom	Repsol Nuevas Energías, S.A.	Alienation	may-16	100.00%	0.00%	Note (2)
Talisman (Jambi) Ltd.	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	may-16	100.00%	0.00%	-
Talisman Indonesia Ltd.	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	may-16	100.00%	0.00%	-
TE Resources S.ar.l.	Luxembourg	TE Holding S.ar.l.	Liquidation	may-16	100.00%	0.00%	-
Talisman International Business Corporation	Barbados	Repsol Oil & Gas Canada, Inc	Liquidation	jun-16	100.00%	0.00%	-
TLM Finance Corp	Canada	Repsol Oil & Gas Canada, Inc	Absorption	jun-16	100.00%	0.00%	-
New Santiago Pipelines AG ⁽⁵⁾	Switzerland	Talisman Ocesa Pipelines Holdings AG	Absorption	jun-16	100.00%	0.00%	-
Santiago Pipelines AG ⁽⁵⁾	Switzerland	Talisman Ocesa Pipelines Holdings AG	Absorption	jun-16	100.00%	0.00%	-
Talisman Santiago AG ⁽⁵⁾	Switzerland	New Santiago Pipelines AG	Absorption	jun-16	100.00%	0.00%	-
Talisman SO AG ⁽⁵⁾	Switzerland	Santiago Pipelines AG	Absorption	jun-16	100.00%	0.00%	-
TE Colombia Holding S.ar.l	Luxembourg	TE Holding S.ar.l.	Liquidation	jun-16	100.00%	0.00%	-
Repsol Exploración Gorontalo B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	-
Repsol Exploración Numfor B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	-
Repsol LNG Offshore B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	jun-16	100.00%	0.00%	1
Repsol Gas del Perú, S.A.	Peru	Repsol Butano, S.A.	Alienation	jun-16	99.85%	0.00%	Note (6)
Repsol Gas de la Amazonía, S.A.C.	Peru	Repsol Gas del Perú, S.A.	Alienation	jun-16	100.00%	0.00%	Note (6)
Via Red Hostelería y Distribución, S.L.	Spain	Repsol Butano, S.A.	Alienation	jul-16	100.00%	0.00%	-
Fusi GP, Llc. ⁽⁷⁾⁽⁸⁾	USA	Repsol Oil & Gas USA Llc.	Absorption	jul-16	100.00%	0.00%	-
Fortuna (US) L.P.	USA	Fusi GP, Llc.	Liquidation	jul-16	100.00%	0.00%	-
Talisman Energy Services, Llc. ⁽⁷⁾⁽⁹⁾	USA	Repsol Oil & Gas USA Llc.	Absorption	jul-16	100.00%	0.00%	-
TE Global Services, Llc. ⁽⁷⁾⁽¹⁰⁾	USA	Talisman Energy Services, Llc.	Absorption	jul-16	100.00%	0.00%	-
TENOK, S.a.r.l. ⁽¹¹⁾	Luxembourg	TE Holding S.ar.l.	Absorption	jul-16	100.00%	0.00%	-
Talisman UK Investments, Ltd.	United Kingdom	TE Holding S.ar.l.	Liquidation	aug-16	100.00%	0.00%	-
Papua Petroleum (PNG), Ltd.	Papua New Guinea	Papua Petroleum Pty Ltd.	Liquidation	aug-16	100.00%	0.00%	-
Duragas, S.A.	Ecuador	Repsol Butano, S.A.	Alienation	oct-16	100.00%	0.00%	Note (12)
Servicios de Mantenimiento y Personal, S.A.	Ecuador	Repsol Butano, S.A.	Alienation	oct-16	100.00%	0.00%	Note (12)
Talisman Wiriagar Overseas, Ltd.	British Virgin Islands	Talisman Energy Tangguh, B.V.	Alienation	dec-16	100.00%	0.00%	21
Repsol Capital, S.L. ⁽¹³⁾	Spain	Repsol Tesorería y Gestión Financiera S.L.	Absorption	dec-16	100.00%	0.00%	-
Tecnicontrol y Gestión Integral, S.L. ⁽¹³⁾	Spain	Repsol Tesorería y Gestión Financiera S.L.	Absorption	dec-16	100.00%	0.00%	-
Repsol E&P T&T, Ltd	Trinidad & Tobago	Repsol Exploración, S.A.	Alienation	dec-16	100.00%	0.00%	17
Kuosol S.A.P.I. de C.V.	Mexico	Repsol Nuevas Energías, S.A.	Alienation	dec-16	50.00%	0.00%	-
Principle Power, Inc.	USA	Repsol Energy Ventures, S.A.	Decrease part.	dec-16	0.58%	24.79%	-
Gas Natural Fenosa SDG, S.A.	Spain	Repsol, S.A.	Decrease part.	dec-16	10.08%	20.07%	233
Red Sea Oil Corporation	Canada	Repsol Oil & Gas Canada, Inc	Liquidation	dec-16	100.00%	0.00%	-
TE Global Holding, S.a.r.l.	Luxembourg	Talisman Holding International, S.a.r.l.	Liquidation	dec-16	100.00%	0.00%	-

⁽¹⁾ Net income before tax.

⁽²⁾ Companies transferred as part of the sale of the wind power business in the United Kingdom to the Chinese Group SIDIC Power (see Note 4.1).

⁽³⁾ Formerly, Repsol Beatrice, Ltd.

⁽⁴⁾ Formerly, Repsol Nuevas Energías UK, Ltd.

⁽⁵⁾ Merged into Talisman Ocesa Pipelines Holdings AG.

⁽⁶⁾ Transferred as part of the sale of the LPG business in Peru (see Note 4.1).

⁽⁷⁾ Merged into Talisman Energy USA Inc.

⁽⁸⁾ Formerly, Fusi GP, Inc.

⁽⁹⁾ Formerly, Talisman Energy Services, Inc.

⁽¹⁰⁾ Formerly, TE Global Services, Inc.

⁽¹¹⁾ Merged into TE Capital, S.a.r.l.

⁽¹²⁾ Transferred as part of the sale of the LPG business in Ecuador (see Note 4.1).

⁽¹³⁾ Merged into Repsol Tesorería y Gestión Financiera, S.A.

APPENDIX Ib: MAIN CHANGES IN THE CONSOLIDATION SCOPE FOR THE YEAR ENDED DECEMBER 31, 2015

For the year ended December 31, 2015

a) Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:

31.12.15							
Name	Country	Parent company	Concept	Date	Consolidation method (1)	% of voting rights acquired	% of voting rights acquired in the entity post-acquisition (2)
Societat Catalana de Petrols, S.A. (PETROCAT)	Spain	Repsol Comercial de Productos Petroliferos, S.A.	Increase participation	feb-15	F.C.	4.94%	94.94%
Repsol Chile, S.A.	Chile	Repsol, S.A.	Increase participation	apr-15	F.C.	0.01%	100.00%
Amulet Maritime Limited (3)	United Kingdom	TEGSI (UK) Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Edwards Gas Services LLC (3)	USA	Talisman Energy USA Inc.	Acquisition	may-15	E.M.(J venture)	50.00%	50.00%
Equion Energia Limited (3)	United Kingdom	Talisman Colombia Holdco Limited	Acquisition	may-15	E.M.(J venture)	49.00%	49.00%
FEH Holding S.a.r.l. (3)	Luxembourg	TE Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
FEX GP Inc. (3)	USA	Talisman Energy USA Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
FEX L.P. (3)	USA	FEX GP Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Foreland Oil Limited (3)	British virgin islands	Rift Oil Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna (US) L.P. (3)	USA	FUSI GP Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna Energy Holding Inc. (3)	USA	FEH Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna Finance Corporation S.a.r.l. (3)	Luxembourg	TE Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna International (Barbados) Inc. (3)	Barbados	Talisman International (Barbados) Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna International Petroleum Corporation (3)	Barbados	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Fortuna Resources (Sunda) Limited (3)	British virgin islands	Talisman UK (South East Sumatra) Limited	Acquisition	may-15	F.C.	100.00%	100.00%
FUSI GP Inc. (3)	USA	Talisman Energy USA Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Honner Limited (3)(6)	Papua new Guinea	Papua Petroleum Pty Ltd.	Acquisition	may-15	F.C.	100.00%	100.00%
New Santiago Pipelines AG(3)	Switzerland	Talisman Ocesa Pipelines Holdings AG	Acquisition	may-15	F.C.	100.00%	100.00%
Oil Insurance Company Limited (3)	Barbados	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Paladin Resources Limited (3)	United Kingdom	TE Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Papua Petroleum (PNG) Ltd (3)	Papua new Guinea	Papua Petroleum Pty Ltd.	Acquisition	may-15	F.C.	100.00%	100.00%
Papua Petroleum Pty Ltd.(3)	Australia	Talisman Niugini Pty Ltd.	Acquisition	may-15	F.C.	100.00%	100.00%
Red Sea Oil Corporation (3)	Canada	Talisman Energy Inc.	Increase participation	may-15	F.C.	100.00%	100.00%
Rift Oil Limited (3)	United Kingdom	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Rigel Petroleum (ND) Limited (3)	North Ireland	Rigel Petroleum UK Limited	Acquisition	may-15	E.M.(J venture)	100.00%	51.00%
Rigel Petroleum UK Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	E.M.(J venture)	100.00%	51.00%
Rowell Limited (3)	Papua new Guinea	Papua Petroleum Pty Ltd.	Acquisition	may-15	F.C.	100.00%	100.00%
Santiago Pipelines AG(3)	Switzerland	Talisman Ocesa Pipelines Holdings AG	Adquisition	may-15	IG	100.00%	100.00%
Talisman (Algeria) B.V. (3)	Netherlands	Talisman Middle East B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Asia) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Block K 39) B.V. (3)	Netherlands	Talisman K Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Block K 44) B.V. (3)	Netherlands	Talisman K Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Block K 9) B.V. (3)	Netherlands	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Colombia) Oil & Gas Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Corridor) Ltd. (3)	Barbados	Fortuna International (Barbados) Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Jambi Merang) Limited (3)	United Kingdom	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Jambi) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Ogan Komering) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Pasangkayu) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Sageri) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Sumatra) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Vietnam 133 & 134) Ltd. (4)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Vietnam 15-201) Ltd. (4)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman (Vietnam 46/02) Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Alberta Shale Partnership (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Andaman B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Australasia Pty Ltd.(3)	Australia	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Banyumas B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Central Alberta Partnership (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Colombia B.V. (3)	Netherlands	TE Colombia Holding S.a.r.l	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Colombia Holdco Limited (3)	United Kingdom	TE Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman East Jabung B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman East Tanjung B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy (Sahara) B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Canada (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy DL Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	E.M.(J venture)	100.00%	51.00%
Talisman Energy Inc. (3)	Canada	N/A	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Investments Norge AS (3)	Norway	Talisman Perpetual (Norway) Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Kimu Alpha Pty Ltd (3)	Australia	Talisman Energy Niugini Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Kimu Beta Ltd (3)	Papua new Guinea	Talisman Energy Niugini Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Niugini Limited (3)	Papua new Guinea	Papua Petroleum Pty Ltd.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Norge AS (3)	Norway	Talisman Middle East B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy NS Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	E.M.(J venture)	100.00%	51.00%
Talisman Energy Poland B.V.(3)	Netherlands	Fortuna Energy Holding Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Services Inc. (3)	USA	Fortuna Energy Holding Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy Tangguh B.V. (3)	Netherlands	Talisman Energy (Sahara) B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Energy USA Inc. (3)	USA	Fortuna Energy Holding Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Finance (UK) Limited (3)	United Kingdom	TEGSI (UK) Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Global Holdings B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Groundbich Partnership (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Holding International S.a.r.l (3)	Luxembourg	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Indonesia Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman International (Barbados) Inc. (3)	Barbados	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman International Business Corporation (3)	Barbados	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman International Holdings B.V. (3)	Netherlands	TE Holding S.a.r.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman International Holdings B.V. SCS (3)	Luxembourg	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Java B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman K Holdings B.V. (3)	Netherlands	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Malaysia (PM3) Limited (3)	Barbados	Talisman Malaysia Holdings Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Malaysia Holdings Limited (3)	Barbados	Talisman Oil Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Malaysia Limited (3)	Barbados	Talisman Malaysia Holdings Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Middle East B.V. (3)	Netherlands	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Niugini Pty Ltd.(3)	Papua new Guinea	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman North Jabung Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Ocesa Pipelines Holdings AG(3)	Switzerland	Talisman Colombia B.V.	Adquisition	may-15	IG	100.00%	100.00%
Talisman Oil & Gas (Australia) Pty Limited (3)	Australia	Paladin Resources Limited	Acquisition	may-15	F.C.	100.00%	100.00%

31.12.15

Name	Country	Parent company	Concept	Date	Consolidation method (1)	% of voting rights acquired	% of voting rights acquired in the entity post-acquisition (2)
Talisman Oil Limited (3)	Barbados	Fortuna International Petroleum Corporation	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Perpetual (Norway) Limited (3)	United Kingdom	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Peru B.V. (3)	Netherlands	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Petroleum Norge AS (3)	Norway	Talisman Energy Norge AS	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Resources (Bahamas) Limited (3)	Bahamas	Paladin Resources Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Resources (JPDA 06-105) Pty Limited (3)	Australia	Talisman Oil & Gas (Australia) Pty Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Resources (North West Java) Limited (3)	United Kingdom	Talisman UK (South East Sumatra) Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Resources Norge AS (3)	Norway	Talisman Energy Norge AS	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman RTC Sdn.Bhd. (3)	Malaysia	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Sadang B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Sakakemang B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Santiago AG (3)	Switzerland	New Santiago Pipelines AG	Adquisition	may-15	IG	100.00%	100.00%
Talisman SEA Pte. Ltd. (3)	Singapore	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Sierra Leone B.V. (3)	Netherlands	Talisman Global Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Sinopec Alpha Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Beta Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Energy UK Limited (3)	United Kingdom	Talisman Colombia Holdco Limited	Acquisition	may-15	EM.(N.C.)	51.00%	51.00%
Talisman Sinopec ENS Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec North Sea Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Oil Trading Limited (3)	United Kingdom	Talisman Sinopec North Sea Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Pension and Life Scheme Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Transportation (UT) Limited (3)	United Kingdom	Talisman Sinopec North Sea Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman Sinopec Trustees (UK) Limited (3)	United Kingdom	Talisman Sinopec Energy UK Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Talisman SO AG (3)	Switzerland	Santiago Pipelines AG	Adquisition	may-15	IG	100.00%	100.00%
Talisman South Mandar B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman South Sageni B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Sumatra B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Transgasindo Ltd. (3)	Barbados	Fortuna International (Barbados) Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman UK (South East Sumatra) Limited (3)	United Kingdom	Paladin Resources Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman UK Investments Limited (3)	United Kingdom	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 05-2/10 B.V. (3)	Netherlands	TV 05-2/10 Holding B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 07/03 B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 07/03-GRD Corporation LLC (3)	USA	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 135-136 B.V. (3)	Netherlands	TV 135-136 Holding B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 146-147 B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 45 B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam 46-07 B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Vietnam Limited (3)	Barbados	Talisman Oil Limited	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman West Bengara B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Wild River Partnership (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Talisman Wirtag Overseas Limited (3)	British virgin islands	Talisman Energy Tangguh B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Capital S.ar.l. (3)	Luxembourg	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Colombia Holding S.ar.l. (3)	Luxembourg	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Finance S.ar.l. (3)	Luxembourg	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Global Holding S.ar.l. (3)	Luxembourg	Talisman Holding International S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Global Services Inc. (3)	USA	Talisman Energy Services Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Holding S.ar.l. (3)	Luxembourg	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
TE NOK S.ar.l. (3)	Luxembourg	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TE Resources S.ar.l. (3)	Luxembourg	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TEGSI (UK) Limited (3)	United Kingdom	TE Holding S.ar.l.	Acquisition	may-15	F.C.	100.00%	100.00%
TLM Finance Corp (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Transworld Petroleum (U.K.) (3)	United Kingdom	Talisman Sinopec North Sea Limited	Acquisition	may-15	EM.(N.C.)	100.00%	51.00%
Triad Oil Manitoba Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
TV 05-2/10 Holding B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
TV 135-136 Holding B.V. (3)	Netherlands	Talisman International Holdings B.V.	Acquisition	may-15	F.C.	100.00%	100.00%
504744 Alberta Ltd. (3)	Canada	Talisman Energy Canada	Acquisition	may-15	F.C.	100.00%	100.00%
7308051 Canada Ltd (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
8441251 Canada Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
8441316 Canada Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
8787352 Canada Ltd. (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
8787387 Canada Ltd (3)	Canada	Talisman Energy Inc.	Acquisition	may-15	F.C.	100.00%	100.00%
Repsol Exploración Boughezoul, S.A.	Spain	Repsol Exploración, S.A.	Constitution	aug-15	F.C.	100.00%	100.00%
Dynasol Gestión México, S.A.P.I. de C.V.	México	Repsol Química, S.A.	Constitution	aug-15	EM.(N.C.)	50.00%	50.00%
North Dynasol Shanghai Business Consulting Co Ltd.	China	Dynasol Gestión, S.A.	Constitution	aug-15	EM.(N.C.)	50.00%	25.00%
Rock Solid Images US Group, Inc.	USA	Repsol USA Holdings Corporation	Acquisition	aug-15	EM.	30.00%	30.00%
Principle Power (Europe), Ltd.	United Kingdom	Principle Power, Inc.	Increase participation	sep-15	EM.(N.C.)	(4)	(4)
Principle Power Portugal Unipessoal, Lda.	Portugal	Principle Power, Inc.	Increase participation	sep-15	EM.(N.C.)	(4)	(4)
Principle Power, Inc.	USA	Repsol Energy Ventures, S.A.	Increase participation	sep-15	EM.(N.C.)	0.66%	25.37%
Dynasol China, S.A. de C.V.	México	Dynasol Gestión México, S.A.P.I. de C.V.	Acquisition	oct-15	EM.(N.C.)	99.99%	49.99%
Insa, Llc.	USA	Dynasol Gestión, S.L.	Acquisition	oct-15	EM.(N.C.)	100.00%	50.00%
Insa Altamira, S.A. de C.V.	México	Dynasol Gestión México, S.A.P.I. de C.V.	Acquisition	oct-15	EM.(N.C.)	99.99%	50.00%
Insa, GPRO	USA	Dynasol China, S.A. de C.V.	Acquisition	oct-15	EM.(N.C.)	50.00%	24.99%
Industrias Negromex, S.A. de C.V.	México	Dynasol Gestión México, S.A.P.I. de C.V.	Acquisition	oct-15	EM.(N.C.)	99.99%	49.99%
Liaoning North Dynasol Synthetic Rubber Co., Ltd.	China	Dynasol Gestión, S.L.	High in consolidation perimeter	oct-15	EM.(N.C.)	50.00%	25.00%
Refinería La Pampilla, S.A.A.	Peru	Repsol Perú, B.V.	Increase participation	nov-15	F.C.	31.36%	82.39%
Gas Natural SDG, S.A.	Spain	Repsol, S.A.	Increase participation	dec-15	EM.(N.C.)	0.15%	30.15%

(1) Consolidation method:
F.C. : Fully consolidated
E.M.: Equity method. Joint ventures identified as "J"

(2) Percent (direct and indirect) stake in a subsidiary held by the parent company directly above it in the Group structure.

(3) Companies acquired as part of the business combination with ROGCI (see Note 4).

(4) Percent of control over these companies remains unchanged. However, the Group's total ownership interest has shifted from 24.71% to 25.37%.

Legal and tax domicile changes

Name	Previous jurisdiction of residence	New jurisdiction of residence	Date
Repsol Energy North America Corporation	USA (Delaware)	USA (Texas)	dec-15
Repsol E&P USA, Inc.	USA (Delaware)	USA (Texas)	dec-15
Repsol Louisiana Corp.	USA (Delaware)	USA (Texas)	dec-15
Repsol Offshore E&P USA, Inc.	USA (Delaware)	USA (Texas)	dec-15
Repsol Trading USA Corporation	USA (Delaware)	USA (Texas)	dec-15
Repsol USA Holdings Corporation	USA (Delaware)	USA (Texas)	dec-15
Saint John Gas Marketing Company	USA (Delaware)	USA (Texas)	dec-15
Repsol Services Company	USA (Delaware)	USA (Texas)	dec-15

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

Name	Country	Parent company	Concept	Date	31.12.15		
					% of voting rights sold or retired	% of voting rights acquired in the entity post-acquisition	Income/(Loss) generated (Millions of euros) (1)
Enirepsa Gas, Limited	Saudi Arabia	Repsol Exploración, S.A.	Liquidation	mar-15	--	--	-
Perú Hunt Pipeline Development Company, Llc. (2)	United States	Repsol Exploración Perú, S.A.	Liquidation	apr-15	--	--	-
Repsol International Capital, Ltd. (3)	Cayman Islands	Repsol International Finance, B.V.	Liquidation	jul-15	--	--	-
Repsol Mediación Agente de Seguros Vinculado, S.L.U. (4)	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Absorption	aug-15	--	--	-
Euro-24, S.L. (4)	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Absorption	aug-15	--	--	-
San Andrés Park, S.L. (4)	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Absorption	aug-15	--	--	-
Honner Limited	Papua New Guinea	Papua Petroleum Pty, Ltd.	Liquidation	aug-15	--	--	-
Caveant, S.A.	Argentina	Repsol Capital, S.L.	Liquidation	sep-15	--	--	-
Compañía Logística de Hidrocarburos CLH, S.A.	Spain	Repsol, S.A.	Alienation	sep-15	--	--	Note (7)
CLH Aviación, S.A.	Spain	Compañía Logística de Hidrocarburos CLH, S.A.	Alienation	sep-15	--	--	Note (7)
Windplus, S.A.	Portugal	Repsol Nuevas Energías, S.A.	Decrease part.	oct-15	70.68%	20.60%	-
General Química, S.A.U.	Spain	Dynasol Gestión, S.L.	Decrease part.	oct-15	(5)	(5)	-
Cogeneración Gequisa	Spain	General Química, S.A.U.	Decrease part.	oct-15	(6)	(6)	-
Repsol Overzee Financiën, B.V.	Netherlands	Repsol Exploración, S.A.	Absorption	nov-15	--	--	-
Zhanbay, Lp.	Kazakhstan	Repsol Exploración Kazakhstan, S.A.	Liquidation	nov-15	--	--	-
Repsol Investeringen, B.V.	Netherlands	Repsol International Finance, B.V.	Liquidation	dec-15	--	--	-
Rowell, Ltd.	Papua New Guinea	Papua Petroleum Pty Ltd.	Liquidation	dec-15	--	--	-
Talisman Petroleum Norge, AS	Norway	Talisman Energy Norge AS	Liquidation	dec-15	--	--	-
Talisman Resources Norge, AS	Norway	Talisman Energy Norge AS	Liquidation	dec-15	--	--	-
Talisman Energy Poland B.V.	Netherlands	Fortuna Energy Holding Inc.	Liquidation	dec-15	--	--	-

(1) Net income before tax.

(2) This is the parent company of Hunt Pipeline Development Perú, LP, which owns 100% of Hunt Pipeline Company of Perú, Ltd., registered in the Cayman Islands. All these companies have exited the Repsol Group.

(3) In line with our policy of actively taking steps to reduce our presence in taxhavens, this company was liquidated on July 23, 2015.

The preference shares issued by this company in 1997 and 2002 had already been bought back in 2011 and 2013.

(4) Merged into Repsol Comercial de Productos Petrolíferos, S.A.

(5) Percent of control over these companies remains unchanged. However, the Group's total ownership interest has shifted from 100% to 50%.

(6) Percent of control over these companies remains unchanged. However, the Group's total ownership interest has shifted from 39% to 19%.

(7) See Note 43

APPENDIX II: JOINT OPERATIONS OF THE REPSOL GROUP AT DECEMBER 31, 2016

The Repsol Group's main Joint Operations (see section 2.2.1 of Note 2) are shown below (including those in which the Group is involved through a joint arrangement)¹:

Name	Share % ⁽¹⁾	Operator	Activity
UPSTREAM			
Angola			
Block 22	30.00%	Repsol	Exploration
Block 35	25.00%	ENI	Exploration
Block 37	20.00%	Conoco	Exploration
Algeria			
Bougezoul (104b, 117, 133c, 135b y 137b)	51.00%	Repsol	Exploration
EMK	9.10%	Pertamina	Development/Production
Greater MLN	35.00%	Pertamina	Development/Production
Menzel Ledjmet Sud-Est /405a	35.00%	Pertamina	Development/Production
Ourhoud Field / 404,405,406a	2.00%	Sonatrach	Development/Production
Reggane (REGGANE,AZSE,SALI,TIO,KL,KLS)	29.25%	Repsol	Development/Production
S.E. Illizi	52.50%	Repsol	Exploration
Tin Fouyé Tabenkor (TFT)	30.00%	Total	Development/Production
Aruba			
Aruba	50.00%	Repsol	Exploration
Australia			
Kitan	25.00%	ENI	Development/Production
WA-480-P	45.00%	BHP Billiton	Exploration
Bolivia ⁽²⁾			
Amboro - Espejos	48.33%	YPF B Andina, S.A	Exploration
Arroyo Negro	48.33%	YPF B Andina, S.A	Development/Production
Boqueron	48.33%	YPF B Andina, S.A	Development/Production
Camiri	48.33%	YPF B Andina, S.A	Development/Production
Carahuaicho 8B	24.17%	YPF B Andina, S.A	Exploration
Carahuaicho 8C	24.17%	YPF B Andina, S.A	Exploration
Carahuaicho 8D	48.33%	YPF B Andina, S.A	Exploration
Cascabel	48.33%	YPF B Andina, S.A	Development/Production
Cobra	48.33%	YPF B Andina, S.A	Development/Production
Enconada	48.33%	YPF B Andina, S.A	Development/Production
Guairuy	48.33%	Repsol	Development/Production
Huacaya (Caipipendi)	37.50%	YPF B Andina, S.A	Development/Production
La Peña - Tundy	48.33%	YPF B Andina, S.A	Development/Production
Los Penocos	48.33%	YPF B Andina, S.A	Development/Production
Los Sauces (Grigota)	48.33%	Repsol	Development/Production
Margarita (Caipipendi)	37.50%	Repsol	Development/Production
Monteagudo	39.67%	YPF B Andina, S.A	Development/Production
Oriental	24.17%	YPF B Andina, S.A	Exploration
Palacios	48.33%	YPF B Andina, S.A	Development/Production
Patujú	48.33%	YPF B Andina, S.A	Development/Production
Puerto Palos	48.33%	YPF B Andina, S.A	Development/Production
Rio Grande	48.33%	Petrobras	Development/Production
Sabalo	24.46%	Petrobras	Development/Production
San Alberto (San Alberto)	24.46%	YPF B Andina, S.A	Development/Production
Sara Boomerang III	48.33%	YPF B Andina, S.A	Exploration
Sirari	48.33%	YPF B Andina, S.A	Development/Production
Vibora	48.33%	YPF B Andina, S.A	Development/Production
Yapacani	48.33%	YPF B Andina, S.A	Development/Production
Brazil			
Albacora Leste	6.00%	Petrobras	Development/Production
BM-C-33 (C-M-539)	21.00%	Statoil	Exploration
BM-ES-21 (ES-M-414)	6.66%	Petrobras	Exploration
BM-S-50 (S-M-623)	12.00%	Petrobras	Exploration
BM-S-51 (S-M-619)	12.00%	Petrobras	Exploration
BM-S-9 (SPS-50)- Lapa (Carioca)	15.00%	Petrobras	Development/Production
BM-S-9 (SPS-55)- Sapinhoá (Guará)	15.00%	Petrobras	Development/Production
Piracucá (BM-S-7)	22.20%	Petrobras	Development/Production
Bulgaria			
Han Asparuh	30.00%	Total	Exploration

¹ Joint operations in the *Upstream* segment include the blocks of joint operations where the Group holds acreage for exploration, development and production of oil and gas.

Name	Share % ⁽¹⁾	Operator	Activity
Canada ⁽³⁾			
Chauvin Alberta	63.66%	Repsol	Development/Production
Chauvin Saskatchewan	94.99%	Repsol	Development/Production
Edson	78.82%	Repsol	Development/Production
Groundbirch/Saturn- Montney Rights	42.53%	Repsol	Development/Production
Groundbirch/Saturn- No Montney Rights	41.35%	Repsol	Development/Production
Misc. Alberta	61.09%	Repsol	Exploration ⁽⁴⁾
Misc. British Columbia	67.00%	Repsol	Exploration
Misc. Saskatchewan	83.39%	Repsol	Exploration
North Duvernay	87.88%	Repsol	Development/Production
Quebec	80.00%	Repsol	Exploration
Total Frontier	55.35%	Repsol	Exploration
Wild River	44.44%	Repsol	Development/Production
Colombia ⁽⁵⁾			
Caguan 5	50.00%	Meta Petroleum Corp.	Exploration
Caguan 6	40.00%	Meta Petroleum Corp.	Exploration
Catleya	50.00%	Ecopetrol	Exploration
Chipirón	8.75%	Oxycol	Development/Production
COL-4	33.40%	Repsol	Exploration
Cosecha	17.50%	Oxycol	Development/Production
CPE-8	50.00%	Repsol	Exploration
CPO-9	45.00%	Ecopetrol	Exploration/Production
Cravo Norte	5.63%	Oxycol	Development/Production
Gua Off 1	30.00%	Repsol	Exploration
Mundo Nuevo	21.00%	Equion	Exploration
Niscota	30.00%	Equion	Exploration
Piedemonte	24.50%	Equion	Development/Production
Putumayo 9	40.00%	Meta Petroleum Corp.	Exploration
Putumayo 30	50.00%	Repsol	Exploration
RC-11	50.00%	Repsol	Exploration
RC-12	50.00%	Repsol	Exploration
Recetor	24.50%	Equion	Development/Production
Rio Chitamera	15.19%	Equion	Development/Production
Rondon	6.25%	Oxycol	Development/Production
Tayrona	20.00%	Petrobras	Exploration
Ecuador			
Block 16 (extensión Wati)	35.00%	Repsol	Service contract
Tivacuno	35.00%	Repsol	Service contract
Spain			
Albatros	82.00%	Repsol	Development/Production
Angula	53.85%	Repsol	Development/Production
Bezana	44.45%	Petroleum Oil & Gas Spain	Exploration ⁽⁴⁾
Bigüenzo	44.45%	Petroleum Oil & Gas Spain	Exploration ⁽⁴⁾
Boquerón Unit	61.95%	Repsol	Development/Production
Casablanca -Montanazo Unit	68.67%	Repsol	Development/Production
Casablanca No Unit	67.35%	Repsol	Development/Production
Montanazo D - No Unit	72.44%	Repsol	Development/Production
Rodaballo	65.42%	Repsol	Development/Production
United States ⁽³⁾			
<i>Alaska</i>			
North Slope	49.00%	Repsol	Exploration
North Slope	25.00%	Armstrong	Exploration
<i>Beaufort Sea (Alaska)</i>			
Beechey Point	20.00%	Shell	Exploration
Beechey Point	20.00%	ENI	Exploration
Harrison Bay	20.00%	Shell	Exploration
Harrison Bay	20.00%	ENI	Exploration
<i>Eagle Ford</i>	35.32%	Statoil	Development/Production
<i>Golfo de México</i>			
Alaminos Canyon	10.00%	Statoil	Exploration
Atwater Valley	33.34%	Murphy	Exploration
Atwater Valley	50.00%	Repsol	Exploration
Green Canyon	28.00%	BHP	Development/Production
Green Canyon	40.00%	Murphy	Exploration
Green Canyon	33.34%	Repsol	Exploration
Green Canyon	34.00%	Repsol	Exploration
Green Canyon	40.00%	Repsol	Exploration
Green Canyon	50.00%	Repsol	Exploration
Keathley Canyon	12.50%	Chevron	Exploration
Keathley Canyon	60.00%	Repsol	Exploration
Keathley Canyon	10.00%	Statoil	Exploration
Mississippi Canyon	60.00%	Repsol	Exploration
Walker Ridge	60.00%	Repsol	Exploration
<i>Marcellus</i>	83.75%	Repsol	Development/Production
<i>Marcellus (*) Exploration unconventional</i>	99.67%	Repsol	Exploration
<i>Midcontinent</i>	8.92%	SandRidge	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
Gabon			
Luna Muetse (G4-246)	80.00%	Repsol	Exploration
Guyana			
Kanuku	70.00%	Repsol	Exploration
Indonesia			
Corridor	36.00%	Conoco	Development/Production
East Jabung	51.00%	Repsol	Exploration
Jambi Merang	25.00%	PT Pertamina	Development/Production
Ogan Komerang	50.00%	Repsol	Development/Production
Sakakemang	90.00%	Repsol	Exploration
Ireland			
Dunquin FEL	25.00%	ENI	Exploration
Libya			
NC-115 (Development)	20.00%	Akakus	Development/Production
NC-115 (Exploration)	40.00%	Repsol	Exploration
NC-186 (Development)	16.00%	Akakus	Development/Production
NC-186 (Exploration)	32.00%	Repsol	Exploration
Malaysia			
Angsi South Channel (Unit.)	60.00%	Repsol	Development/Production
PM03 CAA	41.44%	Repsol	Development/Production
PM305	60.00%	Repsol	Development/Production
PM314	60.00%	Repsol	Development/Production
SBI Kinabalu	60.00%	Repsol	Development/Production
SB309	70.00%	Repsol	Exploration
Block 46-CN	33.15%	Repsol	Development/Production
Morocco			
Gharb Offshore Sud	75.00%	Repsol	Exploration
Norway			
License 019B (Gyda)	61.00%	Repsol	Development/Production
License 019B (Tambar East Unit)	9.76%	BP	Development/Production
License 019C	34.00%	Repsol	Exploration
License 025 (Gudrun)	15.00%	Statoil	Development/Production
License 025 B (Gudrun)	15.00%	Statoil	Exploration
License 038 (Varg)	65.00%	Repsol	Development/Production
License 038C (Rev)	70.00%	Repsol	Development/Production
License 038D	40.00%	Repsol	Development/Production
License 052 (Veslefikk)	27.00%	Statoil	Development/Production
License 053B (Brage)	33.84%	Wintershall	Development/Production
License 055 (Brage)	33.84%	Wintershall	Development/Production
License 055 B (Brage)	33.84%	Wintershall	Development/Production
License 055 D (Brage)	33.84%	Wintershall	Development/Production
License 185 (Brage)	33.84%	Wintershall	Development/Production
License 187 (Gudrun)	15.00%	Statoil	Exploration
License 316 (Yme)	60.00%	Repsol	Development/Production
License 316B (Yme)	60.00%	Repsol	Development/Production
License 378 (Area A)	17.50%	Wintershall	Development/Production
License 378 (Area B)	17.50%	Wintershall	Exploration
License 378 (Area C)	17.50%	Wintershall	Exploration
License 528 (6707/8, 6707/9, 6707/11)	6.00%	Centrica R. Norge	Exploration
License 528 B	6.00%	Centrica R. Norge	Exploration
License 692 (6509/3, 6510/1, 6510/2)	70.00%	Repsol	Exploration
License 704 (6705/10, 6704/12)	30.00%	DEA E&P Norge As	Exploration
License 705 (6705/7, 6705/8, 6705/9, 6705/10)	40.00%	Repsol	Exploration
License 721 (7321/4)	20.00%	DEA E&P Norge As	Exploration
License 750 (6405/4, 6405/7, 6405/10)	40.00%	Tullow	Exploration
License 750 B	40.00%	Tullow	Exploration
License 801 (6605/2,3 og 6608/1,2 og 6706/10)	50.00%	Repsol	Exploration
License 802 (6705/11,12)	40.00%	Repsol	Exploration
License 840	20.00%	Statoil	Exploration
License 847	20.00%	Wintershall	Exploration
Papua New Guinea			
License 10	40.00%	Repsol	Development/Production
License 261	50.00%	Repsol	Exploration
License 269	50.00%	Repsol	Exploration
License 287	50.00%	Repsol	Exploration
License 426	66.60%	Repsol	Exploration
License 8	22.29%	Oil Search	Exploration
License 21	35.10%	Horizon Oil	Exploration
License 28	37.50%	Eaglewood	Development/Production
License 38	25.00%	Repsol	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
Peru			
Block 76	35.00%	Hunt Oil	Exploration
Block 56	10.00%	Pluspetrol	Development/Production
Block 57	53.84%	Repsol	Exploration
Block 88	10.00%	Pluspetrol	Development/Production
Portugal			
Ameijoa	34.00%	Repsol	Exploration
Camarao	34.00%	Repsol	Exploration
Caranguejo	70.00%	Repsol	Exploration
Lagosta	90.00%	Repsol	Exploration
Lagostim	90.00%	Repsol	Exploration
Mexilhao	34.00%	Repsol	Exploration
Ostra	34.00%	Repsol	Exploration
Sapateira	70.00%	Repsol	Exploration
Region of the Iraqi Kurdistan			
Kurdamir	40.00%	Repsol	Development/Production
Topkhana	80.00%	Repsol	Development/Production
United Kingdom ⁽⁶⁾			
License 019 (22/17n)	30.08%	Repsol	Development/Production
License 020 (22/18n)	30.08%	Repsol	Development/Production
License 073 (30/18_E)	47.81%	Repsol	Development/Production
License 073 (30/18_W)	47.18%	Repsol	Exploration
License 079 (30/13a)	31.88%	Repsol	Exploration
License 101 (13/24a)	34.53%	Repsol	Development/Production
License 111 (30/3a Upper)	15.55%	Repsol	Development/Production
License 111 (30/3a Blane Field)	30.75%	Repsol	Development/Production
License 116 (30/16n)	51.00%	Repsol	Development/Production
License 185 (30/11b)	30.60%	Repsol	Exploration
License 185 (30/11b)_Developm.	51.00%	Repsol	Development/Production
License 185 (30/12b)	30.60%	Repsol	Exploration
License 187 (11/30a Beatrice)	51.00%	Repsol	Development/Production
License 1031 (11/25a Beatrice)	51.00%	Repsol	Development/Production
License 1031 (12/21a Beatrice)	51.00%	Repsol	Development/Production
License 1621 (22/24e)	25.50%	Repsol	Exploration
License 1622 (22/29e)	25.50%	Repsol	Exploration
License 1806 (22/23e)	51.00%	Repsol	Exploration
License 1880 (29/20a)	51.00%	Repsol	Exploration
License 201 (16/21a)	7.65%	Premier	Development/Production
License 201 (16/21d)	7.65%	Premier	Development/Production
License 219 (16/13a)	16.07%	Repsol	Development/Production
License 219 (16/13e)	16.07%	Repsol	Exploration
License 220 (15/17n-F2- Saltire)	51.00%	Repsol	Development/Production
License 220 (15/17n-Sub Area)	20.40%	EnQuest Heather	Development/Production
License 220 (15/17n-F2- Piper+ rest of Block)	51.00%	Repsol	Development/Production
License 225 (16/27a- Contract Area 3)	13.50%	JX Nippon	Exploration
License 237 (15/16a)	51.00%	Repsol	Development/Production
License 240 (16/22a- non Arundel Area)	18.86%	Repsol	Development/Production
License 241 (21/1a)_Developm.	50.49%	Repsol	Development/Production
License 241 (21/1a Rest of Block)	41.02%	Repsol	Exploration
License 241 (21/1a)	48.16%	Repsol	Exploration
License 241 (21/1c)	48.16%	Repsol	Development/Production
License 241/P244 (21/1c/21/2a- Cretaceous Area West)	48.16%	Repsol	Development/Production
License 244 (21/2a)	51.00%	Repsol	Development/Production
License 249 (14/19n - Residual -Clay more)_Develop.	51.00%	Repsol	Development/Production
License 249 (14/19n - Residual -Clay more)	51.00%	Repsol	Exploration
License 249 (14/19n_F1- Clay more)	47.16%	Repsol	Development/Production
License 249 (14/19n_F2- Scapa/Clay more)	51.00%	Repsol	Development/Production
License 250 (14/19a)	51.00%	Repsol	Exploration
License 250 (14/19a)_Developm.	51.00%	Repsol	Development/Production
License 250 (14/19s- Rest of Block)	51.00%	Repsol	Exploration
License 250 (14/19s- Rest of Block)_Develop	51.00%	Repsol	Development/Production
License 250 (14/19s- F1)	51.00%	Repsol	Development/Production
License 250 (15/17a Rest of Block)	51.00%	Repsol	Exploration
License 250 (15/17a-Sub Area)	20.40%	EnQuest Heather	Development/Production
License 250 (15/17s-F1- Chanter / Saltire / Lona)	51.00%	Repsol	Development/Production
License 250 (15/17s-Rest of Block)	51.00%	Repsol	Development/Production
License 255 (30/14 Flyndre Area)	3.83%	Maersk	Development/Production
License 255 (30/14 Cawdor Field Development)	4.93%	Maersk	Development/Production
License 255 (30/14 Cawdor Area)	4.93%	Maersk	Development/Production
License 255 (30/19a Affleck)	17.00%	Maersk	Development/Production
License 256 (30/16s)	51.00%	Repsol	Development/Production
License 263 (14/18a)	51.00%	Repsol	Development/Production
License 266 (30/17b)	48.45%	Repsol	Development/Production
License 291 (22/17s)	30.08%	Repsol	Development/Production
License 291 (22/22a)	30.08%	Repsol	Development/Production
License 291 (22/23a)	30.08%	Repsol	Development/Production
License 292 (22/18a)	30.08%	Repsol	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
License 294 (20/05a_F1)	51.00%	Repsol	Development/Production
License 294 (20/05a)	48.16%	Repsol	Exploration
License 295 (30/16t)	51.00%	Repsol	Development/Production
License 297 (13/28a)	33.02%	Repsol	Exploration
License 297 (13/28a)_Devel.	35.28%	Repsol	Development/Production
License 307 (13/29a)	35.28%	Repsol	Development/Production
License 324 (14/20b-Clay more Extension)	51.00%	Repsol	Development/Production
License 324 (14/20b)	25.50%	Repsol	Development/Production
License 324 (14/20b-f1+f2)	51.00%	Repsol	Development/Production
License 324 (15/16b)	51.00%	Repsol	Development/Production
License 324 (15/16c)	51.00%	Repsol	Development/Production
License 324 (15/23a)	34.38%	Repsol	Exploration
License 324 (15/23a)_Developm.	34.38%	Repsol	Development/Production
License 344 (16/21b Rest of Block)	30.60%	Repsol	Development/Production
License 344 (16/21b_F1*-Balmoral Field Area)	8.06%	Premier	Development/Production
License 344 (16/21c*- Rest of block excluding Stirling)	30.60%	Repsol	Development/Production
License 344 (16/21c_f1*-Balmoral)	8.06%	Premier	Development/Production
License 344 (16/21c_f1*)	7.81%	Premier	Development/Production
License 534 (98/06a-Wareham)	2.55%	Perenco	Development/Production
License 534 (98/06a-Wych Farm UOA)	2.55%	Perenco	Development/Production
License 534 (98/07a)	2.55%	Perenco	Exploration
License 585 (15/12b)	20.40%	EnQuest Heather	Exploration
License 593 (20/05c)	50.49%	Repsol	Development/Production
License 593 (20/05e)	48.16%	Repsol	Exploration
License 640 (15/24b - MacCulloch)	3.06%	Conoco Phillips	Development/Production
License 640 (15/24b - E2 area)	1.53%	Conoco Phillips	Development/Production
License 729 (13/29b - Ross Unitised Field UUAO interests)	35.28%	Repsol	Development/Production
License 729 (13/29b - Blake Ext Non Skate (retained area))	40.80%	Repsol	Exploration
License 729 (13/29b - Blake Ext Non Skate_Devel.)	40.80%	Repsol	Development/Production
License 810 (13/24b- Rest of Block)	35.28%	Repsol	Exploration
License 810 (13/24b-Rest of Block)	35.28%	Repsol	Development/Production
License 810 (13/24b Blake Area)	34.53%	Repsol	Development/Production
License 973 (13/28c)	33.02%	Repsol	Development/Production
License 982 (12/26a Beatrice)	51.00%	Repsol	Development/Production
License 983 (13/23b)	25.50%	Repsol	Exploration
License089 (SZ/8, SY/88b, SY/98a)	2.55%	Perenco	Exploration
License089 (SZ/8a, SY/88b, SY/98a)	2.55%	Perenco	Development/Production
Romania			
Baicoi	49.00%	OMV	Exploration
Pitesti	49.00%	OMV	Exploration
Targoviste	49.00%	OMV	Exploration
Targu Jiu	49.00%	OMV	Exploration
Russia ⁽⁷⁾			
Alkanovskoe	49.00%	AROG	Development/Production
Avgustovskoe	49.00%	AROG	Development/Production
Bazhkovskoe	49.00%	AROG	Development/Production
Borschevskoe	49.00%	AROG	Development/Production
Kochevnskoe	49.00%	AROG	Development/Production
Kovalevskoe	49.00%	AROG	Development/Production
Kulturenskoe	49.00%	AROG	Development/Production
North Borschevskoe	49.00%	AROG	Development/Production
Novo-Kievskoe	49.00%	AROG	Development/Production
Penzenskoe	49.00%	AROG	Development/Production
Saratovskoe	49.00%	AROG	Development/Production
Solnechnoe	49.00%	AROG	Development/Production
South-Kultashikhskoe	49.00%	AROG	Development/Production
South-Solnechnoe	49.00%	AROG	Development/Production
Stepnoozerskoe	49.00%	AROG	Development/Production
Syskonsinskoe (SK)	49.00%	AROG	Development/Production
West-Avgustovskoe	49.00%	AROG	Development/Production
West-Kochevnskoe	49.00%	AROG	Development/Production
Yelginskoe	49.00%	AROG	Development/Production
Yuzhno-Khadyryakhinskoe (YK)	49.00%	AROG	Development/Production
Trinidad and Tobago			
5B Manakin	30.00%	BP Amoco	Development/Production
Block 23b	40.00%	BHPB	Exploration
East Block	30.00%	BP Amoco	Development/Production
S.E.C.C. (IBIS)	10.50%	EOG	Development/Production
West Block	70.00%	Repsol	Development/Production
Venezuela ⁽⁸⁾			
Barua Motatan	40.00%	Petroquiriquire	Development/Production
Carabobo	11.00%	Petrocarabobo	Development/Production
Cardón IV	50.00%	Cardon IV	Development/Production
Mene Grande	40.00%	Petroquiriquire	Development/Production
Quiriquire	40.00%	Petroquiriquire	Development/Production
Quiriquire (Gas)	60.00%	Repsol	Development/Production
Yucal Placer Norte	15.00%	Total	Development/Production
Yucal Placer Sur	15.00%	Total	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
Vietnam			
Block 07/03 (CRD)	46.75%	Repsol	Exploration
Block 15-2/01	60.00%	Thang Long	Development/Production
Block 16-1 (TGT- Unitization)	0.89%	Petrovietnam	Development/Production
Block 133 y 134	49.00%	Repsol	Exploration
Block 135 y 136	40.00%	Repsol	Exploration
Block 146 y 147	80.00%	Repsol	Exploration
DOWNSTREAM			
Canada			
Canaport LNG Ltd Partnership	75.00%	Repsol	LNG regasification
Spain			
Asfaltos Españoles, S.A.	50.00%	Repsol	Asphalt
Iberian Lube Base Oils Company, S.A.	30.00%	KK Lubricants	Lubricants and Specialties

(1) This percentage corresponds to the Group's share on the Joint Arrangement.

(2) Repsol holds a share of 48,33% in YPFB Andina, S.A. at December 31, 2016 (see Note 8).

(3) Rights over acreage in Canada and the United States are instrumented through a large number of Joint Operating Agreements (JOAs). They have been grouped based on geographical area and Repsol's share criteria.

(4) Exploration activity of unconventional resources.

(5) Repsol holds a share of 49% and 25% in Equion Energía, Ltd. (Equion) and Occidental de Colombia, Llc. (OXYCOL), respectively, at December 31, 2016 (see Note 8).

(6) Repsol holds a share of 51% in Repsol Sinopec Resources UK, Ltd. (RSRUK) at December 31, 2016 (see Note 8).

(7) Repsol holds a share of 49% in AR Oil&Gaz, B.V. (AROG) at December 31, 2016 (see Appendix I).

(8) Repsol holds a share of 40%, 50% and 11% in Petroquiriquire, S.A., Cardon IV, S.A. and Petrocarabobo, S.A., respectively, at December 31, 2016 (see Note 8).

APPENDIX II: JOINT OPERATIONS OF THE REPSOL GROUP AT DECEMBER 31, 2015

The Repsol Group's main joint operations (see section 2.2.1 of Note 2) are shown below (including those in which the Group is involved through a joint arrangement)¹:

Name	Share % ⁽¹⁾	Operator	Activity
Angola			
Block 22	30.00%	Repsol	Exploration
Block 35	25.00%	ENI West Africa SPA	Exploration
Block 37	20.00%	ConocoPhillips Angola 37 Ltd	Exploration
Algeria			
Boughezoul (104b, 117, 133c, 135b y 137b)	51.00%	Repsol	Exploration
EMK	9.10%	Groupement Berkine	Development/Production
Greater MLN	35.00%	Pertamina	Development/Production
MLSE	35.00%	Pertamina	Development/Production
Ourhoud	2.00%	L'Organization Ourhoud	Development/Production
Reggane (REGGANE,AZSE,SALI,TIO,KL,KLS)	29.25%	Repsol	Development/Production
S.E. Illizi	52.50%	Repsol	Exploration
Tin Fouyé Tabenkor (TFT)	30.00%	Total	Development/Production
Aruba			
Block Aruba offshore	35.00%	Repsol	Exploration
Australia			
AC/L5 Coralina	33.33%	Woodside	Development/Production
Kitan	25.00%	ENI	Development/Production
WA-018-L Laminara	100.00%	Woodside	Development/Production
WA-480-P	45.00%	BHP Billiton	Exploration
Bolivia ⁽²⁾			
Amboro - Espejos	48.33%	YPF B Andina, S.A	Exploration
Boqueron	48.33%	YPF B Andina, S.A	Development/Production
Caipipendi	37.50%	Repsol	Exploration, Exploitation and Production
Camiri	48.33%	YPF B Andina, S.A	Development/Production
Carahuaicho 8B	24.17%	YPF B Andina, S.A	Exploration
Carahuaicho 8C	24.17%	YPFB Chaco, S.A	Exploration
Carahuaicho 8D	48.33%	YPF B Andina, S.A	Exploration
Cascabel	48.33%	YPF B Andina, S.A	Development/Production
Charagua	30.00%	Repsol	Exploration
Cobra	48.33%	YPF B Andina, S.A	Development/Production
Enconada	48.33%	YPF B Andina, S.A	Development/Production
Grigota, campo Los Sauces	48.33%	YPF B Andina, S.A	Development/Production
Guairuy	48.33%	YPF B Andina, S.A	Development/Production
La Peña - Tundy	48.33%	YPF B Andina, S.A	Development/Production
Monteagudo	39.67%	Repsol	Production
Oriental	24.17%	YPF B Andina, S.A	Exploration
Palacios	48.33%	YPF B Andina, S.A	Development/Production
Patujú	48.33%	YPF B Andina, S.A	Development/Production
Puerto Palos	48.33%	YPF B Andina, S.A	Development/Production
Rio Grande	48.33%	YPF B Andina, S.A	Development/Production
San Alberto	24.46%	Petrobras	Development/Production
San Antonio	24.46%	Petrobras	Development/Production
Sara Boomerang I	48.33%	YPF B Andina, S.A	Exploration
Sara Boomerang III	48.33%	YPF B Andina, S.A	Exploration/Production
Sirari	48.33%	YPF B Andina, S.A	Development/Production
Vibora	48.33%	YPF B Andina, S.A	Production
Yapacani	48.33%	YPF B Andina, S.A	Development/Production
Brazil ⁽³⁾			
Albacora Leste	10.00%	Petrobras	Production
BMC-33 (539)	35.00%	Repsol	Exploration
BMES-21	10.00%	Petrobras	Exploration
BMS-50 (623)	20.00%	Petrobras	Exploration
BMS-51 (619)	20.00%	Petrobras	Exploration
BMS-7	37.00%	Petrobras	Abandonment
BMS-S-9 (SPS-50) - Lapa (Carioca)	15.00%	Petrobras	Development / Production
BMS-S-9 (SPS-55) - Sapinhoá (Guará)	15.00%	Petrobras	Development / Production
Bulgaria			
Han Asparuh	30.00%	Total	Exploration
Canada ⁽⁴⁾			
Chauvin Alberta	65.00%	Repsol	Development/Production
Chauvin Saskatchewan	95.00%	Repsol	Development/Production
Edson	78.00%	Repsol	Development/Production
Groundbirch/Satum- Montney Rights	43.00%	Repsol	Development/Production
Groundbirch/Satum- No Montney Rights	41.00%	Repsol	Development/Production
Misc. Alberta	72.00%	Repsol	Exploration ⁽⁵⁾
Misc. British Columbia	67.00%	Repsol	Exploration
Misc. Saskatchewan	87.00%	Repsol	Exploration

¹ Joint operations in the Upstream segment include the blocks of joint operations where the Group holds acreage for exploration, development and production of oil and gas.

Name	Share % ⁽¹⁾	Operator	Activity
North Duvernay	88.00%	Repsol	Development/Production
Quebec	80.00%	Repsol	Exploration
Total Frontier	56.66%	Repsol	Exploration
Wild River	64.00%	Repsol	Development/Production
Colombia ⁽⁶⁾			
Catleya	50.00%	Ecopetrol S.A.	Abandonment
CAG-5	50.00%	Meta Petroleum Corp	Exploration
CAG-6	40.00%	Meta Petroleum Corp	Exploration
Chipirón	8.75%	Oxycol	Development/Production
COL-4	33.34%	Repsol	Exploration
Cosecha	17.50%	Oxycol	Development/Production
CPE-6	50.00%	Meta Petroleum Corp	Exploration
CPE-8	50.00%	Repsol	Exploration
CPO-9	45.00%	Ecopetrol S.A.	Exploration and Production
Cravo Norte	5.63%	Oxycol	Development/Production
El Fortón	25.00%	Cepsa Colombia S.A.	Exploration
Guajira Off-1	30.00%	Repsol	Exploration
Mundo Nuevo	21.00%	Hocol S.A.	Exploration
Niscota	30.00%	Equion	Exploration
Piedemonte	24.50%	Equion	Development/Production
PUT -9	40.00%	Meta Petroleum Corp	Exploration
PUT-30	50.00%	Repsol	Exploration
RC-11	50.00%	Repsol	Exploration
RC-12	50.00%	Repsol	Exploration
Recetor	24.50%	Equion	Development/Production
Rio Chitamina	15.19%	Equion	Development/Production
Rondon	6.25%	Oxycol	Development/Production
Tauramena	15.19%	Equion	Development/Production
Tayrona	20.00%	Petrobras	Exploration
Ecuador			
Block 16	35.00%	Repsol	Exploration and Production
Block Tivacuno	35.00%	Repsol	Exploration and Production
Spain			
Albatros	82.00%	Repsol	Development
Angula	53.85%	Repsol	Development
Barracuda	60.21%	Repsol Investigaciones Petrolíferas, S.A.	Production
Bezana	40.00%	Petroleum Oil & Gas España, S.A.	Exploration (5)
Bigüenzo	40.00%	Petroleum Oil & Gas España, S.A.	Exploration (5)
Boquerón Unit	61.95%	Repsol	Development
Canarias 1	50.00%	Repsol	Exploration
Canarias 2	50.00%	Repsol	Exploration
Canarias 3	50.00%	Repsol	Exploration
Canarias 4	50.00%	Repsol	Exploration
Canarias 5	50.00%	Repsol	Exploration
Canarias 6	50.00%	Repsol	Exploration
Canarias 7	50.00%	Repsol	Exploration
Canarias 8	50.00%	Repsol	Exploration
Canarias 9	50.00%	Repsol	Exploration
Casablanca - Montanazo Unit	68.67%	Repsol	Development
Casablanca No Unit	67.35%	Repsol	Development
Chipirón	98.00%	Repsol	Production
Fulmar	84.23%	Repsol	Exploration
Montanazo D- No Unit	72.44%	Repsol	Development
Montanazo Concesión	72.44%	Repsol	Development
Rodaballo	69.42%	Repsol	Development
Rodaballo Concesión	65.42%	Repsol Investigaciones Petrolíferas, S.A.	Development
Siroco	60.00%	Repsol Investigaciones Petrolíferas, S.A.	Exploration
United States ⁽⁴⁾			
Alaska			
North Slope	55.00%	Repsol	Exploration
North Slope	25.00%	Armstrong	Exploration
Beaufort Sea(Alaska)			
Beechey Point	20.00%	Shell	Exploration
Beechey Point	20.00%	ENI	Exploration
Harrison Bay	20.00%	Shell	Exploration
Harrison Bay	20.00%	ENI	Exploration
Eagle Ford	35.27%	Statoil	Development/Production
Golfo de México			
Alaminos Canyon	10.00%	Statoil	Exploration
Atwater Valley	33.00%	Murphy	Exploration
Atwater Valley	50.00%	Repsol	Exploration
Green Canyon	28.00%	BHP	Development/Production
Green Canyon	25.00%	Marathon	Exploration
Green Canyon	40.00%	Murphy	Exploration
Green Canyon	33.34%	Repsol	Exploration
Green Canyon	34.00%	Repsol	Exploration
Green Canyon	40.00%	Repsol	Exploration
Green Canyon	50.00%	Repsol	Exploration
Keathley Canyon	12.50%	Chevron	Exploration
Keathley Canyon	60.00%	Repsol	Exploration
Keathley Canyon	10.00%	Statoil	Exploration
Mississippi Canyon	60.00%	Repsol	Exploration
Mississippi Canyon	50.00%	New Field	Exploration
Walker Ridge	60.00%	Repsol	Exploration
Walker Ridge	50.00%	Repsol	Exploration
Marcellus	83.79%	Repsol	Development/Production
Marcellus	99.64%	Repsol	Exploration ⁽⁵⁾
Midcontinent	9.32%	SandRidge	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
Gabon			
Luna Muetsse (G4-246)	80.00%	Repsol	Exploration
Guyana			
Kanuku	40.00%	Repsol	Exploration
Indonesia			
Corridor PSC	36.00%	ConocoPhillips (Grissik) Ltd.	Development y Production
East Jabung PSC	51.00%	Repsol	Exploration
Jambi Merang PSC	25.00%	Joint Operating Body Pertamina-Talisman Jambi Merang	Production
Ogan Komering PSC	50.00%	Joint Operating Body Pertamina-Talisman Ogan Komering	Production
Sakakemang PSC	90.00%	Repsol	Exploration
Tangguh LNG Project ⁽⁷⁾	3.06%	BP Berau Ltd.	Production
Ireland			
Dunquin FEL	25.00%	Exxon Mobil	Exploration
Lybia			
Epsa IV NC115 (Capex)	20.00%	Akakus Oil Operations	Exploration and Production
Epsa IV NC115 Exploration	40.00%	Repsol	Exploration and Production
EPSA IV NC186 (Capex)	16.00%	Akakus Oil Operations	Exploration and Production
Epsa IV NC186 Exploration	32.00%	Repsol	Exploration and Production
Malaysia			
PM3 CAA PSC	41.44%	Repsol	Development and Production
PM 305 PSC	60.00%	Repsol	Production
PM 314 PSC	60.00%	Repsol	Production
SB 309 PSC	70.00%	Repsol	Exploration
SB1 Kinabalu Oil PSC	60.00%	Repsol	Development and Production
Morocco			
Gharb Offshore Sud	75.00%	Repsol	Exploration
Norway			
License 019B	61.00%	Repsol	Production
License 019C	15.00%	Repsol	Production
License 019D	31.00%	Repsol	Development/Production
License 025	15.00%	Statoil Petroleum AS	Production
License 025B	15.00%	Statoil Petroleum AS	Exploration
License 038	65.00%	Repsol	Production
License 038C	70.00%	Repsol	Production
License 038D	40.00%	Repsol	Production
License 038E	65.00%	Repsol	Exploration
License 052	27.00%	Statoil Petroleum AS	Production
License 053B	33.84%	Wintershall Norge AS	Production
License 055	33.84%	Wintershall Norge AS	Production
License 055B	33.84%	Wintershall Norge AS	Production
License 055D	33.84%	Wintershall Norge AS	Production
License 143BS	100.00%	Wintershall Norge AS	Production
License 148	10.00%	Lundin Norway AS	Production
License 185	33.84%	Wintershall Norge AS	Production
License 187	15.00%	Statoil Petroleum AS	Production
License 316	60.00%	Repsol	Production
License 316B	60.00%	Repsol	Production
License 378	17.50%	Wintershall Norge AS	Production
License 528	6.00%	Centrica Resources (Norge) AS	Exploration
License 528B	6.00%	Centrica Resources (Norge) AS	Exploration
License 640	100.00%	Repsol	Exploration
License 704	30.00%	Dea E&P Norge AS	Exploration
License 705	40.00%	Repsol	Exploration
License 721	20.00%	Dea E&P Norge AS	Exploration
License 750	40.00%	Tullow Oil Norge AS	Exploration
License 801	50.00%	Repsol	Exploration
License 802	40.00%	Repsol	Exploration
Papua New Guinea			
License N° 8	22.29%	Oil Search Ltd	Exploration
License N° 10	40.00%	Repsol	Development
License N° 21	32.50%	Horizon Oil (Papua) Ltd	Exploration
License N° 28	30.00%	Eaglewood Energy (BVI) Ltd 40%	Exploration
License N° 38	25.00%	Repsol	Exploration
License N° 235	60.00%	Repsol	Exploration
License N° 239	55.00%	Repsol	Exploration
License N° 261	30.00%	Repsol	Exploration
License N° 269	50.00%	Repsol	Exploration
License N° 287	50.00%	Repsol	Exploration
License N° 426	60.00%	Repsol	Exploration
Peru			
Lote 56	10.00%	Pluspetrol Perú Corporation S.A.	Production
Lote 57	53.84%	Repsol	Exploration, Development and Production
Lote 76	35.00%	Hunt Oil Exploration and Production Company of Perú L.L.C., Sucursal del P	Exploration
Lote 88	10.00%	Pluspetrol Perú Corporation S.A.	Exploration and Production
Lote 103	100.00%	Repsol	Exploration
Portugal			
Ameijoa	34.00%	Repsol	Exploration
Camarão	34.00%	Repsol	Exploration
Caranguejo	70.00%	Repsol	Exploration
Lagosta	90.00%	Repsol	Exploration
Lagostim	90.00%	Repsol	Exploration
Mexilhão	34.00%	Repsol	Exploration
Ostra	34.00%	Repsol	Exploration
Sapateira	70.00%	Repsol	Exploration

Name	Share % ⁽¹⁾	Operator	Activity
Region of the Iraqi Kurdistan			
Kurdamir Block	40.00%	Repsol	Development
Piramaqrum	50.00%	Repsol	Exploration
Qala Dze	50.00%	Repsol	Exploration
Topkhana Block	60.00%	Repsol	Exploration
United Kingdom ⁽⁸⁾			
P019 (22/17n)	30.08%	RSRUK	Development/Production
P020 (22/18n)	30.08%	RSRUK	Development/Production
P073 (30/18E - Orion)	47.81%	RSRUK	Development/Production
P073 (30/18W)	47.18%	RSRUK	Exploration
P079 (30/13a East)	31.88%	RSRUK	Exploration
P101 (13/24a Blake)	34.53%	RSRUK	Development/Production
P111 (30/3a Upper)	15.55%	RSRUK	Development/Production
P111 (30/3a Blane Field)	30.75%	RSRUK	Development/Production
P116 (30/16n)	51.00%	RSRUK	Development/Production
P185 (30/11b)	30.60%	RSRUK	Exploration
P185 (30/11b)	51.00%	RSRUK	Development/Production
P185 (30/12b)	30.60%	RSRUK	Exploration
P187 (11/30a - Beatrice)	51.00%	RSRUK	Development/Production
P1031 (11/25a)	51.00%	RSRUK	Development/Production
P1031 (12/21a)	51.00%	RSRUK	Development/Production
P1621 (22/24e)	25.50%	RSRUK	Exploration
P1622 (22/28e)	25.50%	RSRUK	Exploration
P1622 (22/29e)	25.50%	RSRUK	Exploration
P1806 (22/23e)	51.00%	RSRUK	Exploration
P1880 (29/20a)	51.00%	RSRUK	Exploration
P2042 (22/22c)	25.50%	Apache	Exploration
P2042 (22/27b)	25.50%	Apache	Exploration
P2049 (30/16g)	51.00%	RSRUK	Exploration
P2053 (29/17, 29/18a,29/22a y 29/23a)	33.15%	RSRUK	Exploration
P201 (16/21a)	7.65%	Premier	Development/Production
P201 (16/21d - Glamis)	7.65%	Premier	Development/Production
P213 (16/26a Area E)	51.00%	RSRUK	Exploration
P219 (16/13a)	16.07%	RSRUK	Development/Production
P219 (16/13e)	16.07%	RSRUK	Exploration
P220 (15/17n - F2 Saltire)	51.00%	RSRUK	Development/Production
P220 (15/17n - Sub Area)	20.40%	EnQuest Heather	Development/Production
P220 (15/17n-F2- Piper+ rest of Block)	51.00%	RSRUK	Development/Production
P225 (16/27a)	13.50%	JX Nippon	Exploration
P225 (16/27a - Contract Area 3)	5.03%	BP	Development/Production
P237 (15/16a Tartan)	51.00%	RSRUK	Development/Production
P240 (16/22a Burghley)	18.86%	RSRUK	Development/Production
P240 (16/22b Arundel)	3.61%	Arco British	Exploration
P241 (21/1a Buchan)	50.49%	RSRUK	Development/Production
P241 (21/1a Rest of Block)	41.02%	RSRUK	Exploration
P241 (21/1a North Buchan)	48.16%	RSRUK	Exploration
P241 (21/c Non Buchan)	48.16%	RSRUK	Development/Production
P241/P244 (21/1c, 21/2a Cretaceous)	48.16%	RSRUK	Development/Production
P244 (21/2a Cretaceous Area West)	48.16%	RSRUK	Development/Production
P249 (14/19n Residual)	51.00%	RSRUK	Development/Production
P249 (14/19n Residual)	51.00%	RSRUK	Exploration
P249 (14/19n F1 Claymore)	47.16%	RSRUK	Development/Production
P249 (14/19n F2 Scapa Field)	51.00%	RSRUK	Development/Production
P250 (14/19a)	51.00%	RSRUK	Exploration
P250 (14/19a)	51.00%	RSRUK	Development/Production
P250 (14/19s)	51.00%	RSRUK	Exploration
P250 (14/19s)	51.00%	RSRUK	Development/Production
P250 (14/19s F1)	51.00%	RSRUK	Development/Production
P250 (15/17a)	51.00%	RSRUK	Exploration
P250 (15/17a Sub Area)	20.40%	EnQuest Heather	Development/Production
P250 (15/17s -F1- Chanter / Saltire / Lona)	51.00%	RSRUK	Development/Production
P250 (15/17s -Rest of Block)	51.00%	RSRUK	Development/Production
P255 (30/14 Flyndre Area)	3.83%	Maersk	Development/Production
P255 (30/14 Cawdor)	4.93%	Maersk	Development/Production
P255 (30/19 a Affleck)	17.00%	Maersk	Development/Production
P256 (30/16s Fulmar)	51.00%	RSRUK	Development/Production
P263 (14/18a)	51.00%	RSRUK	Development/Production
P266 (30/17b Clyde)	48.45%	RSRUK	Development/Production
P291 (22/17 s)	30.08%	RSRUK	Development/Production
P291 (22/22 a)	30.08%	RSRUK	Development/Production
P291 (22/23 a)	30.08%	RSRUK	Development/Production
P291 (22/23 d)	30.08%	RSRUK	Development/Production
P292 (22/18 a)	30.08%	RSRUK	Development/Production
P294 (20/05a F1 Buchan)	51.00%	RSRUK	Development/Production
P294 (20/05a Non Buchan)	48.16%	RSRUK	Exploration
P295 (30/16i Auk)	51.00%	RSRUK	Development/Production
P297 (13/28a)	33.02%	RSRUK	Exploration
P297 (13/28a)	35.28%	RSRUK	Development/Production
P307 (13/29a)	35.28%	RSRUK	Development/Production
P312 (16/18a)	15.81%	JX Nippon	Development/Production
P324 (14/20b - Claymore Extensión)	51.00%	RSRUK	Development/Production
P324 (14/20b Duart)	25.50%	RSRUK	Development/Production
P324 (14/20b F1 + F2 Highlander)	51.00%	RSRUK	Development/Production
P324 (15/16b Tartan)	51.00%	RSRUK	Development/Production
P324 (15/16c Tartan)	51.00%	RSRUK	Development/Production
P324 (15/23a)	34.38%	RSRUK	Exploration
P324 (15/23a - Galley)	34.38%	RSRUK	Development/Production
P344 (16/21b Rest of Block)	30.60%	RSRUK	Development/Production
P344 (16/21b F1 - Balmoral)	8.06%	Premier	Development/Production
P344 (16/21c)	30.60%	RSRUK	Development/Production
P344 (16/21c F1 - Balmoral)	8.06%	Premier	Development/Production
P344 (16/21c F1 outside Balmoral)	7.81%	Premier	Development/Production
P534 (98/06a Wareham)	2.55%	Perenco	Development/Production
P534 (98/06a Wytch Farm)	2.53%	Perenco	Development/Production
P534 (98/07a)	2.55%	Perenco	Exploration
P585 (15/12b)	20.40%	EnQuest Heather	Exploration
P593 (20/05c Hannay)	50.54%	RSRUK	Development/Production

Name	Share % ⁽¹⁾	Operator	Activity
P593 (20/05e)	48.16%	RSRUK	Exploration
P640 (15/24b - MacCulloch)	3.06%	Conoco Phillips	Development/Production
P640 (15/24b - E2)	1.53%	Conoco Phillips	Development/Production
P729 (13/29b - Ross United)	35.28%	RSRUK	Development/Production
P729 (13/29b - Blake Ext)	40.80%	RSRUK	Exploration
P729 (13/29b - Blake Ext)	40.80%	RSRUK	Development/Production
P810 (13/24b North)	35.28%	RSRUK	Exploration
P810 (13/24b North)	35.28%	RSRUK	Development/Production
P810 (13/24b Blake Area)	34.53%	RSRUK	Development/Production
P973 (13/28c)	35.28%	RSRUK	Development/Production
P982 (12/26a)	51.00%	RSRUK	Development/Production
P983 (13/23b)	25.50%	RSRUK	Exploration
PL 089 (SZ/8a, SY/88b, SY/98a98/06a)	2.55%	Perenco	Exploration
PL 089 (SZ/8a, SY/88b, SY/98a98/06a)	2.55%	Perenco	Development/Production
Romania			
Block 12 Pitesti	49.00%	OMV Petrom	Exploration
Block 13 Targu Jiu	49.00%	OMV Petrom	Exploration
Targoviste Piscuri Deep	49.00%	OMV Petrom	Exploration
6500 Baicoi Deep	49.00%	OMV Petrom	Exploration
Russia ⁽⁹⁾			
Avgustovskoe	49.00%	AROG	Development/Production
Bazhkovskoe	49.00%	AROG	Development/Production
Borshevskoe	49.00%	AROG	Development/Production
Cheremushkiy	49.00%	AROG	Exploration
Kochevnskoe	49.00%	AROG	Development/Production
Kovalevskoe	49.00%	AROG	Development/Production
Kultumenskoe	49.00%	AROG	Development/Production
Novo-Kievskoe	49.00%	AROG	Development/Production
Pushkarikhinskiy	49.00%	AROG	Exploration
Saratovskoe	49.00%	AROG	Development/Production
Solnechnoe	49.00%	AROG	Development/Production
South-Kultashikhskoe	49.00%	AROG	Development/Production
South-Solnechnoe	49.00%	AROG	Development/Production
Stepnoozerskoe	49.00%	AROG	Development/Production
Syskonsinskoe (SK)	49.00%	AROG	Development/Production
Vostochno-Kultumenskiy	49.00%	AROG	Exploration
West-Avgustovskoe	49.00%	AROG	Development/Production
West-Kochevnskoe	49.00%	AROG	Development/Production
Yelginskoe	49.00%	AROG	Development/Production
Yuzhno-Khadyryakhinskiy (YK)	49.00%	AROG	Development/Production
Trinidad and Tobago			
5B Manakin	30.00%	BP Amoco	Development/Production
Block 23 B	40.00%	BHP Billiton Petroleum	Exploration
Block 5B	30.00%	Amoco Trinidad Gas, B.V.	Exploration
East Block	30.00%	BP Amoco	Development/Production
S.E.C.C. (IBIS)	10.50%	EOG	Development/Production
TSP (POUI)	70.00%	Repsol	Development/Production
TSP (SAMAAAN)	70.00%	Repsol	Development/Production
TSP (TEAK)	70.00%	Repsol	Development/Production
West Block	30.00%	BP Amoco	Development/Production
Venezuela ⁽¹⁰⁾			
Barua Motatan	40.00%	Petroquiriquire	Development/Production
Carabobo	11.00%	Petrocarabobo	Development/Production
Cardón IV	50.00%	Cardon IV	Development/Production
Mene Grande	40.00%	Petroquiriquire	Development/Production
Quiriquire	40.00%	Petroquiriquire	Development/Production
Quiriquire (Gas)	60.00%	Repsol	Development/Production
Yucal Placer	15.00%	Ypergas, S.A.	Exploration y Production
Vietnam			
Block 16-1 (TGT- Unitization)	60.00%	Petrovietnam	Development/Production
Block 05-2/10 PSC	40.00%	Repsol	Exploration
Block 07/03 PSC	55.00%	Repsol	Exploration and Production
Block 133-134 BCC	49.00%	Repsol	Exploration
Block 135-136 PSC	40.00%	Repsol	Exploration
Block 146-147 PSC	80.00%	Repsol	Exploration
Block 15/2-01 PC	60.00%	Thang Long Joint Operating Company (TLJOC)	Production
Block 156-159 PSC	100.00%	Repsol	Exploration
DOWNSTREAM			
Canada			
Canaport LNG Ltd Partnership	75.00%	Repsol	LNG regasification
Spain			
Asfaltos Españoles, S.A.	50.00%	Repsol	Asphalts
Iberian Lube Base Oils Company, S.A.	30.00%	KK Lubricants	Lubricants and Specialties

(1) This percentage corresponds to the Group's share on the Joint Arrangement.

(2) Repsol holds a share of 48,33% in YPFB Andina, S.A. at December 31, 2015 (see Note 8).

(3) Repsol holds a share of 60,01% in Repsol Sinopec Brasil, S.A. at December 31, 2015 (see Note 8).

(4) Rights over acreage in Canada and the United States are instrumented through a large number of Joint Operating Agreements (JOAs). They have been grouped based on geographical area and Repsol's share criteria.

(5) Exploration activity of unconventional resources.

(6) Repsol holds a share of 49% and 25% in Equion Energía, Ltd. (Equion) and Occidental de Colombia, Llc. (OXYCOL), respectively, at December 31, 2015.

(7) Talisman held a share of 42,4% in Wiragar, one of the three Production Sharing Contracts (PSC) of the Tangguh Project, at December 31, 2015. Talisman held a share of 3,06% in Tangguh LNG project at December 31, 2015 (see Note 4).

(8) Repsol holds a share of 51% in Repsol Sinopec Resources UK, Ltd. (RSRUK) at December 31, 2015 (see Note 8).

(9) Repsol holds a share of 49% in AR Oil&Gas, B.V. (AROG) at December 31, 2015.

(10) Repsol holds a share of 40%, 50% and 11% in Petroquiriquire, S.A., Cardon IV, S.A. and Petrocarabobo, S.A., respectively, at December 31, 2016.

APPENDIX III: RECONCILIATION OF REPORTING MODEL FIGURES AND IFRS-EU FINANCIAL STATEMENTS¹

Income Statement figures

The reconciliation between adjusted net income (loss) and IFRS-EU net income (loss) at December 31, 2016 and 2015 is as follows:

Millions €	Net Income 2016 y 2015											
	ADJUSTMENTS											
	Adjusted Net Income		Reclass Joint Ventures		Non recurrent Income		Inventory Effect		Total adjustments		Total Net income IFRS-EU	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Operating Income	2,067	1,764	98	355	(448)	(4,147)	194	(696)	(156)	(4,488)	1,911	(2,724)
Financial Result	(315)	244	(68)	44	149	173	-	-	81	217	(234)	461
Share of results of companies accounted for using the equity method after of tax	371	469	(177)	(558)	-	-	-	-	(177)	(558)	194	(89)
Net income before tax	2,123	2,477	(147)	(159)	(299)	(3,974)	194	(696)	(252)	(4,829)	1,871	(2,352)
Income tax	(164)	(539)	147	159	(323)	1,182	(51)	194	(227)	1,535	(391)	996
Net income from continuing operations attributable to the parent	1,959	1,938	-	-	(622)	(2,792)	143	(502)	(479)	(3,294)	1,480	(1,356)
Net incomes from continuing operations attributable to minority interest	(37)	(86)	-	-	4	1	(10)	43	(6)	44	(43)	(42)
Net income from continuing operations	1,922	1,852	-	-	(618)	(2,791)	133	(459)	(485)	(3,250)	1,437	(1,398)
Net income from discontinued operations	0	0	-	-	299	0	0	0	299	0	299	0
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT	1,922	1,852	-	-	(319)	(2,791)	133	(459)	(186)	(3,250)	1,736	(1,398)

Segmentos	€Million									
	Net amount of sales ⁽²⁾		Depreciation charge of fixed assets		Income/ (expenses) for the impairment of assets		Share of results of entities accounted for the using the equity method		Income Tax	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Adjusted quantities ⁽¹⁾	36,387	41,460	(3,173)	(3,794)	(585)	(4,175)	371	469	-538	909
Upstream	(1,668)	(1,629)	640	664	296	384	(182)	(529)	144	77
Downstream	(29)	(92)	4	6	7	29	7	(27)	3	10
Corporation	(1)	(2)	-	-	(1)	-	(2)	(2)	-	-
Quantities IFRS-EU	34,689	39,737	(2,529)	(3,124)	(283)	(3,762)	194	(89)	(391)	996

(1) Figures compiled in keeping with the Group reporting model described in Note 2.3 "Segment reporting".

(2) The revenue figure corresponds to the sum of the "Sales" and "Services rendered and other income" headings in the consolidated income statement (IFRS-EU). The itemization by provenance (customers or inter-segment transactions) is as follows:

Segments	€Million					
	Operating revenue from customers		Operating revenue inter segments		Total operating revenue	
	2016	2015	2016	2015	2016	2015
Upstream	4,159	3,683	804	1,098	4,963	4,781
Downstream	32,228	37,751	16	12	32,244	37,763
Corporation	-	25	4	96	4	121
(-) Inter-segment adjustments and elimination of operating income	-	1	(824)	(1,206)	(824)	(1,205)
TOTAL	36,387	41,460	-	-	36,387	41,460

(1) Some of these metrics presented in this Appendix are Alternative Performance Metrics (APMs) in accordance with European Securities Markets Authority (ESMA) Guidelines. For further information, see Appendix I of the 2016 Group management report.

Balance sheet figures

Segments	€Million					
	Non-current assets		Net operating investments ⁽²⁾		Investments accounted for using the equity method	
	2016	2015	2016	2015	2016	2015
Adjusted quantities ⁽¹⁾	43,672	44,569	(500)	11,960	3,901	5,322
Upstream	(7,577)	(6,753)	(565)	(1,233)	6,229	6,433
Downstream	(23)	(24)	1	(9)	41	38
Corporation	(1)	(3)	6	1	5	5
TOTAL	36,071	37,789	(1,058)	10,719	10,176	11,797

(1) Figures compiled in keeping with the Group reporting model described in Note 2.3 “Segment reporting”.

(2) Excludes “Non-current financial investments”, “Deferred tax assets” and “Other non-current assets”.

(3) Includes investments accrued during the period net of disposals but does not include net investments in “Other financial assets”.

APPENDIX IV: REGULATORY FRAMEWORK

The activities of Repsol, S.A. and its subsidiaries are subject to extensive regulation, whose key aspects are described below.

Spain

Basic legislation

Spain currently has a legislation which implements a liberalization of the Oil Industry, an example of which is the Hydrocarbons Sector Law 34/1998 of October 7, which has been amended by several legislative acts.

Law 2/2011, of March 4, on Sustainable Economy, modified the Hydrocarbons Sector Law, establishing binding guidelines for energy planning under criteria designed to contribute to the creation of a safe, cost-effective, economically-sustainable, and environmentally-friendly energy system. It further establishes measures for cutting greenhouse gas emissions (GGE) and provides for the creation of a carbon allowance trading fund as well as a broad spectrum of measures affecting nearly all segments of the energy sector.

On June 5, 2013 the Official State Gazette (BOE – “Boletín Oficial del Estado,” in Spanish) published Law 3/2013 of June 4, regarding the creation of the National Markets and Competition Commission (CNMC – “Comisión Nacional de los Mercados y la Competencia,” in Spanish) as an *overseeing body*, charged with the specific duties and tasks relating to supervision and control of regulated markets, which were previously supervised by various National Commissions, including the National Energy Commission. Amongst them the National Energy Commission and the National Competition Commission.

Controlling concentration regime in the energy sector

The aforementioned Law 3/2013 substantially modified the regime controlling corporate transactions in the energy sector, the control function had formerly been part of what was known as the CNE’s public duty no. 14 (“Duty 14”). Law 3/2013 repeals this duty and assigns it to the Ministry of Industry Energy and Tourism (hereinafter, Minetur). The law devises a new *ex post* regime with respect to certain transactions by either requiring the buyer to notify Minetur of the execution of certain transactions or by means of the ministry’s power to impose conditions on the business operations of the companies acquired, in so far as energy supply in Spain is deemed threatened.

A novelty of this new control regime is the assimilation of the liquid hydrocarbons sector with the sectors that previously fell under a control regime (electricity and gas). Where the liquid hydrocarbons sector is concerned, its scope encompasses companies that pursue refining activities, pipeline transportation, and storage of petroleum products (related activities), or companies that hold title to said assets. Such assets acquire the condition of strategic assets.

This control regime extends to both active transactions, in which the active subject of the transaction (the acquiror) is an entity from the above-listed energy sectors that is regulated directly or by assimilation, insofar as the transaction has a relevant impact or significant influence on the development of the business activities of the company notifying the transaction; and passive transactions, transactions in which the object or acquiree is an energy company that is regulated directly or by assimilation insofar as the transaction in question delivers “significant influence” over the acquiree’s management.

Within the sector’s regulation, the concepts of ‘principal operators’ and ‘dominant operators’ are significant. Under Royal Decree-Law 5/2005, of March 11, the CNE - currently the CNMC - is obliged to publish not only the list of principal operators but also the dominant operators in each energy market or sector.

Dominant operators are defined as those commanding a share of more than 10% of the corresponding benchmark market. On the other hand, a principal operator is the operator ranked among the top five players by market share in the following markets or sectors. Designation as a dominant operator, as far as prevailing legislation is concerned, implies certain regulatory restrictions in the Electricity Sector.

As for the principal operators, Article 34 of Royal Decree-Law 6/2000, of June 23, establishes a series of limitations related to the acquisition of voting rights in the equity of companies qualifying as principal operators and serving on their boards of directors; specifically, it stipulates that any natural or legal person holding an equity interest of 3% or more in two or more companies that qualify as principal operators in a given market may not exercise the voting rights corresponding to their equity interests in excess of this threshold at more than one company. Nor may such persons appoint, directly or indirectly, members of the board of directors of another principal operator.

Oil and gas exploration and production

Hydrocarbon deposits and underground storage existing on Spanish territory and in the territorial marine subsoil and ocean bottoms which are under Spanish sovereignty are considered public properties.

Exploration permits are granted by national or regional governments, depending on whether autonomous areas are affected, and exclusive investigation rights are granted for periods lasting six years.

A concession for exploiting hydrocarbon reserves grants the owners exclusive exploration rights for 30 years, renewable for two successive ten-year periods, as well as the right to continue exploration activities in these areas and obtain authorization to freely sell the hydrocarbon products they obtain.

Spanish Law 8/2015, amending the Hydrocarbon Sector Act Law 34/1998 of October 7, 1998, came into force on May 21, 2015. It regulates certain tax and non-tax measures related to oil and gas exploration, research and operation activities. It fosters non-conventional extraction, or 'fracking', creating an incentive regime for regional and local governments that pursue such activities, as well as creating a scheme for land owners to share in the profits derived from the related extraction activity.

The said Law 8/2015 introduces the following tax and non-tax measures:

- It creates a new tax to be levied on the value of the extraction of gas, oil and condensates, applicable from January 1, 2016, at a rate varying between 1% and 8% of annual production values.
- It introduces two tariffs in addition to the current surface royalty, applicable from May 23, 2015: the so-called third tariff, to be levied on exploratory drilling, and the fourth tariff, to be levied on seismic data purchases.

From 2016, it also establishes the obligation to pay the owners of the underlying land, specifically requiring the holders of oil and gas field operating concessions granted subsequent to May 23, 2015 to pay the land owners an annual fee equivalent to 1% of the value of the oil and gas extracted. In the domain of safety, as of the date of authorization for issue of these financial statements Directive 2013/30/EU on safety of offshore oil and gas operations, which so far had been implemented in Spanish legislation only in part, is now in the process of full implementation in national law. The Directive prescribes minimum requirements to prevent major accidents harming humans and the environment in the course of offshore oil and gas operations, and to mitigate the consequences of any accidents that do occur. The intention is that Member States should ensure that EU-registered companies include their offshore oil and gas operations outside the EU in the documents recording their corporate major accident prevention policy, and that they report to the respective Member State authorities the circumstances of any major accident in which they are involved.

Business activity regime

Several of the activities falling within the scope of Law 34/1998 may be subject to prior authorizations, permits, and/or concessions. Law 25/2009, of December 22, modifies Law 34/1998; this requires, among other aspects, the elimination of the need to obtain prior authorization for natural gas suppliers, LPG wholesalers, bulk LPG retailers, or petroleum product wholesalers, and also establishes the obligation for interested parties to sign a responsibility declaration and issue a notification prior to commencing business operations.

The construction and operation of refining, transportation, and fixed storage facilities is subject to receiving prior authorization, the granting of which requires meeting the relevant technical, financial, environmental, and safety requirements.

Third parties may access transportation and fixed storage facilities of oil products, such as the facilities of Compañía Logística de Hidrocarburos S.A. ("CLH"), on conditions agreed on an objective and non-discriminatory basis.

No physical or legal person may hold, directly or indirectly, ownership of more than 25% of the capital stock of CLH. The aggregate ownership interest in CLH of entities with refining capacity in Spain may not exceed 45% of CLH's capital.

Oil products

In addition, Law 11/2013 of July 26, regarding measures to support entrepreneurs and to stimulate growth and job creation, introduces a number of measures in the wholesale and retail markets for petroleum products intended to increase effective competition in the sector.

In the retail side of the business, Law 11/2013 introduces certain changes to exclusive supply agreements for the distribution of vehicle fuel. Specifically, the term of these agreements is now limited to one year (from five years previously); they can be automatically rolled over for additional one-year periods, for a maximum of three years, if and only if the distributor so desires. The new legislation similarly bans clauses that set, recommend or influence, directly or indirectly, the price at which fuel is sold to the public.

Additionally, Law 11/2013 establishes several limits on growth in the number of fuel supply facilities of wholesalers with provincial markets shares of over 30%. Law 8/2015 stipulates that from 2016 on, provincial market shares shall no longer be measured in terms of points of sale but rather based on prior-year sales figures.

This last legislative provision entitles the government to revise this percentage threshold in three years' time or even remove the restriction altogether, market trends and the sector's business structure so permitting.

Finally, Law 8/2015 allows owners of oil and gas product retailers that do not belong to the distribution network of a wholesale operator (private label networks operating without exclusive supply agreements) to inform consumers of the origin of the fuel they sell by advertising the wholesaler from which they purchase the said fuel (article 43.5). Furthermore, as from effectiveness of this law, oil and gas product retailers may supply products to other retailers, subject only to the requirement of first registering themselves in the special duty registry (article 43.1).

LPG

The prices of oil derivatives are deregulated, with the exception of LPG, which is, under certain circumstances, subject to retail price ceilings. The prices of bulk LPG and bottled LPG in cylinders with capacity of under 8 kilograms or over 20 kilograms are deregulated. Royal Decree-Law 8/2014 of July 4

and, subsequently, Law 18/2014 of October 15 have had the effect of also deregulating the prices of containers with capacity of under 8 kilograms or over 20 kilograms with a tare weight of no more than 9 kilograms other than containers of LPG mixes intended for use for fuel purposes; this measure favors certain players over others as a function of the tare weight of the containers they market and, in practice, does not constitute full sector deregulation.

Ministerial Order IET/389/2015 of March 5, 2015 updates the system for automatically determining the maximum price at which bottled LPG can be retailed and for determining the price of piped LPG, adjusting the formulae used to calculate raw material costs in order to, as per the wording of the Order, adapt them to the supply reality in the Spanish market in recent years". Adaptation of these raw material cost calculation formulae does not, however, apply to sales costs, thereby resulting in a reduction in maximum bottled LPG retail prices and piped LPG retail prices.

Additionally, Royal Decree-Law 8/2014 and, subsequently, Law 18/2014 consolidate users' right to home delivery of containers weighing between 8 and 20 kilograms by obliging the LPG wholesalers with the biggest market shares in the corresponding mainland and island territories to perform this home-delivery service. Failure to fulfil this obligation constitutes a very serious offence. The list of LPG wholesalers so obliged is determined by a resolution issued by the General Directorate of Energy Policy and Mining every three years. Every 5 years, the Spanish government is entitled to revise the terms of this obligation and has the power to remove it. The current list of mandatory home suppliers is as follows: Repsol Butano on the mainland and in the Balearics, DISA in the Canary Islands and Atlas in Ceuta and Melilla.

Regarding LPG bulk:

- Retailers of bulk, non-piped LPG are obliged to service all consumers by request in the province in which the retailer is currently operating.
- Retailers of bulk, piped LPG are obliged to service all supply requests within the corresponding area of their respective networks.

Law 8/2015 conveys upon users the obligation to inspect LPG recipient facilities (article 74.1 p), however, it also makes the distributors subsidiary responsible for this obligation if they determine that such inspection has not been performed by a qualified company. It obliges LPG wholesalers and bulk LPG retailers to take out civil liability insurance, and keep such policies current, or arrange other financial guarantees in sufficient amount to cover the risks arising from their business activities.

Natural Gas

Law 12/2007 of July 2, which amended Law 34/1998 on the Hydrocarbon sector, and incorporated into Spanish Law the European Parliament Directive 2003/55, incorporates measures for achieving a completely liberalized market. This legislation establishes the framework for eliminating the tariff system and creates the role of the supplier of last resort with ultimate liability for supplying customers lacking sufficient bargaining power. Moreover, these suppliers are subject to a price cap ("last resort tariff"), which is set by Minetur. Business operations in the natural gas sector can be classified into: i) regulated activities: transport (including storage, regasification and transport per se) and distribution of natural gas; and ii) deregulated activities: production, acquisition and marketing of natural gas. The first require prior administrative authorization, their remuneration is regulated and are subject to specific obligations. On the contrary, the latter activities are not regulated, and are therefore not subject to administrative intervention.

Prevailing legislation stipulates functional unbundling (separation) obligations which imply accounting unbundling, in order to prevent cross subsidies and increase toll royalty and tariff calculation transparency-legal unbundling, by means of separate companies-, and also separation of regulated activities by requiring them to operate independently from the other companies in their consolidated groups.

In accordance with European Union directives, the distribution of natural gas is fully deregulated in Spain, which means that all Spanish consumers are qualified consumers and are accordingly free to choose their natural gas provider since January 1, 2003. The construction, operation, modification and closing of basic network and carrier network facilities require prior government authorizations.

The Natural Gas System Operator, Enagás S.A. is responsible for the coordinating and ensuring that the system works properly. Law 12/2007 limits equity ownership interests in Enagás, S.A. to 5%, caps voting rights at 3% as a general rule, although this cap falls to 1% in the case of companies carrying out business activities related to the gas sector and; in any case, the aggregate ownership interest of shareholders whose business activities relate to the gas sector cannot exceed 40%.

Law 8/2015 creates an official natural gas hub with a view to facilitating entry into the market of new suppliers and increasing competition, creating a new single hub operator, tasked with management of the hub.

Royal Decree 984/2015 of October 30, enacts the rules governing the functioning of the above-mentioned hub. The gas hub will be operated by MIBGAS, S.A. (MIBGAS stands for Iberian Gas Market in Spanish), a company tasked with ensuring that all participating entities comply with the established rules. The various agents may trade in standard natural gas products using electronic platforms managed by the hub operator and/or third parties.

In order to facilitate the hub's operations, the terms on which gas facilities trade capacity have been modified. In addition, the new legislation creates a single platform for trading capacity which is managed by the gas system's technical system operator (Enagas), a development that will enable capacity trading in real time.

Minimum inventory for security

Royal Decree 1766/2007, partially amending Royal Decree 1716/2004, regulates the obligation to maintain a minimum inventory in the oil and natural gas sectors, the obligation to diversify the natural gas provisions and the activities of the Corporation of Strategic Reserves of Petroleum Products (CORES for its acronym in Spanish).

The obligation to maintain minimum inventories of oil and gas products for security reasons, excluding LPG, currently requires storing at all times an amount equivalent to 92 days of sales based on the sales during the previous 12 months. Repsol was obliged to maintain a inventory corresponding to 50 days of sales, while the remaining stocks required to make up the difference with the above mentioned security inventory requirement are held by CORES on behalf of the various operators (strategic reserves).

Royal Decree-Law 15/2013, of December 13, introduces an amendment to the Hydrocarbon Sector Act, Law 34/1998, of October 7, bringing Spanish legislation into line with Council Directive 2009/119/EC of September 14, 2009. It provides that, via regulation, administrative procedures and obligations needed to ensure, on an ongoing basis, a minimum safety buffer equivalent, at least, to the higher of the volume corresponding to 90 days of average net daily imports and 61 days of average internal daily consumption corresponding to the year of reference and measured in oil equivalent.

Spanish legislation does not require these reserves to be handled, measured or stored in any specific manner; indeed any products accounted for by the operators as part of their inventories in the ordinary course of their business operations qualify as strategic reserves to this end.

Electricity sector regulation in Spain

Deregulation of the Spanish electricity sector began in 1997 with the passage of Law 54/1997, of November 27, the Electricity Sector Act, which implements in Spanish Law Directive 96/92/EC

concerning common rules for the internal market in electricity, as fleshed out by enacting regulations. The Electricity Sector Act was amended by Law 17/2007, of July 4, and more recently overhauled by Law 24/2013, of December 26, which took effect on December 28, 2013.

Generation and supply activities continue to be deregulated, developed by competitive businesses, while transmission, distribution and the system's technical and financial management remain as regulated activities, characterized by an access that requires administrative authorization, activities normatively set their remuneration and are subject to specific obligations. Power supply, for its part, is classified as a service of general economic interest.

Regarding power generation, Law 24/2013 eliminates the distinction between 'ordinary' and 'special' regime generation. All electricity production facilities are now regulated as a whole, with certain idiosyncratic provisions for renewable facilities.

Royal Decree 413/2014 regulates the legal and economic regime governing the production of electric power using renewable sources, combined heat and power systems and waste and affects the Repsol Group's facilities, formerly part of the now-defunct 'special' regime and now assimilated into the 'ordinary' regime. This regime is based on these facilities' necessary participation in the market, topping up market-derived revenue with a specific regulated payment designed to enable them to compete on an even footing with the rest of the technologies in the marketplace, compensating owners for the costs that, unlike conventional generation technologies, cannot be recouped in the market in order to enable them to earn an adequate return on their investment by using metrics that are tailored for the various standard facilities.

Ministerial Order IET/1045/2014 of June 16, meanwhile, enacts the standard facility remuneration parameters applicable to certain electricity-producing facilities that use renewable energy sources, CHP systems or waste.

Lastly, note the recent passage of Royal Decree 900/2015, of October 9, regulating the administrative, technical and financial conditions governing the permitted forms of electricity distribution and generation with self-consumption.

This legislation stipulates that parties who produce and consume their own energy without being connected up to the grid (isolated facilities) do not have to bear any electricity system costs; however, self-consumers that are connected up to the grid, by virtue of being guaranteed supply at any given time, even when the energy self-generated is not sufficient, do have to contribute to general system costs, albeit without having to pay for the energy they self-generate or associated taxes or system losses.

Contributions to the national energy efficiency fund

Article 7 of Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 on energy efficiency makes it binding on member states to justify a quantity of energy savings by 2020, obliging each state to establish energy efficiency obligation schemes such that energy distributors and/or retailers are obliged to achieve a cumulative quantity of energy savings by year-end 2020 means of annual savings between 2014 and 2020 equivalent to 1.5% of their annual energy sales.

In this connection it should be borne in mind that, against the background of the Energy Union framework strategy to achieve a competitive, safe and clean economy, in November 2016 there was published the "Clean Energy" package, encompassing a new EU governance which includes amendment of Directive 2012/27/EU, among other statutes.¹

Royal Decree-Law 8/2014 and Law 18/2014 transpose this EU Directive into Spanish law by establishing

¹ Directive 2009/28/EC on the promotion of the use of energy from renewable sources is also amended.

a National Energy Efficiency Fund (NEEF) by virtue of which gas and electricity distributors, oil product wholesalers and liquid petroleum gas wholesalers (although the latter are not considered bound parties under the Directive) are allocated an annual energy saving target at the national level called savings obligations, which is quantified in financial terms.

The creation of a National Fund, which in Spain has been formulated as an alternative to a system of national energy efficiency incentives, is contemplated in Directive 2012/27/EU merely as a supporting or complementary measure.

The successive IET ministerial orders stipulating mandatory contributions to the National Energy Efficiency Fund, are being appealed by the various companies encompassed by the aforementioned National Fund contribution obligation, including the Group entities subject to this obligation.

Energy audits

Spanish Royal Decree 56/2016, of February 12, 2016, transposing Article 8 of Directive 2012/27/EU, of the European Parliament and of the Council, of 25 October 2012, on energy efficiency, in respect of energy audits, energy service and energy audit provider accreditation and the promotion of energy efficiency, took effect in February 2016.

It has the effect of obliging all enterprises that are not SMEs (“large enterprises”) within the European Union to carry out regular energy audits with a view to analyzing whether their energy management is as good as possible and having them establish the opportune energy savings and efficiency opportunities and proposals as warranted.

The bound parties must carry out an energy audit every four years from the date of the last energy audit and it must cover at least 85% of total energy consumption by their universe of facilities located in Spain.

The Group's energy management systems, which are based on the international ISO 50001 standard, are found in the Group's main industrial companies.

Alternative fuels

Royal Decree 639/2016, of December 9, published on December 10 (Official State Gazette [BOE] 298/2016) lays down a framework of measures to implement an infrastructure for alternative fuels, with the aim of minimizing the dependence of the transport industry on oil, mitigating the environmental impact of transport, and setting threshold requirements for the creation of an infrastructure for alternative fuel, including charging stations for electric vehicles and natural gas and hydrogen refuelling stations.

Climate change and air quality

Following the Paris Agreement, countries' commitments under their respective National Determined Contributions (NDCs) will have a significant impact on the development of new climate policies. The agreement is undoubtedly another step toward a low-emissions economy in which a more sustainable model of company will be crucial. As a signatory of the “Paris Pledge for Action” document, Repsol supports the agreement, and works towards being part of the climate change solution.

In 2016 there began the review of Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading and amending Council Directive 96/61/EC.

In addition, 2016 saw the publication of Directive (EU) 2016/2284/EU (amending Directive 2003/35/EC and repealing Directive 2001/81/EC) on the reduction of national emissions of certain atmospheric pollutants (SO₂, NO_x; NH₃, non-methane VOCs and fine particles) that impair local air quality.

Bolivia

Bolivia's New Constitution took effect on February 7, 2009. In addition, the New Constitution makes state-owned Bolivian company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) solely responsible for controlling and managing the hydrocarbon production chain and the sale of these products, stipulating that it may not transfer its rights or obligations in any way but empowering it to enter into service agreements with public, mixed-ownership or private companies, whether Bolivian or foreign, engaging such companies to perform certain production chain activities on its behalf in exchange for remuneration or payment for their services. YPFB may also form associations or mixed-ownership enterprises to carry out oil and gas related business activities, but must retain at least 51% of these companies' share capital

The Bolivian oil and gas industry is regulated by Law 3,058 of May 19, 2005 (the "Hydrocarbons Law").

On May 1, 2006, Supreme Decree 28,701 (the "Nationalization Decree") was published, which nationalized the country's hydrocarbons and transferred ownership and control to the Bolivian state company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB). Furthermore, the shares required to enable YPFB to control at least 50% plus one vote in different companies, among them Empresa Petrolera Andina, S.A., currently known as YPFB Andina S.A. (YPFB Andina), were nationalized. (YPFB Andina).

Subsequently, Law No. 466 of December 26, 2013 established that YPFB Andina take the legal form thereafter of a mixed-capital public limited company (SAM for its acronym in Spanish), to which end YPFB acquired 79,557 shares from Repsol Bolivia S.A. on August 4, 2014. 79,557 shares. YPFB currently holds 51% of the share capital of YPFB Andina, thereby complying with Law No. 466 and paragraph II of article 363 of the State's Political Constitution. At the date of authorizing these financial statements for issue, Repsol Bolivia S.A.'s shareholding in YPFB stood at 48.33%.

Additionally, Law No. 767 was passed on December 11, 2015 to promote investment in oil and gas exploration and production in Bolivia, as regulated by Supreme Decree No. 2830 of July 6, 2016, laying down the following key provisions: (i) the grant of an incentive for oil production designed to boost revenue from oil fields; this incentive ranges from \$30 to \$55 per barrel of oil, depending on price terms, production levels and subject to execution of new investments. The incentive applies to oil presenting an API gravity level of less than 55°; (ii) the grant of an incentive for the production of oil condensate in excess of proved reserves, subject to presentation of a development plan committing to new investments. This incentive ranges from \$0 to \$30 per barrel of associated gas condensate and applies until December 2025; (iii) the grant of an incentive for the production of associated natural gas condensates deriving from new discoveries; the incentive ranges from \$30 to 55\$ per barrel. The term for this incentive is set for each project such that it achieves financial break-even using a formula established in the implementing regulations based on an expected net asset value of zero, albeit capped at 25 years; and (iv) the allocation of preferential export markets in the case of dry gas fields.

Law No. 817 of July 19, 2016 complements article 42 of Law No. 3058 of May 17, 2005, which article had been previously amended by virtue of Law No. 767 of December 11, 2015, permitting YPFB to execute addenda to its Operating Contracts in order to extend their terms such that the reserves so certified can be exploited, subject to undertakings to make new investments in exploration activities (in an amount in excess of \$350 million) or in exploration and related development activities (in an amount in excess of \$500 million), to be executed during a five-year period (by July 2021) and in accordance with an investment plan to be approved by YPFB.

Operating contracts

According to the Hydrocarbons Law and the Nationalization Decree, Repsol E&P Bolivia S.A. and its subsidiary YPFB Andina S.A. signed with YPFB the Operating Contracts establishing the conditions for the prospecting and production of hydrocarbons in Bolivia, effective as of May 2, 2007.

Regarding these Operating Contracts, significant legislation was issued in 2008 and 2009, which had the effect of: setting the conditions and parameters for the recognition and approval by YPFB of the Recoverable Costs within the framework of the Operating Contracts; amending the regulations governing the settlement of royalties and investments with the Bolivian Treasury; and regulating the tendering, contracting and purchase of materials, works, goods and/or services by Operating Contract Holders.

Additionally, on May 8, 2009 The Natural Gas Delivery Agreements and the Liquid Hydrocarbon Delivery Agreements establishing the terms and conditions governing the delivery of hydrocarbons by the Holder were executed at which time the Payment Procedures stipulating the Holder Remuneration payment mechanism were also executed. The Caipipendi Natural Gas Delivery Agreement was amended on March 26, 2010 with the aim of adding volumes for export to ENARSA Argentina and again on November 28, 2014 in order to additional natural gas natural volumes for dispatch from the Margarita and Huacaya fields to the Brazilian and Argentine export markets, enabling implementation of Phase III of the Caipipendi Area with the corresponding increase in production.

Against the background of Laws Nos. 767 and 817, on December 15, 2016 the Group signed with YPFB an Addendum to the Caipipendi Area Operating Contract, which will become effective after approval by the Pluri-National Legislative Assembly and formal attestation before the Government Notary, thus extending the term of the Contract, subject to implementation of the investment amounts determined by the statutes referred to earlier.

Brazil

Exploration and Production

The Constitution of the Federative Republic of Brazil states that the Federal Government is the holding company state monopoly devoted to the exploration, development, and production of oil, gas, and other liquid hydrocarbons, as well as their refining, importation, exportation, and transportation, and is able to engage private or government corporations to assume the above functions, in accordance with the conditions established in legislation.

Law 9,478/97, known as the Oil Act, introduced the first contractual model for exercising exploration activities and encompasses the following:

- It confirms the Brazilian government as the oil and gas monopoly and it creates: (i) the National Council on Energy Policy (CNPE), a body entrusted with establishing energy policies, which is subordinate to the President of the Republic, and (ii) the National Agency of Petroleum, Natural Gas and Biofuel (ANP), an independent regulatory agency which falls under the Mines and Energy Ministry and which is in charge of establishing Upstream and Downstream activity guidelines;
- It stipulates that concession agreements shall be adjudicated via specific tenders and establishes minimum requirements for the tender rules;
- It establishes the minimum terms and conditions for concession agreements for oil and gas exploration, development and production;
- It creates the following levies payable by the concession holders: (i) upfront payments (paid upon execution of the agreement); (ii) royalties (monthly payments of between 5% and 10% of oil and/or natural gas production, depending on the terms of the tender); (iii) a special levy (payable in instances of high-volume production); (iv) an area occupancy or retention payment.

Under the Concession Agreement, the Federal Government grants its concessionaires the right to explore, develop, and produce hydrocarbons in a certain area during a determined period of time established in the agreement; the exploration stage may last between three to eight years, and the production phase may last twenty-seven years, commencing on the date commercial viability is declared (and can be extended by obtaining ANP authorization).

The main rights of the concessionaries are as follows: (i) exclusive exploration, development, and production rights in a granted area; (ii) ownership of produced hydrocarbons; (iii) the right to commercialize the production; and (iv) the right to export hydrocarbons, taking into account the obligation to supply domestic production in the case of a state of emergency.

The main concessionaires assume the following obligations as part of the agreement: (i) all the risks and costs related to the exploration, development, and production of hydrocarbons; (ii) compliance with the relative local content and demands; (iii) compliance with the demands related to the execution of minimal work; and (iv) payment of government take.

In 2010, the production allocation regime was introduced for pre-salt areas for which concessions have not yet been awarded and areas of strategic potential, to be defined by the executive branch under Brazilian Law No. 12,351/10 (as amended by Law 13,365/16). The aforementioned piece of legislation further establishes that:

- The exploration and production in areas contemplated in the above regimes (“production allocation”) must be directly granted to Petrobras, the company controlled by the Federal Government, in exclusive contractual terms, without the necessity of undergoing a bidding process;
- Should a tender protocol exist, Petrobras will have a right of first refusal to be the area operator, and must notify its decision within 30 days. If designated as operator, it must have at least a 30% share of the winning consortium;
- A new public company, Empresa Brasileira de Administração de Petróleo e Gás Natural S.A. – Pré-Sal Petróleo S.A. (PPSA), created by virtue of Law 12.304 in 2010 will manage the production sharing contracts, and in principle, participate in the consortium agreement signed with Petrobras or other entities involved, without assuming the risks or investments involved in exploration, evaluation, development, production, and installation dismantlement;
- Should oil reserves be found, the successful bidders will be allowed to recover in hydrocarbons the costs incurred during the above-mentioned stages (known as oil cost), and will also be entitled to the final production minus the cost of crude, royalties, and the participation of the Federal Government in the production (known as crude oil surplus);
- The winner of this regime's bid process will be the company or companies able to provide the largest oil reserves to the Federal Government;
- In relation with the financial compensation, the distribution regime of the production foresees the payment by the successful bidders in the form of: (i) royalties, and (ii) signature bonuses.

Natural Gas

In 2009, Law 11,909/09 (the Gas Act) was approved; it regulates certain activities within the natural gas industry, including its transportation and commercialization (excluding the distribution of piped natural gas, which is the exclusive domain of state governments). The ANP continues to regulate the above activities while also granting concessions and authorizations, as applicable.

Canada

In the western Canadian provinces of British Columbia, Alberta and Saskatchewan where the majority of the Company’s upstream exploration and production interests in Canada lie, the respective provincial governments own the majority of the subsurface mineral rights to crude oil and natural gas. Generally these provincial governments grant rights to explore for and produce oil and natural gas from provincial “Crown lands” pursuant to leases, licenses and permits for varying terms and on conditions set forth in provincial legislation and regulations, including requirements to perform specific work or make payments. In addition to Crown lands, the Company holds interests in leases obtained from freehold

mineral owners through direct negotiation.

Companies operating in the Canadian oil and natural gas industry are subject to extensive regulation and control of operations (including land tenure, exploration, development, production, refining, upgrading, transportation and marketing and environmental matters) as a result of legislation and policy enacted at both the federal level by the government of Canada and by the various provincial governments. Oversight of such operations are undertaken by provincial regulatory bodies that include the British Columbia Oil and Gas Commission, the Alberta Energy Regulator, the Saskatchewan Ministry of Economy and the Saskatchewan Ministry of the Environment as well as federal regulatory bodies such as the Canadian Environmental Assessment Agency and the National Energy Board of Canada.

Each province has legislation and regulations that govern royalties in relation to provincial Crown lands as well as production rates and other matters. Royalties from production on Crown lands are determined by governmental regulation and are generally calculated as a percentage of the value of gross production. The rate of such royalties generally depends in part on prescribed reference prices, well productivity, geographical location, field discovery date, method of recovery and the type or quality of the petroleum product produced. Occasionally, the governments of the western Canadian provinces create incentive programs for exploration and development. Such programs can provide for royalty rate reductions, royalty holidays or royalty tax credits. Royalties payable on production from freehold lands are determined by negotiation between the mineral freehold owner and the lessee, although production from such lands is subject to certain provincial taxes.

The conduct of oil and gas exploration and production operations in Canada is highly regulated and subject to significant control by provincial and federal regulatory bodies. Regulatory approval is required for various activities, including the drilling of oil and natural gas wells, construction and operation of pipelines and facilities as well as the storage, injection and disposal of associated substances. In order to conduct oil and gas operations and remain in good standing with the applicable regulators, companies must comply with applicable legislation, regulations, orders, directives and other directions (all of which are subject to governmental oversight, review and revision, from time to time). Non-compliance with such legislation, regulations, orders, directives or other directions can result in fines or other sanctions.

In addition to legislation and regulations relating to operational matters associated with exploration and production, the Canadian oil and natural gas industry is also subject to a variety of provincial and federal legislation in relation to environmental matters, all of which are also subject to governmental review and revision from time to time. Such legislation provides for restrictions and prohibitions on the release or emitting of various substances produced as a result of certain oil and gas industry operations, such as sulphur dioxide and nitrous oxide, as well as conditions or prohibitions in operating in certain environmentally sensitive areas. In addition, such legislation sets out the requirements for the satisfactory abandonment and reclamation of well and facility sites. Non-compliance with such legislation can result in suspension or revocation of necessary licenses and authorizations, civil liability for pollution damage, and the imposition of material fines and penalties.

In November 2016, the Alberta Provincial Government issued regulations regarding carbon emissions that included a carbon levy across all industry sectors. The price per tonne of carbon dioxide emitted will increase to \$20 CDN in 2017 and \$30 CDN in 2018. This levy is payable at the time when hydrocarbons are removed or purchased from a transmission pipeline. The regulations contain exemptions for upstream producers and processors of raw materials until 2023 with some exceptions. The Company has applied for and received exemption certificates where available.

In addition to the provincial regulations, the Canadian Federal Government has also announced as part of the Pan-Canadian Framework on Clean Growth and Climate Change the possibility of further increase to the price of carbon to be charged by the Provinces to \$50 CDN per tonne by 2022.

Ecuador

In accordance with the Constitution of 2008 and the Hydrocarbons Law of Ecuador, the nation's hydrocarbon fields and the associated substances are the inalienable, imprescriptible and unattachable property of the State. The State explores and operates the oil and gas fields directly through Petroecuador. Petroecuador, in turn, can perform this activity sub-contracting with third parties. It is also possible to incorporate mixed-ownership enterprises between local companies and renowned expert foreign companies that are legally established in Ecuador.

In accordance with the provisions set down in the amended legislation of the Hydrocarbons Law and the Internal Tax Regime Law, of July 27, 2010, agreements for the exploration and exploitation of hydrocarbons under the various contractual forms must be modified to reflect the amended hydrocarbons exploration and exploitation services agreement model provided for in article 16 of the Hydrocarbons Law under which the contractor is obliged to perform, using its own financial resources, oil and gas exploration and exploitation services in the indicated areas, investing the capital and using the equipment and technology needed to this end. When there are, or the service provider discovers, commercially viable hydrocarbon reserves, it is entitled to payment of a set price per net barrel of oil produced and delivered to the state. This price, which constitutes the contractor's gross revenue, is contractually stipulated based on estimated depreciation schedules, cost/expense schedules and a reasonable profit in light of the risk incurred.

Repsol Ecuador, S.A. (Ecuador Branch), as the contractor and operator of Block 16, entered into a hydrocarbons (crude oil) exploration and exploitation service agreement covering Block 16 in the Ecuadorian Amazon region. The agreement was filed with the Hydrocarbons Register on December 23, 2010 and took effect on January 1, 2011.

In addition, on January 22, 2011, Repsol signed an agreement with the Ecuadorian State amending the services agreement covering the Tivacuno Block. This contract was filed with the Hydrocarbons Register on February 21, 2011.

United States

Exploration and Production

The two government agencies responsible for offshore exploration and production are the *Bureau of Ocean Energy Management* (BOEM) and the *Bureau of Safety and Environmental Enforcement* (BSEE - previously called the *Minerals Management Service*, for its acronym "MMS") of the *U.S. Department of the Interior*.

- i. The BOEM is in charge of responsibly ensuring the economic and environmental development of US offshore resources. Its functions include: *offshore leasing* resources evaluation, review and administration of oil and gas exploration, development plans, renewable energies development, *National Environmental Policy Act*, (NEPA) analyses, and environmental studies.
- ii. The BSEE is responsible for safety and environmental oversight of *offshore* oil and gas operations, including permitting and inspections of offshore *oil and gas operations*. Its functions include the development and enforcement of safety and environmental regulations, permitting offshore exploration, development, and offshore production, inspections, offshore regulatory programs, oil spill response and newly formed environmental capacity-building and compliance programs.

With regard to U.S. *onshore* exploration and production activities, the oil and gas industry is primarily regulated by the laws of the individual States. Oil and gas production is considered a mining activity, and therefore, with the exception of certain environmental matters, cannot be governed by federal law, as the

power to regulate the production or gathering of natural gas, which involves the physical acts of drawing gas from the earth and preparing it for the first stages of distribution, is reserved to the individual States.

At present, the Company has operations in Alaska, Kansas, Louisiana, Oklahoma, Pennsylvania and Texas, and is therefore subject to the laws of those States. In Alaska, exploration and production activities are controlled by the Alaska Department of Natural Resources, Division of Oil and Gas. The BOEM is the body responsible for fully reviewing the environmental impact of a given project (whether exploration or development works) under the National Environmental Policy Act (NEPA).

In Texas, the main exploration and production regulatory bodies are the Railroad Commission of Texas (RRC) and the Texas Commission on Environmental Quality (TCEQ), while the main Pennsylvanian authority in this arena is the Pennsylvania Department of Environmental Protection (DEP).

Federal authorities do have exclusive jurisdiction over the sale and transportation of gas and oil in interstate commerce for resale. Federal authorities also have jurisdiction over certain environmental matters affecting the oil and gas industry. In May, 2016, the United States Environmental Protection Agency issued new rules relating to the reduction of methane, volatile organic compounds such as benzene and other air pollutants in oil and gas operations including hydraulic fracturing. These new rules include requirements related to emission limits and the frequency of monitoring fugitive emissions.

Liquid Natural Gas

As for the Group's LNG business activities in the United States, under the Natural Gas Act, the Federal Energy Regulatory Commission (FERC) has the exclusive power to authorize the establishment of LNG import or export operations.

LNG imports and exports into and out of the United States require the approval of the federal government. (DOE). The Office of Fossil Energy is the DoE division that grants these approvals. Such approval is required for any party looking to market, exchange or use natural gas from overseas.

Trading of crude oil and refined products

A number of US regulatory bodies are empowered to regulate the oil and refined products trading market. The Federal Trade Commission (FTC) has the power to regulate crude oil trading activities. The *Environmental Protection Agency* (EPA) supervises the sector from an environmental standpoint and specifically regulates refined products marketed to private consumers such as gasoline and diesel. Trading of financial derivatives is regulated and supervised by the *Commodities Futures Trading Commission* (CFTC).

On December 18, 2015, the Consolidated Appropriation Act, 2016 was passed (Public law no. 114-113). This piece of legislation repeals section 103 of the Energy Policy and Conservation Act (EPCA), thereby eliminating the ban on exporting crude oil produced in the US. As a result of this legislative development, the executive branch is banned from enforcing regulations implementing the crude oil export ban. However, the legislation preserves the President's power to restrict oil exports in response to a national emergency, enforce trade sanctions and remedy oil supply scarcity or price distortion sustained oil prices significantly above world market levels.

The repeal of this ban gives US-based oil producers increased access to international markets; it is believed that this development could have a major impact on both the US and global economies.

Indonesia

Under Indonesia's 1945 Constitution, all natural resources (including oil and gas) within Indonesian territory are owned and controlled by the State. The regulation of oil and natural gas in Indonesia is based on Law No. 22 of 2001 ("Law No. 22"), which sets out broad principles for the regulation of the industry.

A number of implementing regulations promulgated under Law No. 22, as well as ministerial regulations and decrees, give effect to these principles.

Law No. 22 restructured and liberalised the State's control over the oil and gas industry. Under Law No. 22 regulatory role was assigned to two separate government agencies:

- (i) BPMIGAS (Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi). However, on 13 November 2012, BPMIGAS was declared unconstitutional by the Indonesian Constitutional Court and its roles and functions were assigned to the Government. The President assigned those roles and functions to The Ministry of Energy and Mineral Resources under Presidential Regulation 95/2012. Satuan Kerja Khusus Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi ("SKK Migas") was established under Presidential Regulation 9/2013 and it now performs the same roles and functions as BPMIGAS; and
- (ii) BPHMIGAS (Badan Pengatur Hilir Minyak dan Gas Bumi)

Following the restructuring of the industry under Law No. 22, BPMIGAS and subsequently SKK Migas succeeded Perusahaan Pertambangan Minyak dan Gas Bumi Negara ("PERTAMINA") as the upstream supervisory party to PSCs but did not assume PERTAMINA'S role as a Producer/Contractor.

The Ministry of Energy and Mineral Resources ("MEMR") is responsible for approving the first Plan of Development ("POD") under production sharing contracts ("PSCs") and overseeing the State's ownership and management of oil and gas resources. With assistance from MIGAS, the MEMR formulates government policy, determines the blocks to be opened for bidding, is responsible for approval of transfers by contractors of their participating interest (in consultation with SKK Migas) and issues the licenses required for the conduct of downstream oil and gas business activities, such as the production of LNG using downstream structure.

The Directorate General of Oil and Gas ("MIGAS") assists the MEMR in formulating government policy and determining working areas for tender. It also supervises the implementation of upstream and downstream business activities through SKK Migas and BPHMIGAS.

SKK Migas is the Upstream supervisory and implementing body, being the successor body to BPMIGAS as outlined above. As the Upstream supervisor, SKK Migas assists the MEMR in relation to tender preparation, award of PSCs and approval of the first POD. SKK Migas also enters into and supervises PSCs. Its key supervisory roles include approval of annual WP&Bs and subsequent PODs, monitoring and reporting on the implementation of PSCs to the MEMR, appointing sellers of the State's share of production (SKK Migas may collect the Government's share of gas but must appoint another party to sell the gas) and managing the assets used by the contractors in the implementation of the upstream oil and gas business activities.

The Ministry of Finance ("MoF") is responsible for providing instructions concerning the basis of the Government's share derived from the exploitation of LNG and subordinated by Directorate General of Tax and Directorate General of Customs and Excise, determining the taxes, duties and excise due to activity of LNG development, deciding issues related to government guarantees and formulating, determining and implementing policies on State Owned Assets.

Pursuant to Law No. 22, companies wishing to explore for and exploit oil and gas reserves must do so through a Cooperation Contract with SKK MIGAS. The form of Cooperation Contract typically entered into in respect of upstream activities in Indonesia is a Production Sharing Contract ("PSC").

Under a PSC the Government of Indonesia ("GOI") retains ownership of the oil and gas (prior to delivery) and the contractor bears all the risk and costs of exploration, development and production in return for an agreed percentage share of oil and/or gas production and recovery of eligible operating costs from production.

Peru

Regulation of the hydrocarbons market in Peru is included in its Constitution. The Constitution states that the government promotes the private initiatives, recognizing the economic pluralism, and having the state a subsidiary role in terms of business concerns. The Constitution establishes that private and public business activity must be treated equally under the law, and those national and foreign investments are subject to the same conditions.

In addition, the Constitution stipulates that the country's natural resources are the property of the state and that the terms and conditions of access to and use of these resources by private parties must be regulated by means of organic laws.

Natural and legal persons, whether Peruvian or foreign, who pursue oil and gas activities must expressly subject themselves to the laws of the Republic of Peru, renouncing the right to any diplomatic recourse. Accordingly, any discrepancies arising in respect of execution, compliance and, in general, any matters related to legislated oil and gas activities may be submitted to the Judiciary Power or the national or international courts of arbitration.

The most important authorities with competence over Peruvian oil and gas matters are: the Ministry of Energy and Mining (MINEM for its acronym in Spanish), which is tasked with drafting, passing, proposing and applying sector policy and issuing complementary rules to keep sector regulations updated; the latter Ministry's Oil & Gas Department (DGH), which oversees application of and compliance with sector regulations; the Energy & Mining Investment Oversight Body (OSINERGMIN), tasked with oversight of the natural and legal persons carrying out activities related to the electricity and hydrocarbon sub-sectors and the imposition of penalties for any breaches of the legal and technical obligations issued by the MINEM and PERUPETRO.

The Environmental Assessment and Taxation Body (OEFA) is the technical institution specialized in ensuring compliance with the standards, obligations and incentives laid down in prevailing environmental regulations.

Exploration and Production

The Organic Law of Hydrocarbons (OLH), regulates this natural resource. To provide legal assurance to investors, it states that contracts under its framework shall be considered Contract-Law, and therefore can only be modified by written agreement between the two parties. To achieve these goals the OLH created PERUPETRO, a state-owned Limited Company organized in accordance with the General Corporate Law, to which the state, as owner of the hydrocarbons located in its territory, grants the right of ownership over the hydrocarbons, so that PERUPETRO can negotiate, execute and monitor exploration and/or exploitation contracts, with a licensee (Contractor) by means of License Agreements, Service Agreements and other forms of contracts authorized by the Peruvian Ministry of Energy and Mining (MINEM).

The License Agreements grant Contractors the authorization to explore and exploit hydrocarbons within a determined area. The contractor has ownership over the extracted hydrocarbons and can commercialize them freely. By virtue of the Service Agreements, PERUPETRO grants the Contractor the right to perform hydrocarbon exploration and exploitation activities within the contracted area, and the Contractor receives retribution based on the final certified output. Under this type of agreement, PERUPETRO retains ownership over the extracted hydrocarbons, and therefore is free to arrange for its exportation or its refining and/or commercialization in the national market.

Article 14 of OLH states that national or foreign individuals or legal entities interested in entering into hydrocarbon exploration and/or exploitation contracts must receive prior authorization from PERUPETRO, which is granted based on their legal, technical, economic, and financial capacity to

comply with all its contractual obligations.

Refining and commercialization of hydrocarbons

The OLH stipulates that any national or foreign individuals or legal entities may install, operate, and maintain petroleum refineries, plants for processing natural gas and condensed, natural asphalt, greases, lubricants, and petrochemicals, subject to the norms specifically established by The Mines and Energy Ministry. The OLH does not have established requirements for each activity, and therefore, it is necessary to refer to the Regulations for each of the abovementioned activities.

In Peru, the sale of products derived from oil and gas is governed by supply and demand. However, under Emergency Decree No. 010-2004, the Peruvian government created the Oil-Derived Fuel Price Stabilization Fund (the "Fund"), an intangible fund designed to prevent high oil price volatility from affecting domestic market. The Fund's equity comprises the contributions and discounts made by Producers and Importers on the price of each product, depending on whether the Export Parity Prices (EPP) are over or under the price range. Law No. 29552 made this Fund a permanent mechanism.

Article 43 of the Regulation governing the Sale of Liquid Fuels and Other Oil & Gas Derivatives in Peru (enacted by means of Supreme Decree No. 045-2001-EM) obliges producers and wholesale distributors with proprietary or leased storage capacity to maintain, at each storage facility, a minimum average monthly inventory buffer for each class of fuel stored equivalent to 15 consecutive days' supply, based on average dispatches during the six months prior to the buffer calculation, and a minimum daily buffer equivalent to five consecutive days' supplies based on individual facility averages. Article 8 of the Regulation governing the Sale of Liquefied Petroleum Gas (enacted by means of Supreme Decree No. 01-94-EM) as subsequently amended (by means of Supreme Decree No. 045-2010-EM and Supreme Decree No. 015-2015-EM), similarly obliges average buffers equivalent to 15 days' supply and a minimum buffer of 5 days' supply, again based on average dispatches during the prior 6-month period.

Law No. 28694 also regulated the sulphur content of diesel fuel, stipulating that from January 1, 2010 it is forbidden to sell diesel for domestic use with a sulphur content of over 50ppm, further banning the import of Diesel No. 1 and Diesel No. 2 fuel with a sulphur content of over 2500 ppm. This Law empowered the Ministry for Energy and Mining to establish, exceptionally, geographic regions in the interior of the country in which the sale of diesel with a higher sulphur content is permitted.

Law No. 29852 creates the Hydrocarbon Energy Safety System (SISE for its acronym in Spanish) and the Energy Social Inclusion Fund (FISE). The safety system, or SISE, encompasses the infrastructure required to ensure the safety of the energy system, and is therefore made up of networks of pipeline and storage facilities deemed strategic by the Peruvian state (infrastructure) and is remunerated by means of a tariff levied on the infrastructure comprising the national network of liquid oil and gas transportation and supply pipelines. The FISE sets up a Social Compensation and Universal Service scheme focused on the most vulnerable members of society, being remunerated by a series of surcharges levied on: i) deregulated users of interconnected electricity systems; ii) the supply of liquid products deriving from hydrocarbons and liquid natural gas, by levying every primary sale made by Producers and Importers, to be passed on to liquid hydrocarbons end prices; and iii) the monthly invoicing of tariff charges levied on users of the system for transporting natural gas by pipeline or ducts.

Venezuela

The Constitution of the Bolivarian Republic of Venezuela stipulates that the mines and oil and gas fields, irrespective of their nature, located on national territory, under the territorial sea, in the exclusive economic zone or on the continental platform, belong to the Republic, are public-domain goods and are, therefore, inalienable and imprescriptible.

By virtue of organic law and to protect national interests, the Venezuelan State has reserved the Venezuelan oil and gas activities for itself. For reasons of economic and political sovereignty and for

national strategic purposes, the State holds all of the shares of Petróleos de Venezuela, S.A (PDVSA), or the entity that may be set up to run the oil and gas industry.

Venezuela's Hydrocarbons Organic Law regulates all matters regarding the exploration, operation, refining, industrialization, transportation, storage, sale and conservation of hydrocarbons, including related refined products and the works required to perform these activities.

The Venezuelan government has dictated Decree No. 2,184 published on January 14, 2016 in the Extraordinary Official Journal of the Bolivarian Republic of Venezuela No. 6,214, declaring a State of Economic Emergency throughout the entire territory of the Republic for a period of 60 days. The purpose of the Decree is that the Executive branch adopt exceptional and timely measures to secure to the people the full enjoyment of their rights, to preserve internal order, to assure timely access to basic goods and services, and to mitigate the effects of the natural circumstances that have affected electricity production and access to food and other life essentials. The measures that the Executive branch is now enabled to take include the execution of contracts in the public interest to obtain financing, technical advice and use of strategic resources for the economic development of the country, without need of authorization from other public powers, and all other social, environmental, economic, political or legal measures that the Executive may deem expedient to resolve the exceptional situation prompting the Decree, and to prevent its effects from increasing.

The Presidential Decree has so far been renewed on five occasions by the issue of a fresh Decree declaring a state of economic emergency throughout national territory for a period of 60 days, followed by yet another renewal for a similar term.

Recently, on November 13, 2016, there was issued Presidential Decree No. 2.548 in Extraordinary Official Gazette No. 6272, extending by 60 days the term prescribed in Presidential Decree No. 2.452 of September 13, 2016, published in Extraordinary Official Gazette No. 6256, bearing the same date.

Both Decrees were then revoked by the National Assembly, as was the request made by the President of the Republic to extend the State of Economic Emergency in the case of the first Decree. However, the Supreme Court of Justice's Constitutional Court has since ruled and declared both Decrees pertinent and constitutional.

For information regarding the new Exchange Agreements introduced during the reporting period, see Note 22.3.

Exploration and Production

The performance of the activities relating to exploration for hydrocarbon fields, the extraction of hydrocarbons in their natural form, and their collection, transportation and initial storage is reserved to the State, either conducted directly by the National Executive Power or by wholly-owned State companies. The State may also conduct these activities through mixed owned companies whose equity interest is over 50%.

The incorporation of Mixed Companies and the terms governing the performance of primary activities require prior approval from the National Assembly. Any subsequent amendment to these terms also requires the National Assembly approval. Accordingly, Mixed Companies are governed by law and specifically by the terms and conditions established by the Agreement approval of the National Assembly. These companies are also subject to the rules established in the Code of Commerce and other applicable regulations. Mixed Companies can be functioning for a maximum term of 25 years; this term can be extended for a period agreed upon by the parties of no more than 15 years.

The State is entitled to a thirty percent (30%) participation in the hydrocarbon volumes extracted from any of its fields, notwithstanding the companies' requirement to pay all other applicable taxes.

The commercialization activities of natural hydrocarbons and of any derivative products indicated by the National Executive Power by Decree, may only be performed by wholly-owned State companies. As a result, the Mixed Companies that engage in primary activities may only sell the natural hydrocarbons they produce to companies that are wholly-owned by the State.

Pursuant to the Organic Gaseous Hydrocarbons Law, the following activities may be carried out by the state either directly or through state-owned entities or by private national or foreign bodies, with or without state ownership: (i) activities consisting of exploration for non-associated gaseous hydrocarbons and operation of these fields; (ii) the extraction, storage and use of the non-associated natural gas found at these fields and the gas produced in association with oil or other fossil fuels; and (iii) the processing, industrialization, transportation, distribution and domestic and foreign trading of such gases.

Activities to be carried out by private national or foreign bodies, with or without state ownership, do require a license or permit and must be associated with specific projects or uses linked to national development objectives. A single party may not simultaneously perform or control in a given region two or more production, transportation or distribution activities.

The Mixed Companies agreements referred to in the Organic Hydrocarbon Act do not impose restrictions on this legal form of company in terms of transferring funds in the form of cash dividends, loan repayments or the redemption of shareholder advances in foreign currency (USD).

Under Foreign Exchange Agreement No. 37, private domestic or foreign holders of gas exploration and operation licenses as defined in the Organic Gaseous Hydrocarbons Law, may hold in bank accounts or in analogous form the foreign currency representing the proceeds of operation of their licenses, including the proceeds of export sales or changes in consumption patterns.

Under that provision, foreign currency held at banks may be used, first, for investment or reinvestment in gas projects properly authorized by the relevant ministry, or for the restitution of funds and payment for goods, materials and equipment relating to project implementation, provided that such items are not manufactured domestically and are necessary for the licensee to carry out its operations.

Other countries

Repsol's operations are subject to an extensive variety of legislation and regulatory frameworks in the other countries in which it operates. All aspects of the activities performed, including among others, land occupancy, production rates, royalties, price-setting, environmental protection, export rates, exchange rates, etc., are covered by such legislation and regulatory frameworks. The terms of the concessions, licenses, permits and agreements governing the Group's interests vary from one country to another. These concessions, licenses, permits and agreements are generally awarded or jointly carried out with government bodies or state companies and occasionally with private sector organizations.

CONSOLIDATED MANAGEMENT REPORT 2016



REPSOL, S.A. and Investees comprising the Repsol Group

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

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1. SUMMARY OF THE MAIN EVENTS

In 2016, Repsol¹ continued the process of transformation begun with the acquisition of Talisman² and the approval of the 2016-2020 Strategic Plan³. This process has produced gains in efficiency and savings in operating costs and investments, along with synergies in integration of the businesses, and allowed for flexible management of the portfolio to order to divest from non-core assets.

These steps, coupled with the advantages of the company's integrated model, have highlighted Repsol's resilience and its ability to achieve quite healthy results even in the current environment of low crude oil and gas prices: **net income** of the year amounted to 1,736 million euros and the cash flow allowed for **reducing the Group's net debt** by 3,790 million euros from 2015.

RESULTS FOR THE PERIOD⁴

<i>Million euros</i>	2016	2015⁵	Variation
Upstream	52	(925)	977
Downstream	1,883	2,150	(267)
Corporation and others	(13)	627	(640)
Adjusted net income	1,922	1,852	70
Inventory effect	133	(459)	592
Special items	(319)	(2,791)	2,472
Net income	1,736	(1,398)	3,134

Upstream results show a significant improvement, with a return to profit despite the difficult price environment. This improvement was, in particular, driven by the increase in total average production (690 Mboe on 23% more than in 2015, mainly as a result of the contribution of ROGCI assets and the increases in Venezuela, Norway, Peru and Brazil) and increased operating efficiency and the reduction in exploration expenses, which far offset the adverse impact of the drop in crude oil and gas realization prices (14% in both cases).

In *Downstream*, the competitive advantages of our integrated business model and of the quality of our refining assets, the strong performance of Chemicals and the better results in commercial businesses helped mitigate the adverse impact of the worsening of the international environment of Refining and Gas & Power in North America.

The lower results in *Corporation and others*⁶ are mainly due to the absence of the exceptional financial gain in the Company's dollar positions in 2015 arising from receipt of compensation for the expropriation of YPF.

Consequently, **adjusted net income** amounted to 1,922 million euros, 4% higher than in 2015.

The *inventory effect*, which reflects the impact of price changes on inventories⁷, was positive as a result of the gradual recovery in crude oil prices.

¹ Henceforth, the names "Repsol," "Repsol Group" or "the company" are used interchangeably to refer to the company group consisting of Repsol, S.A. and its subsidiaries, associates and joint ventures.

² Acquisition of Talisman Energy Inc., now called Repsol Oil & Gas Canada Inc. (hereinafter "ROGCI").

³ The 2016-2020 Strategic Plan was published in October 2015 (see section 7.2).

⁴ All the information presented throughout this section, unless expressly stated to the contrary, was prepared in accordance with the Group's reporting model, which is described in Note 2.3 "Segment reporting" in the financial statements for 2016. Some of the financial indicators used in this document are classified as alternative performance measures (APM) in accordance with the Guidelines of the European Securities Markets Authority (ESMA). See Appendix I, "Alternative Performance Measures," which includes the reconciliation between the adjusted figures and those corresponding to IFRS-EU financial information.

⁵ The 2015 figures include the necessary modifications due to changes in accounting policy in relation to capitalization of geology and geophysics costs (see note 2.1 "Comparative information" of the 2016 consolidated financial statements).

⁶ The segment Corporation and others includes the expenses of corporate centers in Madrid and Calgary, the company's financial result, results from the stake in Gas Natural Fenosa and others of lesser importance (consolidation adjustments, etc.).

⁷ See Appendix I on the definition of Alternative Performance Measures (APM).

The *special items* of the period mainly include the gains from divestments in non-core assets (737 million euros, especially the proceeds from the sale of 10% of Gas Natural Fenosa and the piped LPG in Spain), workforce restructuring costs (-393 million euros; notably the provision for the collective dismissal in Spain), devaluations and provisions for asset impairments.

In sum, the Group's 2016 **net income** amounted to a profit of 1,736 million euros, compared to -1,398 million euros in 2015.

The **EBITDA** for the period, 5,226 million euros, reflects savings generated by efficiency programs, and made it possible to significantly improve cash flow from operations which, together with the cash generated from the divestments and the reduction in investments within the framework of the Strategic Plan, enabled the company to meet debt service payments, maintain attractive return for its shareholders and reduce **financial debt** to 8,144 million euros, 32% less than that at the end of 2015.

OTHER EVENTS DURING THE PERIOD

Repsol provided **remuneration to its shareholders** under its "Repsol Flexible Dividend" program, which allows shareholders to choose to receive their compensation, in total or in part, in either new shares or cash. In 2016, it involved remuneration of €0.76 per share¹.

At 2016 year-end, the Repsol **share** rose 33%, which is in line with the average 30% increase of its European peers, but significantly above the 2% drop in the Ibex-35 index.

In 2016 the company continued to take the steps necessary to carry out the **workforce** reduction of approximately 1,500 employees announced in the 2016-2020 Strategic Plan. In order to clear the way for the workforce adjustment in Spain and to fulfill the commitment to carry out the resizing in a responsible and agreed-upon manner, an agreement was reached in June with the workers' representatives to implement a collective dismissal process.

Repsol has maintained its **commitment to safety and the environment**. With regard to employee accidents, both the Frequency Rate (FR) and the Total Frequency Rate (TFR) decreased compared to 2015. With regard to the environment, improvement actions were carried out in 2016 at our facilities which, in addition to reducing energy consumption, reduced CO₂ emissions by 312 metric kilotons in equivalent operating conditions (386 metric kilotons of CO₂ in 2015).

¹ The figure includes the amount committed by Repsol's for the purchase of bonus shares in the two bonus issues of January and July 2016 (€0.466 and 0.292 gross per share, respectively).

MAIN FIGURES AND INDICATORS¹

Results, financial overview and shareholder remuneration ⁽¹⁾	2016	2015	Macroeconomic environment	2016	2015
Results			Brent (\$/bbl) average	43.7	52.4
EBITDA	5,226	4,416	WTI (\$/bbl) average	43.5	48.8
Adjusted net income	1,922	1,852	Henry Hub (\$/MBtu) average	2.5	2.7
Net income	1,736	(1,398)	Algonquin (\$/MBtu) average	3.1	4.8
Earnings per share (€/share)	1.16	(0.96)	Exchange rate (\$/€) average	1.11	1.11
Capital employed ⁽²⁾	39,255	40,697			
ROACE (%)	5.8	3.0	Our business performance ⁽¹⁾	2016	2015
Financial overview			Upstream		
Free cash flow ⁽³⁾	4,323	1,371	Proven reserves (MMboe)	2,382	2,373
Net debt (ND)	8,144	11,934	Proven reserve-replacement ratio (%)	103	509
ND / EBITDA (x times)	1.6	2.7	Net daily liquids production (kbbbl/d)	243	207
ND / Capital employed (%)	20.7	29.3	Net daily gas production (Mboe/d)	447	352
Debt interest / EBITDA (%)	8.2	10.0	Net daily hydrocarbon production (Mboe/d)	690	559
Shareholder remuneration			Average crude oil price (\$/bbl)	39.0	45.2
Shareholder remuneration (€/share)	0.76	0.96	Average gas price (\$/kscf)	2.4	2.8
			EBITDA	2,072	1,611
Main stock market indicators	2016	2015	Adjusted net income	52	(925)
Share price at year-end (€/share)	13.42	10.12	Net investments ⁽¹⁰⁾	1,889	11,370
Average share price (€/share)	11.29	14.77	Downstream		
Market capitalization at year-end (€million)	19,669	14,172	Refining capacity (kbbbl/d)	1,013	998
			Conversion ratio in Spain (%)	63	63
Other ways of creating value	2016	2015	Refining margin indicator in Spain (\$/Bbl)	6.3	8.5
People			Service stations (no.) ⁽¹¹⁾	4,715	4,716
Total employees ⁽⁴⁾	26,877	29,494	Oil product sales (kt)	48,048	47,605
New employees ⁽⁵⁾	2,445	6,159	Petrochemical product sales (kt)	2,892	2,822
Employee turnover rate (%)	13	7	LPG sales ⁽¹²⁾ (kt)	1,747	2,260
Hours of training per employee	41	45	Gas sales in North America (TBtu)	414	299
Tax paid (million euros) ⁽⁶⁾	11,764	11,989	EBITDA	3,367	3,092
Safety			Adjusted net income	1,883	2,150
Frequency Rate of accidents ⁽⁷⁾	0.69	0.92	Net investments ⁽¹⁰⁾	(496)	493
Total Frequency Rate of accidents ⁽⁸⁾	1.46	2.25			
Environment					
Direct CO ₂ emissions (Mt)	19.69	17.89			
Annual CO ₂ emissions reduction (Mt) ⁽⁹⁾	0.312	0.386			
No. of spills	11	21			

⁽¹⁾ Where applicable, figure shown in million euros.

⁽²⁾ Capital employed from continuing operations.

⁽³⁾ In 2015 this did not include the acquisition price of ROGCI, net of the cash acquired.

⁽⁴⁾ Includes managed and non-managed workforce.

⁽⁵⁾ Only fixed or temporary employees with no prior working relationship with the company are considered to be new hires. The % of permanent new hires in 2016 and 2015 amounts to 43% and 62%, respectively.

⁽⁶⁾ This includes taxes paid which represents a cash expense for the company, thus reducing its earnings, as well as those withheld or passed on to the end taxpayer. Does not include amounts accrued payable at a future date or collected in previous periods. For further information, see section 6.3 of this document.

⁽⁷⁾ Frequency Rate (FR) with sick leave: number of accidents leading to lost time and fatal accidents accumulated during the year, for every million hours worked.

⁽⁸⁾ Total Frequency Rate (TFR): number of accidents without lost time, with lost time, and fatal accidents accumulated during the year, for every hour worked.

⁽⁹⁾ CO₂ emissions reduction achieved through the implementation of greenhouse gas reduction actions, compared to the 2010 baseline.

⁽¹⁰⁾ Net investments in operating asset divestments.

⁽¹¹⁾ The number of service stations includes those controlled and licensed.

⁽¹²⁾ On April 20, 2016, an agreement was reached with the South American international operator, Abastible, for the sale of the LPG business in Peru and Ecuador. The sale of the LPG business in Peru was finalized on June 1 and the LPG business in Ecuador was sold on October 1.

¹ All the information presented throughout this section, unless expressly stated to the contrary, was prepared in accordance with the Group's reporting model, which is described in Note 2.3 "Segment reporting" in the financial statements corresponding to December 31, 2016. See definitions, composition and reconciliation of figures in Appendix I, "Alternative Performance Measures". On the calculation of figures for people, see section 6.1, and on that for safety and the environment, see 6.2.

2. OUR COMPANY

2.1. BUSINESS MODEL

Repsol is an integrated energy company with extensive experience in the industry, carrying out its activities on a global scale in two **business areas**:

Upstream



(*) includes finished exploration wells and evaluation/appraisal wells.

Downstream

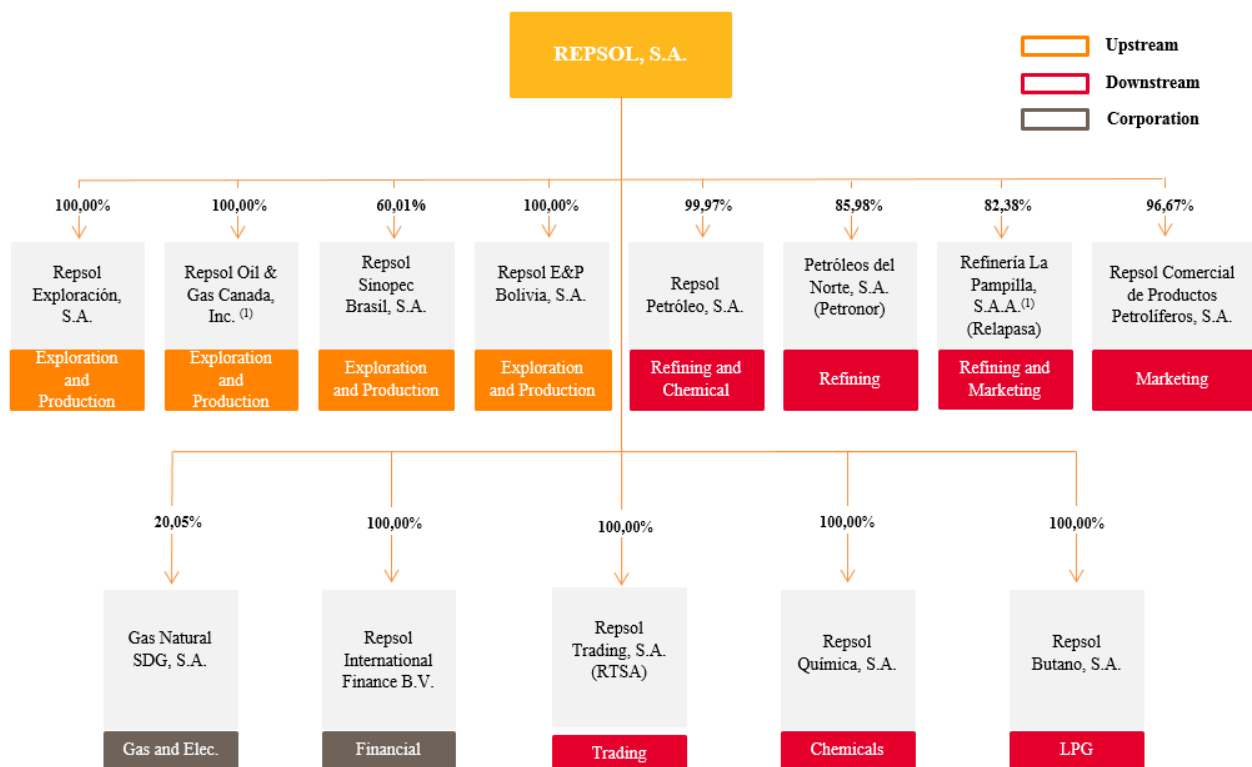


Our vision is to be a global company that seeks individual welfare and believes in the building of a better future through the development of intelligent energy to offer better energy solutions. This vision is embodied in the company's core **values**:

- *Integrity:* We care for the welfare of people, the company and the environment in which we operate, acting in accordance with the commitments we undertake.
- *Responsibility:* We achieve our goals while considering the overall impact of our decisions and actions on people, the environment and the planet we inhabit.
- *Flexibility:* Actively listening enables us to meet our goals in a fair and sustainable manner.
- *Transparency:* We work under the maxim that all our actions should be reported truthfully, clearly and demonstrably, based on the premise that information is a company asset that generates value by being shared.
- *Innovation:* We believe that the key to our competitiveness and progress lies in our ability to generate ideas and implement them in an environment of collective collaboration and continuous learning.

2.2. CORPORATE STRUCTURE

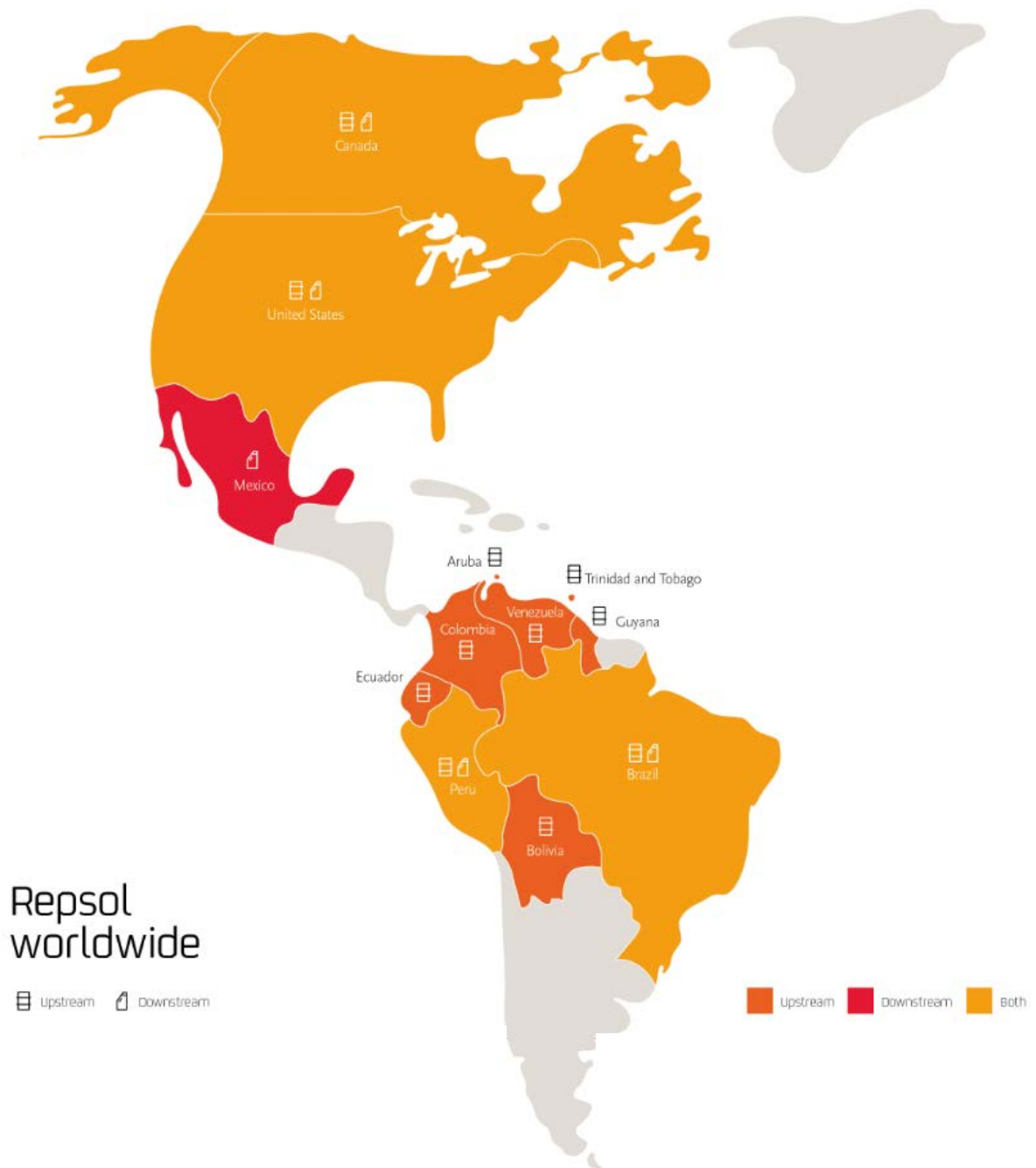
The **corporate structure** of the Repsol Group is shown below, in the form of the main companies making up the Group¹:



⁽¹⁾ Indirect ownership interests

¹ For further information on the main companies comprising the Repsol Group and the main changes during the year, see Appendix I and Ib of the 2016 consolidated financial statements.

Markets in which we operate



UPSTREAM

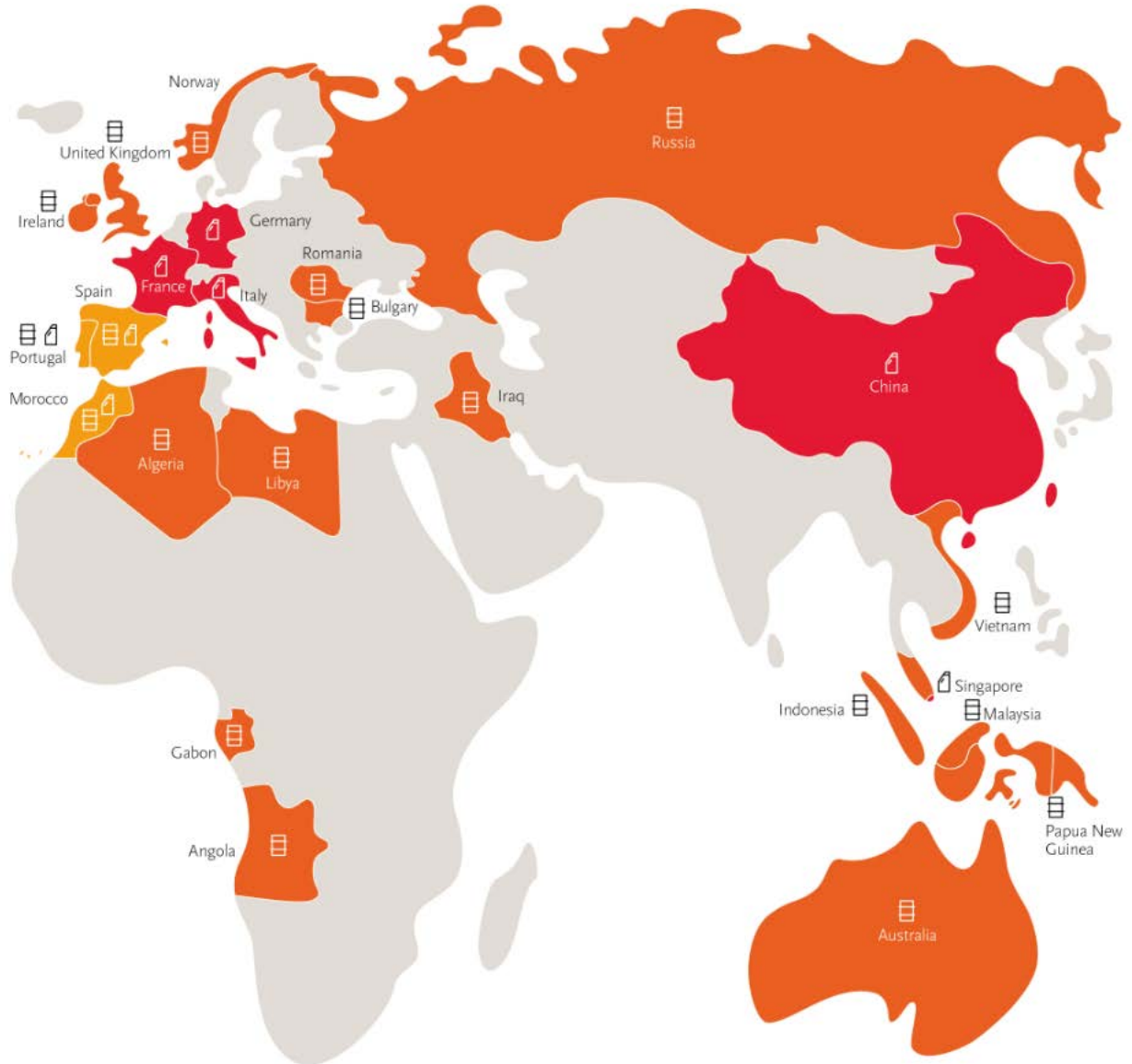
We are present in 490,894 km² of oil and gas exploration and production gross acreage in 30 countries, either directly or through our investees.

There have been around 45 discoveries with exploratory drilling over the past nine years, including eight of the major findings worldwide, according to IHS.

Repsol's hydrocarbon production in 2016 was estimated at an average of 690 Mboe/d, representing an increase of 23% on figures for 2015.

At year-end 2016, Repsol's net proven reserves amounted to 2,382 MMboe, of which 584 MMboe (25%) was crude oil, condensate and liquefied gases, and the rest, 1,798 MMboe (75%), natural gas.

Translation of a report originally issued in Spanish.
 In the event of a discrepancy, the Spanish language version prevails



DOWNSTREAM

Sales (Thousand Tn)	2016	2015	Refining capacity	Primary distillation (kbb/d)	Conversion index (%)
Oil products	48,048	47,605	Cartagena	220	76
Petrochemical products	2,892	2,822	A Coruña	120	66
LPG	1,747	2,260	Puertollano	150	66
			Tarragona	186	44
			Bilbao	220	63
			La Pampilla (Perú)	117	24
Service stations (no.)	2016		Petrochemical capacity (Thousand Tn)		
Spain	3,501		Basic		2,603
Portugal	453		Derivative		2,235
Peru	440				
Italy	321				

Repsol Refineries in Spain

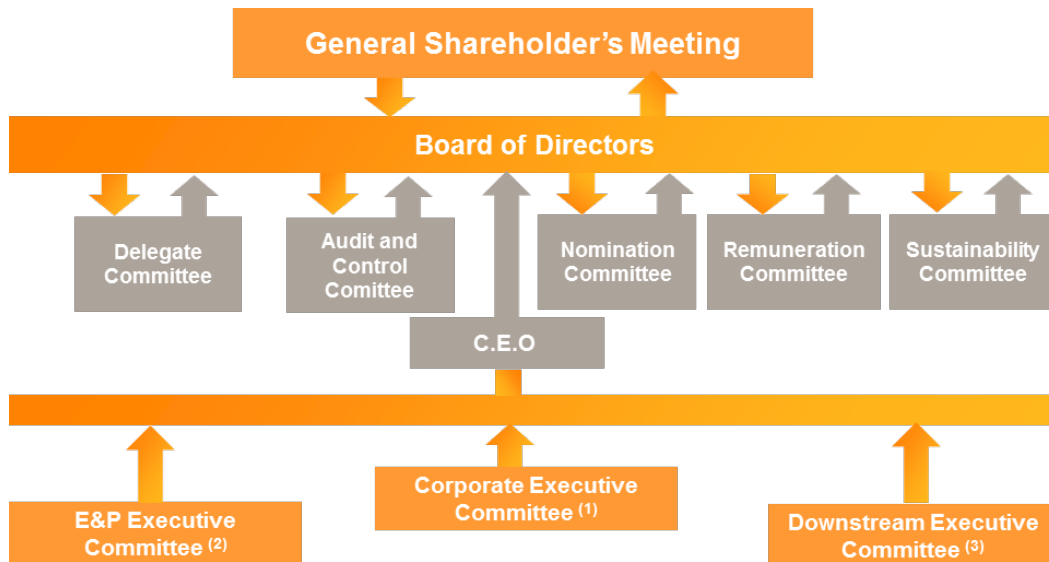


- Repsol refineries
- Repsol crude oil pipelines
- Repsol refined products pipeline

2.3. CORPORATE GOVERNANCE

Repsol's system of corporate governance, which was established in accordance with best national and international practice and standards, guides the structure, organization, and operation of its corporate bodies in the interests of the Company and of its shareholders, and is based on the principles of transparency, independence, and responsibility. For the internal regulations of the Repsol Group regarding corporate governance, see the website www.repsol.com.

The governance structure at Repsol adequately differentiates the Company's governance and management functions from its oversight, control, and strategy functions.



⁽¹⁾ Chaired by the Chief Executive Officer (CEO). Includes Corporate Executive Directors, Business Executive Directors, and Corporate Directors which report to the CEO. The Corporate Executive Committee oversees global strategies, company policies, and any other company-wide decisions.

⁽²⁾ Chaired by the Chief Executive Officer (CEO), and comprising the Executive Director of E&P, Executive Directors that report directly to the Executive Director of E&P, and Corporate Executive Directors and Corporate Directors that report directly to the CEO and the Corporate Economic and Tax Director. The E&P Executive Committee is responsible for high-level Upstream business decisions.

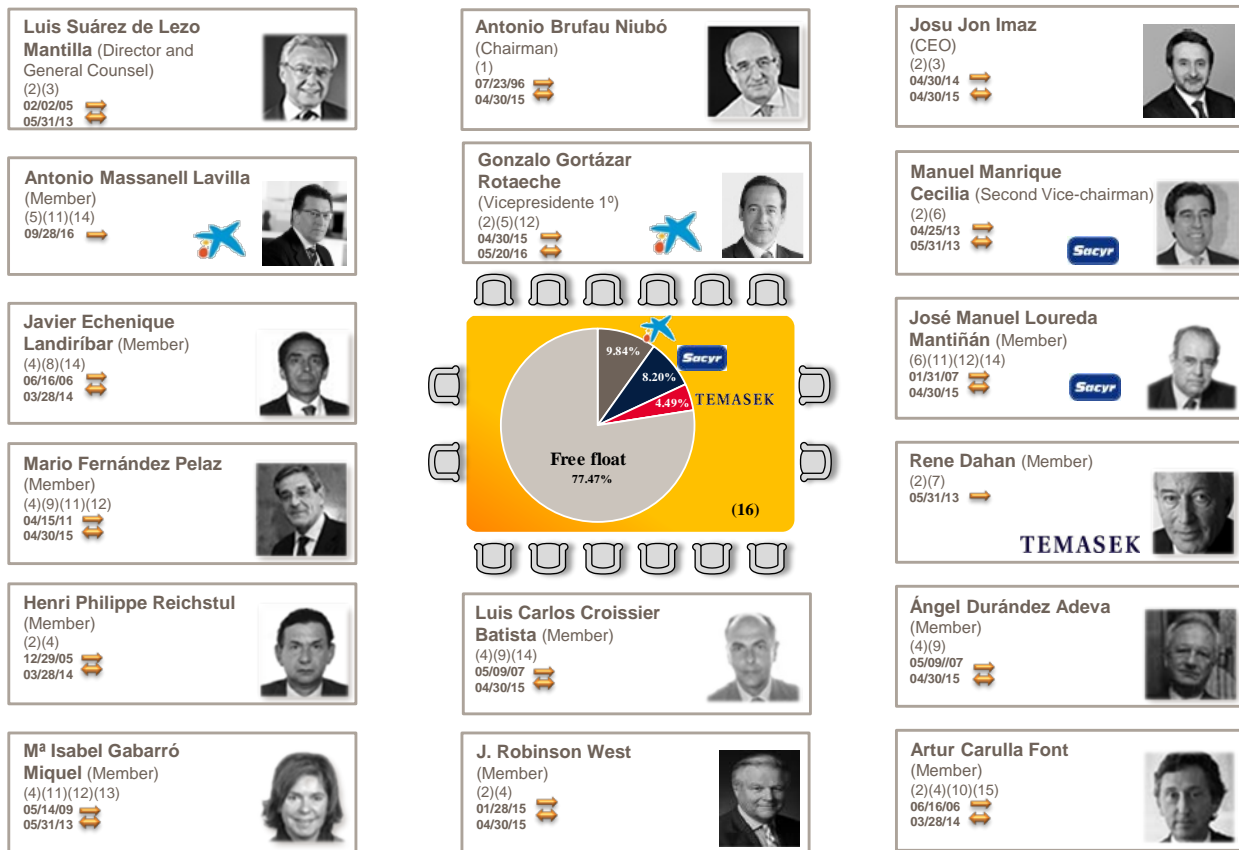
⁽³⁾ Chaired by the Chief Executive Officer (CEO), and comprising the Executive Director of Downstream, Executive Directors, and Executive Directors that report directly to the Downstream Executive Director, Corporate Executive Directors, and Corporate Directors reporting directly to the CEO and the Corporate Economic and Tax Director. The Downstream E&P Executive Committee is responsible for high-level Downstream business decisions.

The General Shareholders' Meeting is the sovereign corporate body through which shareholders intervene in the taking of essential decisions of the Company, with the Board of Directors, either directly or through its various Committees, responsible for the formulation of general policies, the strategy of the Company, and basic management directives, as well as general oversight and consideration of matters of special importance that are not reserved to General Shareholders' Meeting.

The composition of the Board of Directors and its committees at the date of approval of this document is on the following page. On September 21, 2016 Isidro Fainé Casas tendered his resignation as a member of the Board of Directors; on September 28, the Board of Directors resolved, proposed by CaixaBank, S.A., to appoint by cooptation Antonio Massanell Lavilla as an external proprietary director of the Company to fill the vacancy caused by the resignation of Mr. Fainé, and to appoint Gonzalo Gortázar Rotaèche as First Vice Chairman of the Board of Directors.

With respect to the company's management structure, over which the CEO presides, there are three management bodies with full responsibilities over their respective areas: the Corporate Executive Committee, the E&P Executive Committee and the Downstream Executive Committee.

Composition of the Board of Directors and its Committees:



→ Date of the first appointment as Member of the Board of Directors.
→ Date of the last appointment as Member of the Board of Directors.

Note: See the Annual Corporate Governance Report for more information on the General Meeting, the Board of Directors and its committees. Updated information related to the profile of each member of the Board of Directors members can be found at www.repsol.es/es_es/corporacion/accionistas-inversores/gobierno-corporativo/. For further information on the Director's remuneration, see "Remuneration Policy for the Directors", "Annual Report on the remuneration of Directors" and Note 27 "Remuneration of the Members of the Board of Directors and Executives" of the 2016 consolidated financial statements.

- (1) Chairman of the Delegate Committee.
- (2) Member of the Delegate Committee.
- (3) Executive Director.
- (4) Independent Non-Executive Director.
- (5) External Proprietary Director proposed by Caixabank, S.A.
- (6) External Proprietary Director proposed by Sacyr, S.A.
- (7) External Proprietary Director proposed by Temasek.
- (8) Chairman of the Audit and Control Committee.
- (9) Member of the Audit and Control Committee.
- (10) Chairman of the Nomination Committee and of the Remuneration Committee.
- (11) Member of the Nomination Committee.
- (12) Member of the Remuneration Committee.
- (13) Chairwoman of the Sustainability Committee.
- (14) Member of the Sustainability Committee.
- (15) Coordinating Director.
- (16) Percentage of share capital according to the latest information available at the date of this document. Information provided by *Compañía de Gestión de los Sistemas de Registro, Compensación y Liquidación de Valores, S.A.U.* (Iberclear), and the information submitted by the shareholders of the Company and to the National Securities Market Commission (CNMV for its abbreviation in Spanish).

2.4. ETHICS AND COMPLIANCE

The following events in ethics and compliance were significant in 2016:

New Code of Ethics and Business Conduct

On September 15, the new Code of Ethics and Business Conduct, approved by the Board of Directors, entered into force.

It is a global Code that applies to all Repsol directors, executive personnel and employees, regardless of the type of contract governing their professional or employment relationship. The Code aims to establish a framework of reference to understand and put into practice the behavior and expectations the company places in each employee in their day-to-day work, under the guidance of the values of the Group (integrity, responsibility, transparency, flexibility and innovation).

The Ethics Code is available on the corporate website, which is accessible at the following link: repsol.com/es_es/corporacion/responsabilidad-corporativa/nuestros-compromisos/etica-transparencia/codigo-etica-conducta/default.aspx.

New Repsol Ethics and Compliance Channel

The new Ethics and Compliance Channel was also launched on September 15. The channel allows employees or any third party to report, with absolute confidentiality, queries and possible breaches of the Code of Ethics and Business Conduct or the Crime Prevention Model.

The channel is accessible both by telephone and online in every country in which Repsol is present, in the local language, 24 hours a day, seven days a week, and it is managed by an external supplier (NAVEX Global).

The Ethics and Compliance Channel is accessible via: ethicscompliancechannel.repsol.com.

The availability of this channel to employees and third parties, aimed at facilitating as much as possible the reporting of concerns related to the Code of Ethics and Business Conduct, is a further illustration of the company's total commitment to fostering integrity and ethical conduct in all its activities.

Strengthening of Compliance Function

Repsol has procedures and a global framework in place to ensure the appropriateness and observance of all its obligations, whether internal or external, in every regulatory area. Nevertheless, the Company sought to strengthen the compliance function by appointing a Chief Compliance Officer and creating a new Compliance Process Division, the purpose of which centers on overseeing compliance risks, fostering a preventive approach to compliance, disseminating a broader compliance culture and reinforcing management of ethics and conduct risks.

Crime Prevention Model

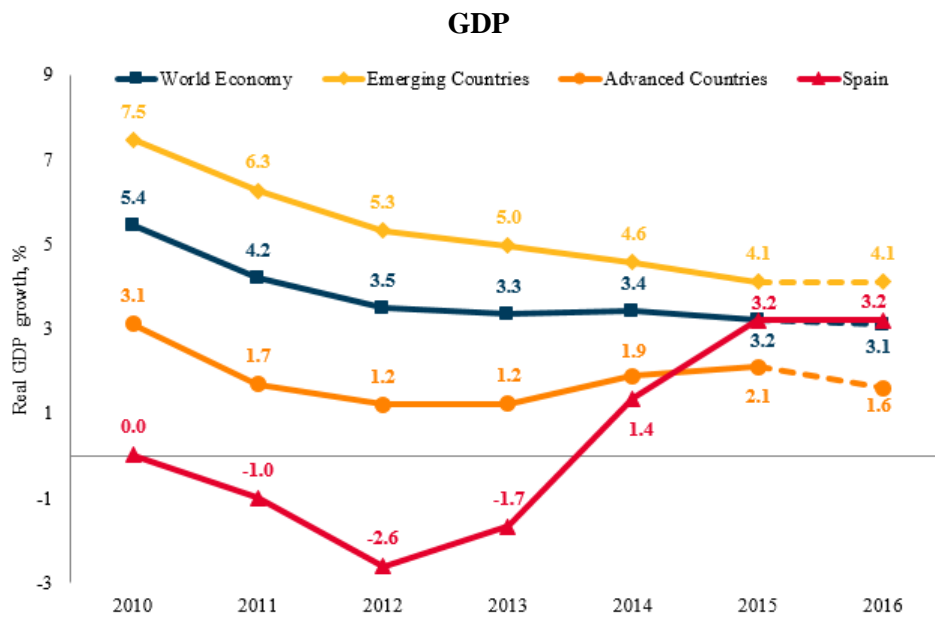
As a Spanish company, and in accordance with Spanish regulation on the criminal liability of legal persons, the Group has designated the Ethics and Compliance Committee as a Crime Prevention Body. The Company has a Crime Prevention Model and an internal investigations procedure through which the crime prevention model and response mechanisms for potentially unlawful conduct is structured, related to, inter alia, ethical matters attributable to a legal person, with the aim of preventing and, at least, minimizing the risk of occurrence of such conduct.

3. MACROECONOMIC ENVIRONMENT

RECENT ECONOMIC DEVELOPMENTS

In 2016, the **world economy** experienced moderate growth of 3.1%, according to the latest estimates, which is 0.1 percentage points (p.p.) below the 3.2% growth of 2015. However, greater dynamism has been seen in recent months.

The improvement was driven by the emerging economies, which have benefited from a stabilization of the economy of China, a certain degree of recovery in commodity prices and the return of capital inflows. Further, in the advanced economies, a trend can be seen towards a more expansive fiscal policy, which may help open the way to an upturn in activity.



Source: International Monetary Fund (IMF, WEO Update January 2017) and Repsol Economic Research Department.

In the **United States**, growth in the first half of 2016 was disappointing, as the sluggishness of industrial activity put a brake on rising investment, which was also hit by the adjustment of the energy sector. However, activity significantly picked up from the third quarter, when it grew by 3.5% on the back of strong private consumption. In this context, after the Federal Reserve began in December 2015 a process of interest rate normalization, following years of near-zero rates, a further hike was postponed, although an interest rate increase ultimately occurred in December 2016, prompted by the recent rise in dynamism.

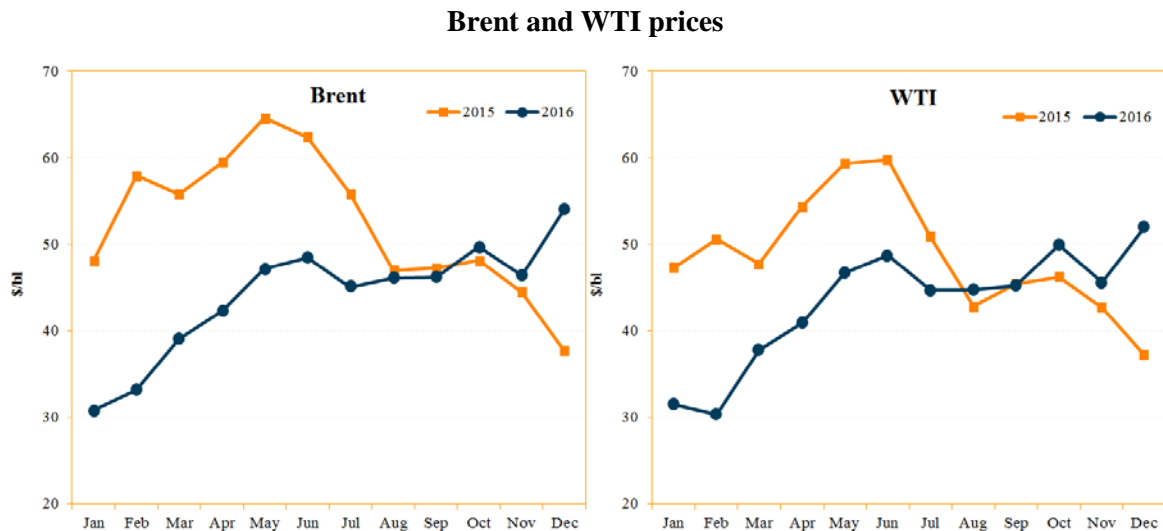
The **Eurozone** continued on the path towards recovery, with modest but stable growth for another year, at about 1.7% in 2016. Growth has been underpinned by lower energy prices, better financial conditions, a weaker euro driving exports, and the shift towards a more neutral fiscal stance. The strength of private consumption is now commensurate with the labor market recovery, and external demand is now making a positive contribution to growth. The absence of inflationary pressures led the European Central Bank (ECB) to extend, in early 2016, its stimulus measures by lowering to -0.4% the marginal deposit facility and extending its purchase program to corporate bonds. In its last meeting of the year, the ECB decided to extend the asset purchasing program until December 2017, while reducing the volume of purchases to a maximum of 60,000 million euros per month.

The **Spanish economy** continues to grow at a quicker pace than the Eurozone as a whole (in 3Q of 2016, it grew by 3.2% yoy). The improvements in the labor market and confidence are responsible for this growth differential. Although a certain exhaustion of some of the positive factors can be observed, which will lead to a gradual moderation, the outlook remains favorable. Economic growth in Spain shows a robust composition, with expansion not only in domestic consumption, but also in exports. In recent years, total volumes of exports of goods and services are showing growth above international trade levels.

DEVELOPMENTS IN ENERGY SECTOR

Crude oil - Brent

In 2016, the average Brent crude oil price decreased 16% in comparison with 2015 average of \$52.4 per barrel (\$/bbl) to \$43.7/bbl. The main cause of the fall in prices was the oversupply in the market, which caused by the actions of OPEC.



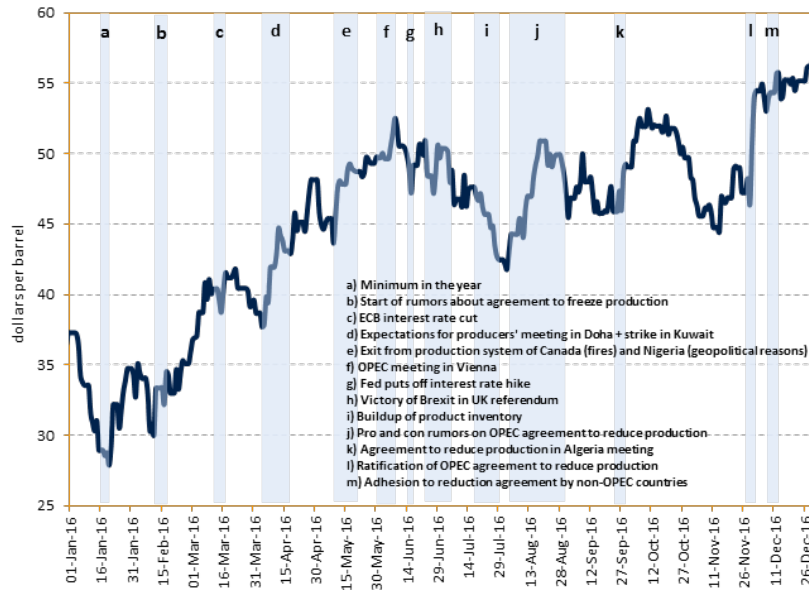
Source: Bloomberg and Repsol Economic Research Department.

On the demand side, 2016 saw healthy growth of 1.4%. Significant demand growth was seen in emerging countries like India, while there was also an upturn in demand in developed countries. On the supply side, one of the key factors was the substantial fall in non-OPEC oil output, which decreased by nearly a million barrels in the year to date. As a result, there is a significant difference between the pace of inventory buildup in 1Q of 2016 (more than a million bbl/d) and later in the year (200-500 thousand bbl/d).

In fact, there may not have been a build-up in inventories in the third quarter of 2016. However, the increase in OPEC production in the year – with Iran alone adding nearly a million barrels a day (aggregate of crude and natural gas liquids) in October compared to the previous year, along with the recovery in production in Libya and Nigeria starting in September, meant that an additional 200,000 barrels a day being added to the market in the third quarter. OPEC's decision on November 30, 2016 to abandon the policy of defending market share and to cut production in order to support prices provided a stimulus to rebalance the market and reduce inventories throughout 2017.

The following factors will also be important in the short and medium term: i) the response of US unconventional shale to the expected increase of prices, and ii) the effect of the drop in investment since 2015 on both OPEC and non-OPEC production.

Main milestones marking the price of Brent crude oil in 2016



Source: Bloomberg and Repsol Economic Research Department.

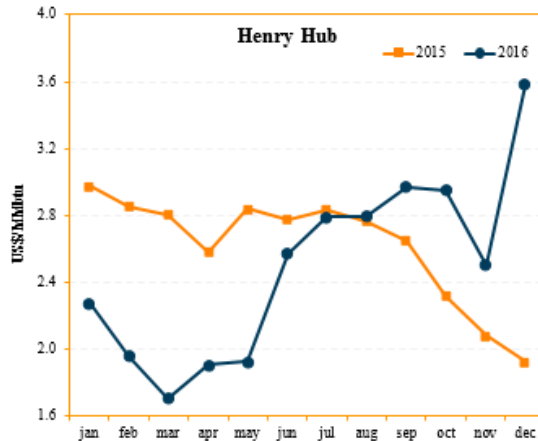
Natural Gas - Henry Hub

In 2016, US Henry Hub (HH) gas averaged \$2.5/MMBtu, 7% lower than in 2015. Generally, gas market fundamentals were weak in the first quarter of the year, leading HH in March to hit levels of \$1.49/MMBtu, which has not been seen since December 1998. This easing of fundamentals was characterized by an oversupply situation that became evident in the high level of inventories: At the end of March, inventories were nearly 70% above the 2015 level, and more than 50% above the average level of the past five years.

However, prices began to recover in the second quarter due to a gradual adjustment in the supply-demand equilibrium driven by the falling dry gas production in a context of healthy consumption, above all with respect to electricity demand. Hence, the US Energy Information Administration (EIA) estimates that 2016 was the first year in which gas-fired power generation exceeded coal-fired generation, thus accounting for 33% of total US generation compared to 30% for coal.

The price recovery, which was affected by temperature forecasts, led HH to post a yearly high of \$3.75/MMBtu on December 9, 2016.

Henry Hub prices



Source: Bloomberg and Repsol Economic Research Department

The equilibrium adjustment was also reflected in the level of inventories. A significant correction in inventories occurred in 2016: starting the year at 25% above the 2015 level, it ended up at 12% below the 2015 level in December. Injection volumes in 2016 were lower than the average of the past five years in the majority of weeks of the injection season. The injection season began in March (brought forward from its usual start in April) and lasted until November (it usually ends in October). The third withdrawal from storage during injection season since 2006 occurred on August 5.

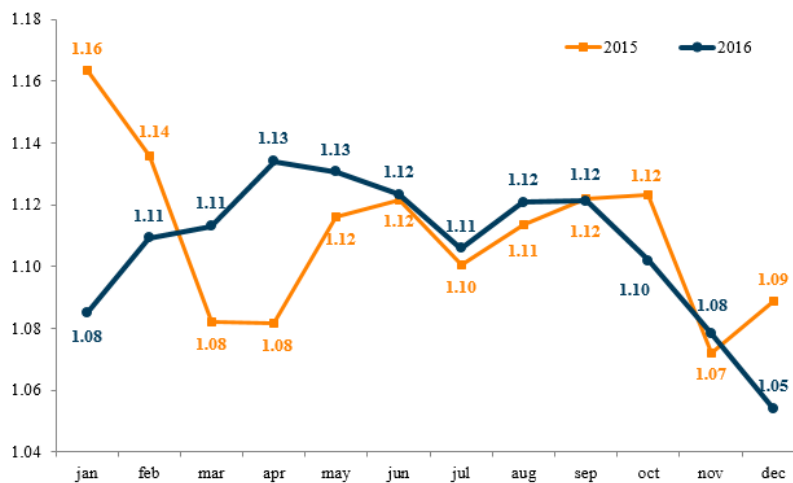
For 2017, the two aspects that may have the greatest effect on the price recovery are as follows: first, the evolution of domestic production; and, second, demand growth, both temperature-related and non-temperature related (industrial demand and exports).

EXCHANGE RATE

At the start of 2016, the euro reversed the slide against the dollar that had begun in the second half of 2014, shaped by the divergent monetary policy stances of the Federal Reserve and the European Central Bank. The backdrop of a slowdown in the US economy in the early part of the year and global uncertainty, which was greater at the start of the year, set back expectations of new rate hikes in the US. From the second quarter, the euro remained relatively stable, hovering at around 1.12.

At the same time, the depreciation of emerging currencies, which was significant in 2015 in a context of lower export prices and doubts about China, bottomed out at the start of 2016. From the second quarter, most currencies tended to appreciate, driven by a return of capital inflows and better perspectives.

EUR/USD exchange rate (monthly average)



Source: Bloomberg and Repsol Economic Research Department

The trend towards an appreciation of the dollar returned in late 2016. Following Donald Trump's victory in the US elections, a larger fiscal stimulus has been priced in. This could lead to higher inflation, as the US is already in a mature cyclical position, and it has a labor market with nearly full employment. Hence, the new economic environment could be characterized by a return to monetary divergence between the leading central banks.

4. RESULTS, FINANCIAL OVERVIEW AND SHAREHOLDER REMUNERATION¹

4.1. RESULTS

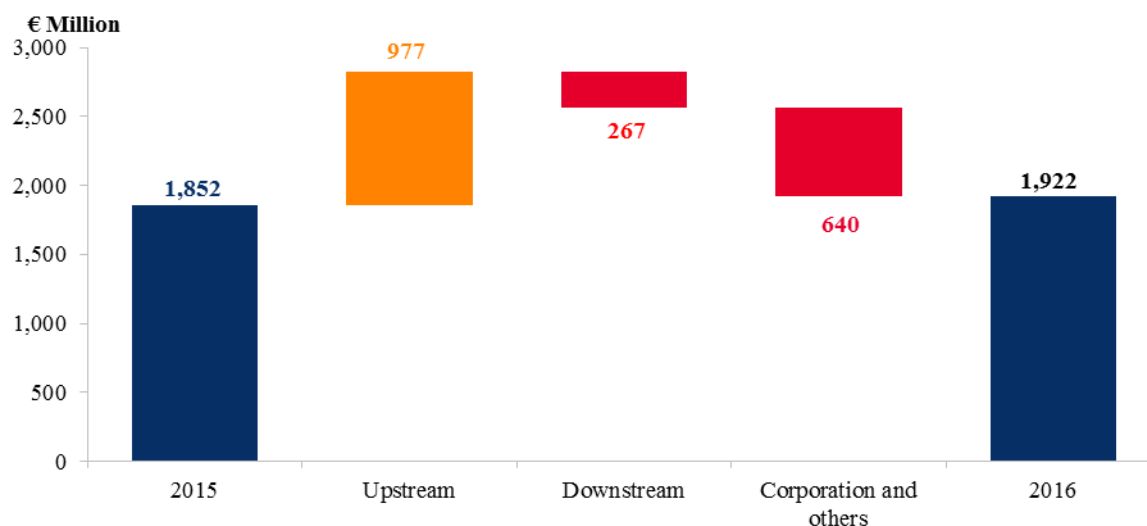
Million euros	2016	2015 ²	Variation
Upstream	52	(925)	977
Downstream	1,883	2,150	(267)
Corporation and others	(13)	627	(640)
Adjusted net income	1,922	1,852	70
Inventory effect	133	(459)	592
Special items	(319)	(2,791)	2,472
Net income	1,736	(1,398)	3,134

In spite of the significant recovery in 2016 of crude oil and gas prices from the lowest part of the cycle, the yearly results, compared to those of the previous year, are occurring in an environment featuring low crude and gas prices, tighter refining margins and adverse trends in the American Gas & Power domestic market.

Against this backdrop, the Company, relying on the resilience of its integrated model, has continued to pursue its projects aimed at the enhancement of operating efficiency, realization of synergies, reduction of investment and active management of the portfolio, all within the scope of its 2016-2020 Strategic Plan.

The **net adjusted income** of 2016 amounted to 1,922 million euros, 4% higher than in the same period of 2015. Highlights include the better income in Upstream which, in spite of the challenging price environment, continues on the recovery path (due to rising production and falling costs) which are partially offset by the lower income in Downstream and in Corporation.

Adjusted Net Income Variation 2016 vs. 2015



¹ All the information presented throughout this section, unless expressly stated to the contrary, was prepared in accordance with the Group's reporting model, which is described in Note 2.3 "Segment reporting" in the financial statements corresponding to December 31, 2016. See definitions, composition and reconciliation of figures in Appendix I, "Alternative Performance Measures".

² The comparative figures of 2015 presented throughout this section include the necessary modifications due to changes in the accounting policy in relation to capitalization of geology and geophysics costs (see Note 2.1 "Comparative information" of the 2016 consolidated financial statements).

EBITDA amounted to 5,226 million euros, compared to 4,416 million euros in the previous year, which represents a 18% increase, mainly driven by the contribution of assets from ROGCI (Upstream) and by the healthy performance of industrial businesses (Downstream). In 2016, optimization of investments continued, as did the divestment in non-core assets (approximately 3,650 million euros), thus generating value without foregoing opportunities for future growth.

Return on average capital employed (ROACE) amounted to 5.8%, which is 93% higher than in 2015, mainly due to the better results of the period.

Upstream

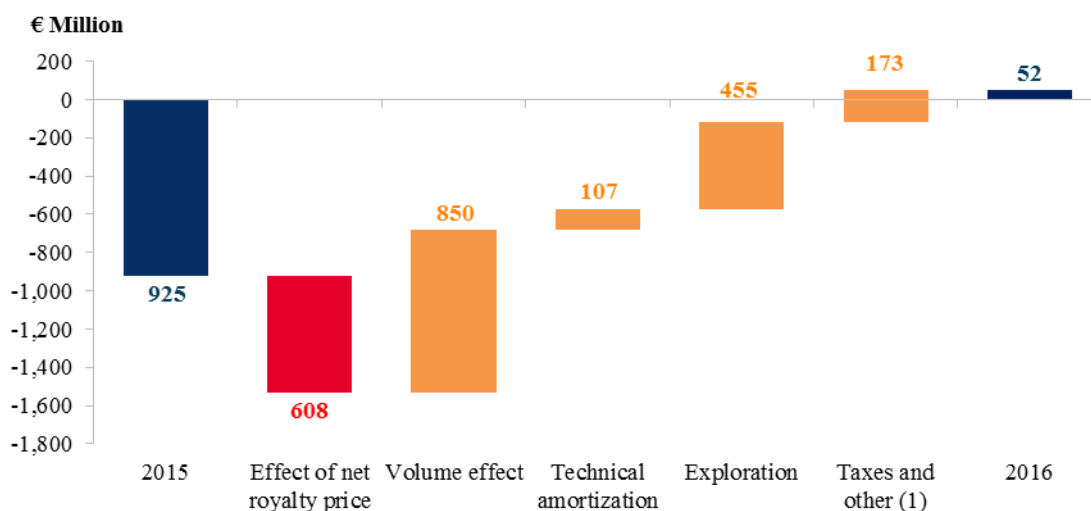
Total average output increased by 23%, up to an average in the year of 690 Mboe/d, mainly due to the contribution of ROGCI assets (113.4 Mboe/d up to May 8, 2016), the start of production of Cardon IV in Venezuela in the third quarter of 2015, the new wells in Sapinhoá Norte in Brazil, the addition of Gudrun, Norway, and the larger deliveries of gas in block 57 in Peru. These production gains, offset the lower output in the following countries: Trinidad and Tobago, due to maintenance stoppages and operational incidences in the fields; the United States resulting from the December 2015 sale of 26% of the stake in Eagle Ford and the natural decline of the fields, and in Colombia due to the lower demand for gas in Equion and the closure between March and October of the Akacias field because of low crude oil prices.

In the period, drilling was completed for 13 exploration wells and six appraisal wells. Of these, three had a positive results (all appraisal wells), 11 negative results (nine exploratory wells and two appraisal wells) and five remain under evaluation (four exploratory wells and one appraisal wells). In addition, one exploratory well in Rumania was under suspension and an appraisal well in Bolivia was in progress.

Crude oil and gas realization prices both decreased by 14%, respectively, as a result of the depressed international price environment.

The adjusted net income in Upstream in 2016 was 52 million euros, compared to -925 million euros in the same period of 2015. The positive effect of larger volumes sold, significant reductions in exploration expenses (due to fewer failed wells) and in operating costs (due to improved efficiency of operations) have offset the adverse impact of less income caused by low crude oil and gas prices. Amortization charges were also lower due mainly to the impairments recognized in the previous year. In comparing the results of 2016 and 2015, it must be noted that, ROGCI's businesses have been consolidated since its acquisition May 8, 2015.

Upstream Adjusted Net Income Variation 2016 vs. 2015



⁽¹⁾ Mainly includes income tax expense and the effect of the exchange rate.

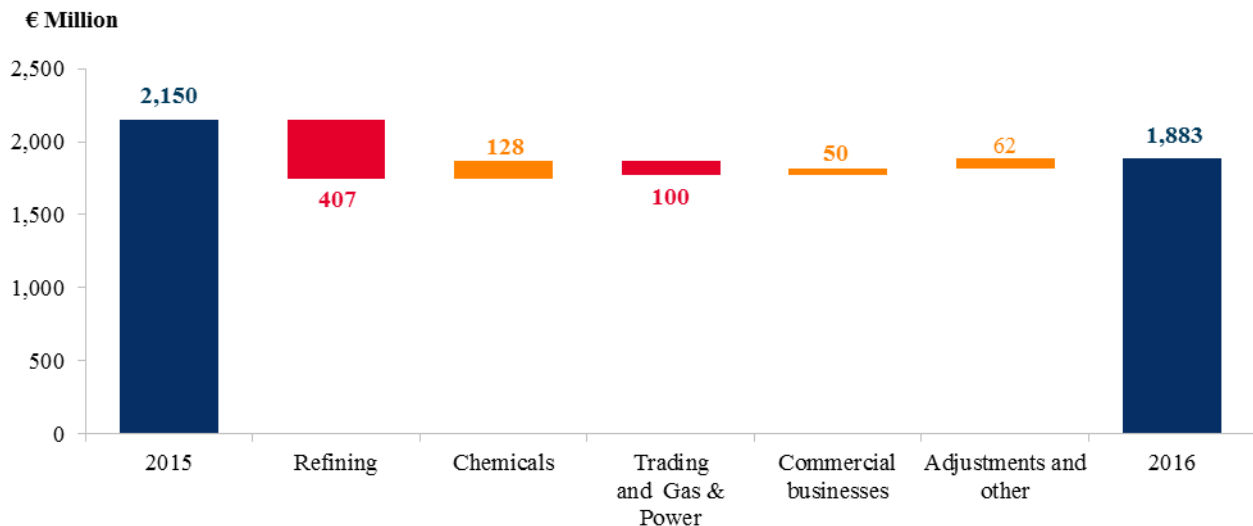
EBITDA amounted to 2,072 million euros, 29% higher than in 2015. Net investment (including assets from ROGCI) decreased by 83% from 2015, which mainly included the acquisition of ROGCI.

Gross investment was 80% lower than in 2015, which included the acquisition of ROGCI, mainly due to lower investment in assets under development in Latin America and North America, and in exploration in North America and Angola. Investment in development in 2016 was concentrated in Trinidad and Tobago, North America, Brazil, Algeria, the UK and Canada, and, in exploration, mainly in North America, Indonesia, Malaysia, Colombia, Bulgaria and Papua New Guinea.

Downstream

The adjusted net income in Downstream in 2016 was 1,883 million euros, 12% lower than in 2015. In spite of this decrease, which was as a result of the more adverse international environment of the Refining and Gas & Power businesses, note should be taken of the strong performance of Downstream businesses which, supported by the quality of our assets, have driven operating improvements and better active management of business opportunities. These results have kept Repsol in leadership positions among its European competitors in terms of margins of industrial and commercial businesses.

Downstream Adjusted Net Income Variation 2016 vs. 2015



Change in result due mainly to:

- In refining, lower income arising from a reduction of the production margin (due to weaknesses of the spreads of mid distillates and the tightening of the spreads of heavy crude oils) and lower distillation volumes were partially offset by lower energy costs and a tax reduction in Spain.
- Better income from higher commercial margins and growth in sales volumes in the chemicals business, driven by a favorable international environment, have been buoyed by lower stoppage-related costs and the reduction of Spanish taxes.
- The lower income from the Trading business and the adverse trend in the US Gas & Power business in spite of the higher volume marketed, due to the mark-to-market valuation of products and derivatives, affected by low gas prices.
- Better income in Commercial businesses, due to the lower costs in marketing, with sales volumes in service stations in Spain that are in line with those of the previous period, and due to the wider margins and an increase in volumes sold in Portugal. In addition, highlights included LPG revenue from indemnities for losses arising from the application of maximum commercial prices for regulated LPG containers in Spain.

EBITDA amounted to 3,367 million euros, which is 9% higher than in 2015. Net investment amounted to -496 million euros, including 587 million euros of divestment from piped gas assets in Spain, the LPG business of Peru and Ecuador, and the offshore wind power business in the United Kingdom.

Investment decreased by 21% from 2015 (mainly in Chemicals and commercial businesses), with the principal investments made in the Cartagena and Petronor refineries in Spain, and in the La Pampilla refinery in Peru for adaptation to new specifications arising from the commencement of operation of the diesel block (project RLP21).

Corporation and others

In 2016, net adjusted income amounted to -13 million euros, which represents a decrease from the 627 million euros in the same period of 2015. This change is due mainly to lower finance income, which in 2015 included extraordinary income from the exchange rate effect on dollar positions as a result of receipt of compensation for the expropriation of YPF. The operating costs of the Corporation decreased from 2015 as a result of efficiency gains and synergies with ROGCI realized during the period, in spite of the addition of ROGCI's operating costs in Calgary.

Net income

The effects of the following must be added to the adjusted net income (1,922 million euros):

- *Inventory effect*: 133 million euros, compared to -459 in the previous year, as a result of the increase in crude oil prices.
- *Special items*: -319 million euros after tax, mainly:
 - (i) Divestments (737 million euros): with results that were significantly better than those of the previous year, mainly due to the proceeds from the sale of piped gas assets in Spain (347 million euros), of 10% of Gas Natural Fenosa (226 million euros), of the offshore wind power business in the United Kingdom (101 million euros) and of the LPG business in Peru and Ecuador (81 million euros);
 - (ii) Workforce restructuring (-393 million euros): costs from workforce reduction as part of efficiency projects, including adjustments in the executive team;
 - (iii) Asset impairments and write-downs (-434 million euros): far lower than in 2015, when significant provisions were made to adjust assets' book value to the new low-price scenarios and that mainly affect assets in Venezuela (-192 million euros), Gas & Power North America (-112 million euros) and unconventional assets in North America (-90 million euros); and
 - (iv) Provisions and other (-229 million euros): mainly from the impacts of devaluation in Venezuela (-268 million euros), provisions for onerous contracts for the use of platforms and other E&P assets (-103 million euros), which were partially offset by the net changes in tax provisions (183 million euros).

Details of special items by item and segment are presented below:

<i>Million euros</i>	As of December 31							
	Upstream		Downstream		Corporation and others		TOTAL	
	2016	2015	2016	2015	2016	2015	2016	2015
Divestments	(26)	41	595	343	168	(20)	737	364
Workforce restructuring charges	(68)	(15)	(156)	(4)	(169)	(30)	(393)	(49)
Impairment	(280)	(2,762)	(154)	(312)	-	(45)	(434)	(3,119)
Provisions and other	(639)	(90)	(24)	(8)	434	111	(229)	13
TOTAL	(1,013)	(2,826)	261	19	433	16	(319)	(2,791)

As a result of the foregoing, net income in 2016 amounted to 1,736 million euros.

Divestments

Active management of the portfolio generated greater gains and significant cash flow from divestments:

- In Upstream:
 - The company Repsol E&P T&T Limited was sold to the Perenco group for 122 million euros, generating income before tax of 17 million euros, and
 - The 3.06% stake in the integrated LNG project in West Papua, called Tangguh LNG, was sold to BP for 286 million euros, thus generating income before tax of 21 million euros.
- In Downstream:
 - Sale of the piped gas business to Gas Natural Distribución and to Redexis Gas (as part of agreements reached in 2015) and to the EDP Group, Gas Extremadura and Madrileña Red de Gas, for a total amount in the year of 737 million euros, generating an income before tax of 464 million euros.
 - The offshore wind power business in the United Kingdom was sold to the Chinese group SDIC Power for 265 million euros, generating an income before tax of 101 million euros, and
 - The LPG business in Ecuador and Peru was sold to the international South American operator Abastible for 269 million euros, generating an income before tax gain of 129 million euros
- In Corporation and others, noteworthy was the sale of 10% of Gas Natural SDG, S.A. for 1,901 million euros to GIP III Canary 1 S.À.R.L, generating a pre-tax gain of 233 million euros.

Performance indicators

PERFORMANCE INDICATORS	2016	2015
Return on average capital employed (ROACE) (%)	5.8	3.0
Earnings per share (€share)	1.16	(0.96)

Cash flow

Cash flows during the period are detailed below. The figures demonstrate the businesses' capacity to generate free cash flow in the today's complex environment, due to the quality of the company's assets and the reductions in costs and investments.

	2016	2015
EBITDA	5,226	4,416
Changes in working capital	(777)	1,486
Dividends received ⁽¹⁾	383	279
Income tax receipts/(payments)	(283)	(246)
Other receipts/(payments) from operating activities	(717)	(422)
I. CASH FLOW FROM OPERATING ACTIVITIES	3,832	5,513
Payments on investments	(3,157)	(12,264)
Proceeds from divestments	3,648	733
II. CASH FLOW FROM INVESTMENTS ⁽²⁾	491	(11,531)
FREE CASH FLOW (I+II)	4,323	(6,018)
Dividend payments and remuneration from other equity instruments	(420)	(488)
Net interest and leasing	(657)	(716)
CASH GENERATED DURING THE PERIOD	3,246	(7,222)

⁽¹⁾ Mainly includes receipt of dividends from Gas Natural Fenosa.

⁽²⁾ In 2016, it includes cash flow generated by the divestments described in this section. In 2015, it includes the investment in ROGCI of 8,005 million euros.

The **operating cash flow**, supported by a 18% increase of EBITDA resulting from the better operating result of Upstream, amounted to 3,832 million euros. The decrease from 2015 (-30%) is due mainly to the increase in working capital resulting from the increase in the prices of crude oil and products, and the increase in accounts receivable for sales of crude oil and gas in Venezuela.

The **cash flow from investment activities** is positive (491 million euros), as a result of the significant savings in Upstream investment (2,343 million euros in 2016, compared to 11,175 million euros in 2015) and proceeds from divestments (3,648 million euros). It should be recalled that investment cash flow in 2015 included the payout for the purchase of Talisman (now ROGCI) of 8,005 million euros.

As a result, **free cash flow** amounted to 4,323 million euros, which represents a very strong improvement (10,341 million euros) on 2015. Following payment of finance costs (-657 million euros) and shareholder remuneration and similar (-420 million euros), the company generated cash flow of 3,246 million euros.

The increase in the cash generated by the businesses during the period, discipline in investments and liquidity obtained from divestments in the period enabled the Group to cover its net investment needs, make interest and dividend payments and reduce its net debt.

4.2. FINANCIAL OVERVIEW

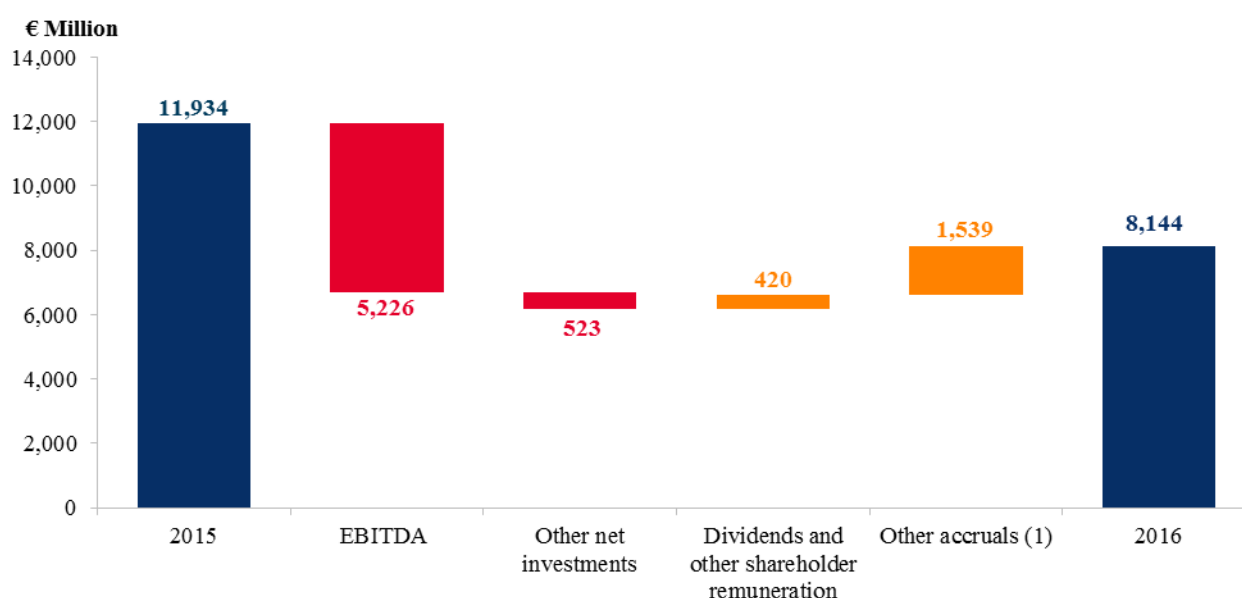
In 2016, in line with the Group's commitment to strengthening its financial position following the acquisition of ROGCI, various measures were implemented that enabled the Group to maintain its previous credit rating and to reduce its net debt by 32%.

In line with its policy of financial prudence and its commitment to maintaining a high degree of liquidity, the funds held in cash by the Group at the end of the year and available credit lines amply exceed the maturity dates of its short-term debt.

Leverage

The Group's net financial debt at the end of 2016 decreased to 8,144 million euros, compared to 11,934 million euros at December 31, 2015. The changes in net financial debt in 2016 are detailed below:

Change in Net debt



⁽¹⁾ This mainly includes payments for income tax, bond repurchases, net interest and changes in working capital.

The main financing transactions carried out in 2016^{1, 2} were as follows:

Bond issues

Date	Description	Issuer	Currency	Face value (million)	Rate	Issue price	Maturity
January	Issue ⁽¹⁾	Repsol International Finance B.V.	Euros	100	5.375%	96.298%	15 years
July	Issue ⁽¹⁾	Repsol International Finance B.V.	Euros	600	EUR 3m + 70 bp	100.00%	2 years
July	Issue ⁽¹⁾	Repsol International Finance B.V.	Euros	100	0.125%	100.00%	3 years

⁽¹⁾ Issue guaranteed by Repsol, S.A.

¹ For further information, see Note 15 "Financial liabilities" of the 2016 consolidated financial statements.

² RIF holds a Euro Commercial Paper (ECP), arranged on May 5, 2013 and guaranteed by Repsol, S.A., with a limit up to 2,000 million euros.

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Redemptions or bond repurchases ⁽²⁾

<u>Date</u>	<u>Description</u>	<u>Issuer</u>	<u>Currency</u>	<u>Nominal amount redeemed / Nominal amount repurchased (million)</u>	<u>Rate</u>
February	Redemption	Repsol International Finance, B.V.	Euros	850	5.13%
March	Redemption	ROGCI	Dollars	150	8.5%
⁽¹⁾	Repurchase	ROGCI	Dollars	631	⁽¹⁾

⁽¹⁾ In 2016 ROGCI carried out several bond repurchases for issues maturing in 2019, 2021, 2027, 2035, 2037, 2038 and 2042.

⁽²⁾ On February 16, 2017 a bond issued by RIF in February 2007 in the amount of 886 million euros, carrying a fixed annual coupon of 4.75%, matured.

The maturity dates for gross debt at year-end is as follows:

<u>Maturity of gross debt</u> ⁽¹⁾⁽²⁾	<u>Total (millions of euros)</u>	<u>Maturity of bonds</u> ⁽¹⁾				
		<u>Year</u>	<u>Currency</u>	<u>Nominal amount</u> ⁽³⁾	<u>%</u>	<u>Maturity</u>
2017	4,054	2017	€	886 ⁽³⁾	4.75	Feb-17
2018	1,652		£	250 ⁽⁴⁾	6.63	Dec-17
2019	1,728		€	750 ⁽³⁾	4.38	Feb-18
2020	1,951	2018	€	600	EUR 3m + 70 bp	Jul-18
2021	1,379	2019	€	1,000 ⁽⁵⁾	4.88	Feb-19
			\$	364 ⁽⁴⁾	7.75	Jun-19
			€	100	0.125	Jul-19
2022 and after	2,741	2020	€	1,200 ⁽³⁾	2.63	May-20
			€	600 ⁽³⁾	2.13	Dec-20
TOTAL	13,505	2021	\$	241 ⁽⁴⁾	3.75	Feb-21
			€	1,000 ⁽³⁾	3.63	Oct-21
			€	500 ⁽³⁾	2.25	Dec-26
			\$	55 ⁽⁴⁾	7.25	Oct-27
		2022 and subsequent years	€	100	5.375	Jan-31
			\$	89 ⁽⁴⁾	5.75	May-35
			\$	131 ⁽⁴⁾	5.85	Feb-37
			\$	119 ⁽⁴⁾	6.25	Feb-38
			\$	97 ⁽⁴⁾	5.50	May-42
			€	1,000 ⁽⁵⁾	4.50 ⁽⁶⁾	Mar-75

⁽¹⁾ Refers to bond issues outstanding at December 31, 2016. Does not include 1,000 million euros of perpetual subordinated bonds issued by Repsol International Finance, B.V (RIF) on March 25, 2015

⁽²⁾ Includes exchange rate derivatives and interest.

⁽³⁾ Issues of RIF under the “Euro 10,000,000,000 Guaranteed Euro Medium Term Note Program (EMTNs)” guaranteed by Repsol, S.A.

⁽⁴⁾ Issues placed through ROGCI under the scope of the “Universal Shelf Prospectus” program in the United States and the “Medium-Term Note Shelf Prospectus” program in Canada.

⁽⁵⁾ Subordinated bond maturing at 60 years issued by RIF and guaranteed by Repsol, S.A.

⁽⁶⁾ Coupon scheduled for reset on March 25, 2025 and March 25, 2045.

Financial prudence

Group liquidity, including committed and undrawn credit facilities, stood at 9,347 million euros at December 31, 2016, which is enough to cover its short-term debt maturities by a factor of 2.3. Repsol had undrawn credit facilities amounting to 4,429 million euros and 6,360 million euros at December 31, 2016 and 2015, respectively.

<u>INDICATORS OF FINANCIAL POSITION</u>	<u>2016</u>	<u>2015</u>
Net financial debt (million euros)	8,144	11,934
Net financial debt / EBITDA (x times)	1.6	2.7
Net financial debt / total capital employed (%)	20.7%	29.3%
Liquidity / Gross short-term debt (x times)	2.3	2.15
Debt interest / EBITDA (%)	8.2	10.0

For further information, see Note 16 “Financial risks” of the Group’s consolidated financial statements.

Credit rating

At the date of preparation of this document, the credit ratings assigned to Repsol, S.A. by ratings agencies are as follows:

TERM	STANDARD & POOR'S		MOODY'S		FITCH RATINGS	
	Repsol, S.A.	ROGCI	Repsol, S.A.	ROGCI	Repsol, S.A.	ROGCI
Long-term	BBB-	BBB-	Baa2	Baa3	BBB	BBB-
Short-term	A-3	A-3	P-2	P-3	F-3	F-3
Outlook	Negative	Negative	Negative	Negative	Negative	Negative
Last date of change	03/21/2016	03/21/2016	03/21/2016	03/21/2016	03/23/2016	03/23/2016

Treasury shares and own equity investments

In 2016 no significant transactions involving treasury shares or own equity investments were performed:

	<i>No. of shares</i>	<i>Million euros</i>	<i>% capital</i>
December 31, 2015	18,047,406		1,25%
Market purchases	21,693,728	254	1.45%
Market sales	(39,740,591)	(501)	2.66%
Other transactions	842,809	8	0.06%
December 31, 2016	94,185		0.01%

For further information, see Note 13 “Equity” of the 2016 consolidated financial statements.

Average payment period to suppliers

The average payment period to suppliers for the Group's Spanish companies was 27 days in 2016, which is far below the maximum 60-day limit stipulated by Law 15/2010, of July 5 (amended by final provision two of Law 31/2014), which establishes measures to combat late payment in commercial transactions. For further information, see Note 19 “Trade and other payables” of the 2016 consolidated financial statements.

4.3. SHAREHOLDER REMUNERATION

Repsol is committed to maintaining attractive returns for its shareholders, although it does not have a formal dividend distribution policy. Nonetheless, any shareholder remuneration to be distributed by Repsol, S.A. will depend on various factors, including the performance of its businesses and its operating results.

The remuneration received by shareholders in 2016 and 2015 under the “Repsol Flexible Dividend” program¹ is as follows:

- Remuneration of €0.96/share for 2015. This includes the amount of the irrevocable commitment to purchase free-of-charge allocation rights assumed by Repsol in the two capital increases concluded in January and July 2015 (€0.472 and €0.484 gross per right, respectively). In 2015, Repsol paid out a gross total of 488 million euros to shareholders and distributed 50,088,670 new shares, worth 814 million euros, to those shareholders opting to take their dividend in the form of new Company shares.
- Remuneration of €0.76/share for 2016. This includes the amount of the irrevocable commitment to purchase free-of-charge allocation rights assumed by Repsol in the two capital increases concluded in January and July 2016 (€0.466 and €0.292 gross per right, respectively). In 2016, Repsol paid out a gross total of 377 million euros to shareholders and distributed 65,283,041 new shares, worth 697 million euros, to those shareholders opting to take their dividend in the form of new Company shares.

In addition, in January 2017, under the “Repsol Flexible Dividend” program, replacing what would have been the interim dividend from 2016 profits, Repsol paid out 99 million euros in cash (0.335 euros gross per right) to those shareholders opting to sell their free-of-charge allocation rights back to the Company and delivered 30,760,751 shares, worth 392 million euros, to those opting to take their dividend in the form of new Company shares.

At the date of the approval of these consolidated financial statements, it is expected that the Company's Board of Directors submit a proposal to the next Annual General Meeting to continue the “Repsol Flexible Dividend” program, through the implementation of a capital increase with full charge to reserves from retained earnings, on the same dates as those on which the Company has traditionally paid the final dividend.

Our share price

The Repsol share price rose by 33% in 2016, which is significantly above the 2% decline in the Ibex-35 index and higher than the average increase of 30% of its European peers.

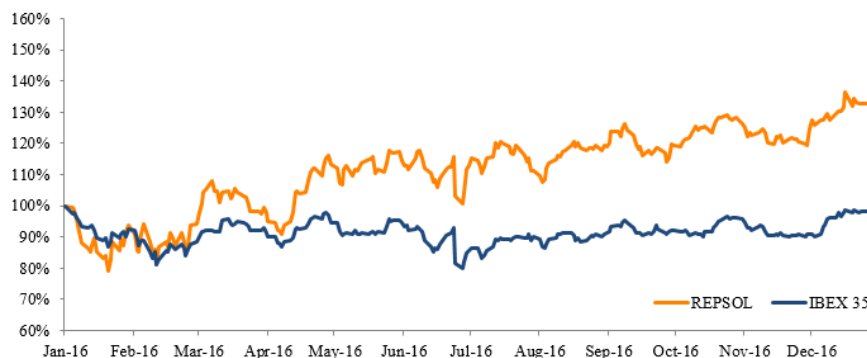
Although European markets were buoyed by the implementation of the European Central Bank's debt repurchase program (quantitative easing), macroeconomic factors mainly arising from the United Kingdom's referendum vote to leave the European Union reversed this trend toward the end of the first half of the year.

The second half of the year was characterized, however, by a recovery in the main European indexes, which were positively influenced by the recovery in hydrocarbon prices following the preliminary agreement reached by OPEC in its Algiers meeting in late September.

Despite the relative underperformance of the Ibex-35 compared to other European indexes, the Repsol share achieved the second-best performance for companies in the sector and closed the year 3% above the average attained by integrated European oil & gas companies. The recovery of crude oil prices, together with the progress made toward the targets of the Strategic Plan (in particular with regard to efficiency measures, the implementation of synergies and the divestment program) contributed to Repsol's positive stock market performance in 2016.

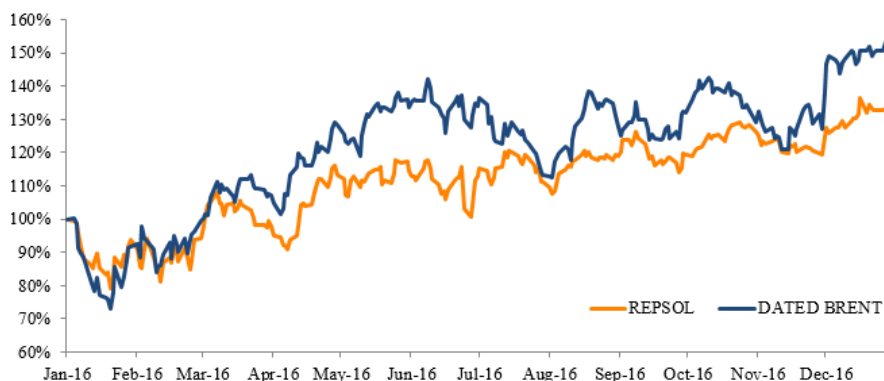
¹ In 2012, Repsol launched, for the first time, the shareholder remuneration program called "Repsol Flexible Dividend". The program is implemented through capital increases against voluntary reserves derived from retained earnings, with the irrevocable undertaking of Repsol, S.A. to purchase the resulting free share allotment rights at a guaranteed fixed price. This program allows shareholders the opportunity to receive their remuneration, in whole or in part, in new paid-up shares issued by the company or in cash by selling their free-of-charge share allotment rights, either on the market at the share trading price or to the company. For additional information on the total remuneration received by shareholders and the aforementioned capital increases issued under the “Repsol Flexible Dividend” program, see sections 13.1 “Share capital” and 13.4 “Dividends and shareholder remuneration” of Note 13 “Equity” of the 2016 consolidated financial statements.

Repsol share vs. the Ibex-35



Source: Bloomberg.

Repsol share vs. the dated Brent price



Source: Bloomberg.

The main stock market indicators of the Group in 2016 and 2015 are detailed below:

MAIN STOCK MARKET INDICATORS	2016	2015
Shareholder remuneration (€/share) ⁽¹⁾	0.76	0,96
Share price at year-end ⁽²⁾ (€)	13.42	10.12
Average price for the year (€)	11.29	14.77
Maximum price (€)	13.825	18.54
Minimum price (€)	8.023	9.96
Number of shares outstanding at year-end (million)	1,466	1,400
Market capitalization at year-end (million euros) ⁽³⁾	19,669	14,172
Price to earnings ratio (P/E) ⁽⁴⁾	11.6	(10.5)
Dividend yield paid ⁽⁵⁾ (%)	7.5	6.2
Book value per share ⁽⁶⁾ (€)	20.6	19.8

⁽¹⁾ Shareholder remuneration for each year includes the dividends paid and the fixed price guaranteed by Repsol for the free-of-charge allocation rights awarded under the "Repsol Flexible Dividend" program.

⁽²⁾ Share price at year-end in the Continuous Market of the Spanish stock exchanges.

⁽³⁾ Share price at year-end x Number of outstanding shares.

⁽⁴⁾ Share price at year-end / Earnings per share attributed to the parent company.

⁽⁵⁾ Remuneration per share for each year / Share price at end of previous year.

⁽⁶⁾ Equity attributed to the parent company/ Number of shares outstanding at year-end.

5. PERFORMANCE BY BUSINESS AREAS

5.1. UPSTREAM

5.1.1. SUMMARY INFORMATION

Our activities

Repsol's Upstream division carries out oil and natural gas exploration and production activities, and manages its project portfolio in order to create value, with a strong focus on efficiency and resilience and a firm commitment to safety and the environment, as detailed in the 2016-2020 Strategic Plan. Exploration and production activities are as follows:

- **New areas:** Identification of and entry into new projects (organic or inorganic growth).
- **Exploration:** Geological and geophysical activities and drilling of exploratory wells in the search for hydrocarbon resources.
- **Evaluation:** Drilling of appraisal wells, definition of the resources discovered and determination of their commercial viability.
- **Development:** Drilling of production wells and facilities for production of the reserves.
- **Production:** Commercialization of hydrocarbons.
- **Decommissioning:** Abandonment and reconditioning of all facilities in order to leave the area in the same environmental conditions as prior to the start of exploration and production activities.

Main figures

	2016	2015
Net undeveloped acreage (Km ²)	277,027	270,512
Net developed acreage (Km ²)	4,862	4,978
Reserves of crude oil, condensate and LPG (MMboe)	584	588
Natural gas reserves (MMboe)	1,798	1,785
Reserve replacement ratio (%)	103	509
Total production of liquids (kbbbl/d)	243	207
Total production of gas (Mboe/d)	447	352
Total production of hydrocarbons (Mboe/d)	690	559
Average crude oil price (\$/bbl)	39.0	45.2
Average gas price (\$/kscf)	2.4	2.8
Bonds, dry wells, and general and administration expenses ⁽¹⁾	443	818
Net investments ^{(2),(3)}	1,889	11,370

⁽¹⁾ Only costs directly assigned to exploration projects.

⁽²⁾ Gross investments minus divestments for the period.

⁽³⁾ Gross investments for the period broken down by geographical area as follows:

- Development (76% of total investment): Trinidad and Tobago (24%), US (14%), Brazil (13%), Algeria (10%), UK (10%), Canada (6%), Venezuela (5%) and Bolivia (5%).

- Exploration investments (18% of total investment): US. (13%), Indonesia (8%), Malaysia (8%), Colombia (8%), Bulgaria (7%), Papua New Guinea (7%), Angola (6%), Brazil (6%), Algeria (4%), Peru (3%), Bolivia (3%) and Russia (3%).

Our performance in 2016

Million euros	2016	2015	Var.
Operating income	(87)	(1,107)	1,020
Income tax	147	182	(35)
Investees and non-controlling interests	(8)	-	(8)
Adjusted net income ⁽¹⁾	52	(925)	977
Special items	(1,013)	(2,826)	1,813
Net income	(961)	(3,751)	2,790
Effective tax rate (%)	168	16	152
EBITDA	2,072	1,611	461

⁽¹⁾ Detail of adjusted net income by geographical area:

Geographical area	2016	2015	Variation
Europe, Africa and Brazil	167	(124)	291
South America	234	(27)	261
North America	9	(124)	133
Asia and Russia	(4)	19	(23)
Exploration and others	(354)	(669)	315
Adjusted net income	52	(925)	977

Main events of the period

- **Exploratory campaign:** in 2016 the drilling of 13 exploratory wells and 6 appraisal wells was concluded, 3 with positive results (all appraisal wells), 11 with negative results (9 exploratory and 2 appraisal) and 5 wells (4 exploratory and 1 appraisal) had yet to be evaluated at December 31. At year-end 2016, there was 1 exploratory well and 2 appraisal wells still ongoing. In addition, one exploratory well in Romania was under suspension.
- On January 1, 2016, the **divestment of 10% of license PL 148** in the **Brynhild field** in Norway was completed.
- In March, Repsol's status as **operator in North Slope, Alaska, in the US** was transferred to **Armstrong Oil and Gas**.

- In March, the MGR-7ST well began production in the Margarita-Huacaya field in Bolivia, which enabled it to reach production of 20 million cubic meters per day (Mm³/d) of gas, a volume which set a **new production record** for the asset.
- In March the **TIHS-2 appraisal drilling** in the **Sud-Est Illizi block in Algeria** was completed with **positive** results.
- The Colombian authorities (ANH) approved the **temporary suspension of production at the CPO-9 (Akacias) field** in Colombia for 6 months as a result of crude oil prices.
- In the first quarter, two **exploratory wells (Zoisit-1 and Baiduri-1)** in Malaysia were completed, both with **negative results**.
- On April 6, Repsol signed an agreement for a **10-year extension of production block PM3 CAA** in Malaysia. The contract was therefore extended until 2027.
- In April 14, it was announced that the **Perla 9 offshore well**, located in the Perla field in the Cardón IV block in Venezuela, **began production**. The Cardón IV block is 50% owned by Repsol and Eni.
- On April 18, an important discovery was made in Brazil with the **Gavea A1 appraisal well**, in offshore block BM-C-33 in the Campos basin in Brazil.
- In April, after the **transport capacity of the TGP gas pipeline was expanded, the gas delivered from block 57 to block 56** would now increase from 85 Mscfd to 160 Mscfd in Peru.
- In April **operations in the western area of the Eagle Ford production asset in the US were transferred to Statoil**, whereby this company is the operator of the entire asset as of that date.
- In April the **drilling of the P-7 appraisal well in Russia was completed, with positive results in the Karabasky field**.
- In May, the Cidade de Caraguatatuba FPSO (Floating Production Storage and Offloading) arrived in Brazil to begin production of the Lapa field in block BM-S-9 which was produced on December 19, 2016.
- On June 1, **operations in the Varg field in Norway were terminated**.
- In June, the **Strickland-2 exploratory well** in Papua New Guinea was completed **with negative results** and in December the **Strickland-1 exploratory well was also completed with negative results**.
- In the second quarter, the drilling and completion work on the Perla 10 production well in the Cardón IV block was concluded. The **Perla 10 well has a production capacity of more than 100 Mscfd**.
- In the second quarter, the **Sagari 8D development well was completed** and in the second half of the year the **Sagari 7D well** was completed as part of the development work to begin production of the Sagari discovery in block 57 (Peru).
- In the second quarter, the **WI-7 well in Shenzi** was completed in the deepwaters of the US Gulf of Mexico for the purpose of **increasing production levels** in the southern area of the field.
- In the second quarter, Repsol notified the US authorities that it would be **withdrawing from all exploratory blocks in the Chuckchi Sea** in which it held interests in Alaska.
- In Canada, as part of the project to develop the Duvernay asset, four new development wells were drilled in the first half of the year.
- On August 22, **the production platform was successfully removed from the Yme field** in Norwegian waters.
- In August 2016 the **P14N well entered into production** in the northern area of Sapinhoá in Brazil.
- On October 3, **production resumed** at the production area of the **CPO-9 (Akacias) field** in Colombia.
- On October 27, it was announced that the President of Bolivia and Repsol signed an agreement to **extend operations in Caipipendi for an additional 15 years**, until 2046.
- In October, an agreement was reached for the **sale of the Teak, Samaan, and Pouí (TSP) offshore assets** in Trinidad and Tobago. The transaction was concluded with Perenco in **December**.
- In October and November, the exploratory drilling at **Andalusit-1 (Malaysia) and at Payero-1 (Colombia)** was completed, respectively, with **negative results**.
- In Indonesia, effective December 2, **Repsol sold its ownership interest in the Wiriagar block to BP, including the 3.06% holding in the Tangguh LNG project**.
- In the last half of December, **production resumed in Libya** in several fields of block NC-115. On January 4, 2017, production was also resumed at the I/R field (Blocks NC-186 and NC-115).

5.1.2. UPSTREAM ACTIVITIES¹

Within the 2016-2020 Strategic Plan, Repsol is prioritizing management of its portfolio oriented toward value creation and resilience. Accordingly, it sold assets such as Teak, Samaan and Poui in Trinidad and Tobago, and Tangguh in Indonesia, along with other select divestments in Norway and the United Kingdom.

Exploration and development

At year-end 2016, Repsol was involved in oil and gas exploration and production blocks in 30 different countries, either directly or through its investees. The company was the operator in 24 of these countries.

The tables below display the information on Repsol's acreage and exploration and development activities by geographic area:

(km ²)	Developed and undeveloped acreage (2016)			
	Developed ⁽¹⁾		Undeveloped ⁽²⁾	
	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾
Europe	1,892	686	60,186	28,888
Latin America	3,131	715	132,471	57,207
North America	5,606	2,184	35,745	20,473
Africa	2,566	713	87,592	56,825
Asia and Oceania	1,402	564	160,302	113,633
Total	14,598	4,862	476,297	277,027

⁽¹⁾ Developed acreage is the area that may be assigned to production wells. The amounts shown belong to exploration acreage.

⁽²⁾ Undeveloped acreage covers the surface area in which no production wells have been drilled, or where wells have not been completed to the point of permitting oil and gas production in economically viable quantities, regardless of whether said area contains proven reserves. This also includes exploratory areas.

⁽³⁾ Gross acreage is the area where Repsol owns an interest.

⁽⁴⁾ Net acreage is the sum of the fractions of interest held in gross acreage.

	Acreage							
	Gross area (km ²) ⁽¹⁾				Net area (km ²) ⁽¹⁾			
	Development		Exploration		Development		Exploration	
	2016	2015	2016	2015	2016	2015	2016	2015
Europe	2,845	2,882	59,233	67,408	1,230	1,312	28,344	31,622
Latin America	16,883	18,119	118,719	127,435	4,736	5,884	53,186	56,539
North America	10,881	16,205	30,470	33,284	5,316	6,442	17,342	20,456
Africa	12,725	12,846	77,434	87,745	2,744	2,709	54,794	57,930
Asia and Oceania	11,280	10,328	150,423	136,387	4,638	4,319	109,560	88,277
Total	54,614	60,380	436,280	452,259	18,664	20,666	263,226	254,824

⁽¹⁾ Gross acreage is the area where Repsol owns a working interest. Net acreage is the sum of the gross area in each acreage according to their respective interests.

¹ The information in this section may be supplemented with "Information on hydrocarbon exploration and production activities" that the company publishes on an annual basis and which was disclosed in a significant event in the CNMV on the date of publication of this document and it is not audited information.

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A representative figure is the number of wells finished in the year (13 in total) compared to the 19 carried out in the previous year. In 2014, prior to the buyout of ROGCI, 24 wells were made. That is, in 2016, 32% fewer wells were completed than in 2015, and 46% fewer than in 2014, when the blocks incorporated through the purchase of ROGCI had not yet become available.

	Finished and ongoing exploratory wells ⁽¹⁾									
	Positive		Negative		Under evaluation		Total		Ongoing	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Europe	-	-	-	6	1	-	1	6	1	1
Latin America	-	-	2	2	-	1	2	3	1	1
North America	-	1	-	2	-	-	-	3	-	-
Africa	-	2	1	3	1	-	2	5	-	-
Asia and Oceania	-	1	6	-	2	1	8	2	-	2
Total	-	4	9	13	4	2	13	19	2	4

⁽¹⁾ This does not include appraisal wells: in 2016, six appraisal wells were completed, three with a positive result, two negative and one under evaluation, and two appraisal wells were ongoing. The Mashira 6X was declared negative although it was under way at 12.31.2016.

	Finished development wells							
	Positive		Negative		Under evaluation		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Europe	3	4	-	-	-	-	3	4
Latin America	52	62	2	3	7	5	61	70
North America	150	282	-	1	-	16	150	299
Africa	8	2	1	1	1	-	10	3
Asia and Oceania	46	43	-	3	-	-	46	46
Total	259	393	3	8	8	21	270	422

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

Production

The following table provides information on the **main production assets and assets under development** for Repsol's Upstream division by country at December 31, 2016, likewise stating the percentage that Repsol holds in each of them.

Country	Main blocks	% Repsol	Production (P) / Under Development (D)	Operated (O) /Not Operated (NO)	Liquids (L) / Gas (G)
Europe					
Norway	Operated assets (Blane, Varg, Gyda...)	40% to 100%	P	O	L-G
Norway	Non-operated assets (Brage, Gudrun...)	9.76% to 33.84%	P	NO	L-G
United Kingdom	RSRUK operating assets (Beatrice, Claymore, etc.)	15.55% to 51.00%	P	O	L-G
United Kingdom	RSRUK non-operated assets (Balmoral, Cawdor, etc.)	1.53% to 20.40%	P	NO	L-G
South America					
Trinidad and Tobago	BP TT	30.00%	P	NO	L-G
Brazil	BM-S-9 (Sapinhoá)	15.00%	P	NO	L-G
Brazil	BM-S-9 (Lapa)	15.00%	P / D	NO	L-G
Brazil	Albacora Leste	6.00%	P	NO	L-G
Bolivia	Margarita - Huacaya (Caipipendi)	37.50%	P	O	L-G
Bolivia	Sábalo	24.46%	P	NO	L-G
Bolivia	San Alberto	24.46%	P	NO	L-G
Colombia	Equion	15.19% to 24.50%	P	O	L-G
Colombia	CPO-9 Akacias	45.00%	P / D	NO	L
Colombia	Cravo Norte	5.63%	P	NO	L
Peru	Camisea (Blocks 56 and 88)	10.00%	P	NO	L-G
Peru	Block 57 (Kinteroni & Sagari)	53.84%	P / D	O	L-G
Venezuela	Cardón IV (Perla)	50.00%	P / D	O	L-G
Venezuela	Quiriquire	40.00%	P	O	L-G
Venezuela	Barua Motatan	40.00%	P	O	L
Venezuela	Carabobo	11.00%	P / D	O	L
North America					
United States	Shenzi	28.00%	P	NO	L-G
United States	Midcontinent	8.92%	P	NO	L-G
United States	Eagle Ford	35.32%	P	NO	L-G
United States	Marcellus	83.75%	P	O	G
Canada	Edson	78.82%	P	O	L-G
Canada	Wild River	44.44%	P	O	L-G
Canada	Chauvin	63.66% to 94.99%	P	O	L-G
Canada	Duvernay	87.88% to 100%	P	O	L-G
Africa					
Algeria	Tin Fouyé Tabankort (TFT)	30.00%	P	O	L-G
Algeria	Reggane	29.25%	D	O	G
Algeria	Greater MLN	35.00%	P	NO	L
Asia					
Russia	SK	49.00%	P	O	L-G
Russia	SNO	49.00%	P	O	L
Russia	TNO	49.00%	P	O	L
Indonesia	Corridor	36.00%	P	NO	L-G
Malaysia	PM3 CAA	41.44%	P	O	L-G
Malaysia	Kinabalu	60.00%	P	O	L
Vietnam	Block 15-2/01 (HST / HSD)	60.00%	P	O	L-G
Vietnam	Block 07/03 (CRD)	46.75%	D	O	L-G

Average net production was 23% higher than in 2015, up to 690 Mboe/d. The increase is mainly due to the contribution of assets incorporated in the purchase of ROGCI, whose production in 2015 was added from the effective date of purchase (May 8, 2015) and which in 2016 contributed the following throughout the year (the effect of the new assets acquired was an increase of total average production in year of 113.4 Mboe/d): the start of production of Cardon IV in Venezuela in the third quarter of 2015, the new wells in Sapinhoá Norte in Brazil, the addition of Gudrun, Norway, and the larger deliveries of gas in block 57 in Peru. These production gains offset the lower output of Trinidad and Tobago due to maintenance stoppages and operational incidences in the fields, of the United States due to the December 2015 sale of 26% of the stake in Eagle Ford and the natural decline of the fields, and of Colombia owing to the lower demand for gas in Equion and the closure between March and October of the Akacias field because of low crude oil prices.

	Total production of liquids and natural gas by geographical area						Production wells by geographical area			
	Liquids (MMb)		Natural gas (bcf)		Total (MMboe)		Oil		Gas	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Europe	16	9	17	7	19	10	236	231	3	2
Norway	7	3	16	6	10	4	60	67	1	-
United Kingdom	8	5	1	1	8	5	166	154	1	1
Rest of Europe	1	1	-	-	1	1	10	10	1	1
Latin America	39	35	486	419	125	110	953	1,130	216	233
Brazil	14	11	5	3	15	12	28	26	-	-
Colombia	5	4	11	10	7	6	395	414	-	17
Peru	5	4	68	52	17	13	-	-	27	27
Trinidad and Tobago	4	4	188	216	37	43	-	91	55	55
Venezuela	5	5	129	69	28	17	324	376	32	34
Rest of Latin America	6	7	85	69	21	19	206	223	102	100
North America	20	18	262	182	67	51	2,924	2,852	2,610	2,664
Canada	8	5	82	48	23	14	1,126	1,151	1,574	1,593
United States	12	13	180	134	44	37	1,798	1,701	1,036	1,071
Africa	3	3	16	16	6	5	128	86	79	78
Asia and Oceania	11	10	137	98	36	28	621	619	91	99
Indonesia	1	1	94	63	18	12	55	89	45	55
Malaysia	4	3	28	19	9	6	90	87	38	36
Russia	4	4	14	15	7	7	448	403	8	8
Rest of Asia and Oceania	2	2	1	1	2	3	28	40	-	-
Total	89	75	918	722	253	204	4,862	4,918	2,999	3,076

The average crude oil and gas realization prices by geographic area are as follows:

	2016		2015	
	Average crude oil price	Average gas price	Average crude oil price	Average gas price
	(\$/Bbl)	(\$/Boe)	(\$/Bbl)	(\$/Boe)
Europe	44.93	27.17	50.92	34.36
Latin America	37.12	10.99	44.02	14.53
North America	36.47	11.38	44.28	11.74
Africa	41.80	-	52.51	-
Asia and Oceania	39.35	25.08	42.99	27.50
Total	39.01	13.56	45.16	15.75

Reserves

At year-end 2016, Repsol's **proven reserves**, estimated in accordance with the criteria established by the SPE/WPC/AAPG/SPEE Petroleum Resources Management System (a system more commonly known by its acronym, SPE-PRMS, with SPE standing for the Society of Petroleum Engineers), amounted to 2,382 MMboe, of which 584 MMboe (25%) consisted of crude oil, condensates and liquefied gases, and the remaining 1,798 MMboe (75%) natural gas.

<i>Million barrels of crude oil equivalent</i>	Net proven reserves	
	2016	2015
Europe	62	51
South America	1,525	1,480
North America	496	520
Africa	125	128
Asia	174	194
Oceania	-	-
TOTAL	2,382	2,373

In 2016, the **development of these reserves** was positive, with the addition of a total of 261 MMboe, mainly from extensions and discoveries in Peru, the United States and Canada, revisions of previous estimates in Trinidad and Tobago, Peru and Venezuela, and the improved recovery in Brazil. In 2016 the Company achieved a reserve replacement ratio (calculated by dividing total additions of proven reserves in the period by production for the period) of 103% (509% in 2015 and 118% in 2014) for crude oil, condensates, LPG and natural gas (96% in crude oil, condensates and LPG, and 107% in natural gas), which is in line with the Company's long-term objectives, incorporating resources that significantly strengthen future growth. The organic reserve replacement ratio (not including purchases and sales) reached 124% for crude oil, condensates, LPG and natural gas combined (118% in crude oil, condensates and LPG, and 127% in natural gas).

5.1.3. NEW DEVELOPMENTS DURING THE PERIOD

NORTH AMERICA

United States

Repsol's presence in the US, one of the company's main strategic countries, focuses on unconventional hydrocarbon assets, such as the shale gas of **Marcellus** (dry gas), **Eagle Ford** (gas with associated liquids) and **Mississippian Lime** (gas with associated liquids). These assets, along with Shenzi, the important crude oil offshore asset, and the exploration portfolio with significant discoveries made in North Slope (Alaska), Buckskin and León, completes the project portfolio.

- In March 2016, Repsol transferred its status as operator in **North Slope**, Alaska, in the US to Armstrong Oil and Gas. In 2016, the company continued to move forward with the phase of requesting environmental permits for the future Nanushuk development project. Repsol has a 25% interest in this exploration area.
- In April 2016, operations in the western area of the **Eagle Ford** production asset in the US were transferred to Statoil, whereby this company became the operator of the entire asset. In December 2015, an agreement was reached with Statoil in which Repsol transferred 13% of its interest in Eagle Ford in exchange for a 15% interest in the Gudrun production field in Norway. Repsol now holds a 35.32% interest in the project.

- The WI-7 well in the **Shenzi** field (Repsol 28%) in the deepwater Gulf of Mexico was completed in the second quarter of 2016. This is an injection well to increase production levels in the southern area of the oil field.
- In the second quarter of 2016, Repsol delivered the necessary documentation to the US government in order to withdraw from all exploratory blocks in which it was invested in the **Chuckchi Sea** in Alaska.
- With regard to the important exploratory discoveries made in recent years in the **Gulf of Mexico**, in 2016 the company continued to define the future development plan for Buckskin with the aim of making the Final Investment Decision (FID) in 2017. At the end of 2016, an agreement was reached with the company Llog, under which it would take a 55% interest in the project (Repsol has a 22.5% interest). The León-2 appraisal well was completed in 2016, and the results are being evaluated to confirm the extension of the important discovery made in 2014 with the León drilling.
- In 2016 there was less development activity in the unconventional resource assets of **Midcontinent / Mississippian Lime**, as around 25 wells were drilled, which represents an 89% drop in activity compared to 2015.

Canada

In this strategic country in North America, the company's presence focuses on the unconventional hydrocarbon assets of **Greater Edson** (crude oil and gas production that is concentrated in Edson - Alberta- with an average investment of 75% and which covers 6 areas: Edson, Sundance/MedLodge, Ansell and Minehead in the south and Wild River and Bigstone in the north) and **Duvernay** (an underdeveloped area that is in the initial stage of development and appraisal, producing crude oil and gas, which is located in central-western Alberta. In 2016, drilling continued in order to appraise the southern area). The heavy crude oil production asset of **Chauvin**, located in Alberta/Saskatchewan, is also worthy of mention.

LATIN AMERICA

Brazil

The company boasts a significant and well-diversified asset portfolio in Brazil, through Repsol Sinopec Brasil (a company 60% owned by Repsol and 40% owned by Sinopec), which includes the **Sapinhoá** and **Albacora Leste** production fields and major discoveries made over recent years in blocks **BM-S-9** (Lapa, in production since December 2016) and **BM-C-33**.

- On April 18, Repsol Sinopec Brasil announced that a hydrocarbon column of 175 meters had been found in the Gavea A1 appraisal well, drilled in the ultra-deepwater block **BM-C-33** in the Campos basin in Brazil. Repsol Sinopec Brasil holds an interest in this project, in partnership with Statoil (operator) and Petrobras. The consortium also carried out drilling and tests in the Seat-2, PdA-A1 and PdA-A2 appraisal wells. The potential resources for the three discoveries are currently being appraised.
- Within the framework of the development project of another major discovery in block **BM-S-9**, Lapa, the Cidade de Caraguatatuba FPSO (Floating Production Storage and Offloading) arrived in the country in May 2016. On December 19, production began in the Lapa field with the first production well. In April 2017, a second production well is expected to enter into production.
- In August 2016, the P14N well entered into production in the northern area of **Sapinhoá** in block BM-S-9 in the deepwater of the pre-salt layer of the Santos basin, which enabled the company to reach the production plateau in this northern area in mid-September 2016 (150,000 Mboe/d 100%). Production began in the northern area of Sapinhoá through the use of the Cidade de Ilhabela FPSO in mid-November 2014. In the southern area of Sapinhoá, the production plateau of 120,000 barrels of crude oil was reached in 2014 through the Cidade de São Paulo FPSO.
- In January 2017, Petrobras and Repsol withdrew from block **BM-S-7- Piracucá** in the Santos marine basin.

Bolivia

- In the **Margarita-Huacaya** field, the MGR-7ST well began production of the H1B reservoir in March 2016, with the early commissioning of the collection pipeline. In March the field's production reached 20 million cubic meters per day (Mm³/d) of gas. Within the framework of the development plan to maintain the production plateau, in October 2016 drilling began on the Huacaya-2 development well, which is expected to begin production in the first half of 2017, once the production tests are carried out upon its completion and once construction of the service facilities is completed.
- The project is operated by Repsol (with a stake of 37.5%), alongside partners Shell/BG (37.5%) and PAE E&P (25%).
- On October 27, it was announced that the Chairman of Repsol, Antonio Brufau, and the President of Bolivia, Evo Morales, entered into an agreement to expand operations at Caipipendi (the location of the Margarita-Huacaya field) for an additional 15 years. The contract was therefore extended until 2046. The new plans include the execution of an exploration, development and production program in Boyuy and Boicobo Sur, to the south and north of Caipipendi.

Peru

- In April 2016, once the transmission capacity of the TGP gas pipeline was expanded from 1,230 million cubic feet per day (Mscfd) to 1,540 Mscfd, the gas delivered from **block 57 to block 56** would be increased from 85 Mscfd to 160 Mscfd. The gas of block 57 is allocated in full to exportation along with the gas of block 56. Block 57 is located in the Ucayali-Madre de Dios basin, one of the most prolific gas areas of Peru, in which Repsol is the operator with a 53.84% interest.
- In 2016, within the framework of the development program and the entry into production of the Sagari discovery in block 57, the Sagari 8D and the Sagari 7D development wells were completed. The campaign is expected to be completed in 2017 with the completion of the **Sagari 4X** well (the discovery well). In September 2016, the company was awarded a contract for the construction of surface facilities and evacuation pipelines.
- The other major discovery in block 57, **Kinteroni**, entered into production in March 2014. The compression project of block 57 was approved in 2016.
- The **Mashira-6X** well was declared **negative** following the results that became known to date, although it was technically under final drilling at December 31, 2016.

Venezuela

In April 2016, the Perla 9 offshore well, located in the Perla field in the Cardón IV block, began production. During the second quarter of the year, the drilling was completed on another production well, Perla 10, in order for the well to enter into production with a capacity of more than 100 Mscfd. As of today's date there are 6 production wells in the field. Average production in 2016 remained at around 500 Mscfd. In the next phase of development, it is estimated that production may reach around 800 Mscfd, with a possible intermediate phase of 600 Mscfd. The **Cardón IV** block is 50% owned by Repsol and Eni, and production began at this giant gas field in July 2015.

Trinidad and Tobago

- In October 2016, it was announced that an agreement had been reached with Perenco for the sale of Repsol E&P T&T, which includes the **Teak, Samaan, and Pouï (TSP)** offshore assets, where Repsol was the operator with a 70% interest. The sale was completed in December 2016 after obtaining all required authorizations (for more information on these transactions, see the Divestments heading of section 4.1).
- In 2016, production at the **BPTT** offshore fields operated by BP (70% interest), in which Repsol held the remaining 30% interest, was partially affected by the shutdowns and maintenance work carried out at the fields envisaged in the annual work plans for the year.
- In 2016, the work continued at BPTT to increase the production of the fields as of 2017 (Juniper project, Onshore compression, drilling campaign at Amherstia, Galeota expansion project).

Colombia

- Production in the early phase (begun in November 2010) of the **CPO-9** field in Columbia resumed on October 3, 2016. In the first half of 2016, the Colombian authorities (ANH) approved the temporary suspension of production for 6 months starting in March 2016 as a result of crude oil prices. The well drilling plan was moved to 2017. Repsol holds a 45% interest in block CPO-9 operated by Ecopetrol, which in 2014 announced the hydrocarbon discovery of the Nueva Esperanza-1 exploratory well, and where the important Akacias field is in the preliminary development phase. In 2016 work was carried out at the Akacias field in order to define the development plan for the purpose of making the final investment decision (FID) in 2017.
- During the first quarter of 2016, the Bayonero-01 exploratory well in the **Chipirón block** was completed with negative results and in November the Payero-1 exploratory well also yielded negative results.

AFRICA

Algeria

- In 2016, the work to develop the important **Reggane Nord** gas project continued with the construction of surface facilities and the drilling of wells with three active drilling towers in 2016. The development work is expected to last for 36 months, and gas production is expected to begin at the end of 2017, with a 100% production target of 8 million m³ of gas per day.

This gas project in the Algerian Sahara includes the development of six fields (Reggane, Kahlouche, South Kahlouche, Sali, Tiouliline and Southeast Azrafil) in the Reggane Basin. Repsol holds a 29.25% stake in the consortium that is to develop the project, alongside the Algerian state-owned company Sonatrach (40%), Germany's Dea AG (19.5%), and Edison of Italy (11.25%).

- In the first half of 2016, the second exploratory drilling and appraisal campaign was completed at the **Sud-Est Illizi** exploratory block in Algeria with the TAOR-1 exploratory well (under assessment) and the TIHS-2 appraisal well (positive).

Repsol is the operator of the block with a 52.5% interest. In a future development and production phase, the Algerian state-owned company Sonatrach would have a 51% interest and the rest of the consortium would hold a 49% stake in the aforementioned proportions.

The successful exploratory activity carried out since 2012 in this block (5 exploratory discoveries between 2012 and 2016 and 4 appraisal wells) confirm the high potential of the Sud-Est Illizi block.

Libya

- Production was suspended in 2016 until it was resumed in mid-December. Production was resumed on December 20 at field A of block **NC-115**, on December 21 at field M, on December 26 at field H and on December 28 in the north of field H. On January 4, 2017, production was also resumed at field I/R (blocks NC-186 and NC-115).

Angola

- The Ohanga-1 exploratory well at block 35 (operated by ENI) was completed in June 2016 with negative results. After this result, Repsol withdrew from **Blocks 35 and 37**. All obligations of the initial exploratory phase have been met and the remaining potential is considered to involve a high level of risk. A 2-year extension was obtained for block 22, during which geological and geophysical work will be carried out in order to evaluate the possibility of drilling an exploratory well in the future.

EUROPE

Spain

- In the first half of 2016, Repsol officially withdrew from the **Canarias 1-9** blocks, in which it was the operator with a 50% interest.
- In 2016, production activities continued as usual in Spain in accordance with the most rigorous safety standards.

Norway

- In the first half of 2016, Repsol sold the 10% interest in license PL 148, the **Brynhild** field, operated by Lundin, to CapeOmega, effective as of January 1, 2016.
- On June 1, 2016, operations of the **Varg** field were terminated. In the second half of 2016, the FPSO operated by Teekay for Varg's production withdrew from the field. This work is carried out within the framework of the initial phase of the Varg dismantling project.
- On August 22, the **MOPU Yme** (offshore production platform for the Yme field) was successfully removed from its location in Norwegian waters. A single lift of 13,500 tons of surface elements was carried out using, for the first time, the Pioneering Spirit, which is the world's largest heavy-lift vessel. In order to cut the platform's pillars, a series of tools specifically designed for this purpose were used, which were placed in the pillars and operated remotely from the ship. The removal work was completed without any incidents. Never before has a 13,500-ton structure been removed from the sea, with the unit safely lifted and transported to the coast for dismantling.
- In 2016, the **Gudrun** field (where Repsol holds a 15% stake under the December 2015 agreement with Statoil, in exchange for a 13% stake in Eagle Ford in the United States) surpassed production forecasts, at levels around 50% of Repsol's total net production in the country (14.4 Mboe/d on average for the year of Gudrun vs. 28.1 Mboe/d of total Repsol production in Norway).

United Kingdom

- In 2016, within the framework of the project for redeveloping the **MonArb** production area, progress was made in line with initial plans, with the aim of increasing current production in the second quarter of 2017. On October 20, 2016, current production of MonArb was resumed following the performance of scheduled maintenance work.

ASIA AND OCEANIA

Indonesia

- Effective December 2, Repsol sold its ownership interest in the Wiriagar block to BP, which included the 3.06% holding in the **Tanggung LNG** project (for further information, see the Divestments heading of section 4.1).
- In August and October 2016, two exploratory wells in the **Ogan Komering**, in which Repsol has a 50% interest and that are operated by Pertamina, block were completed. The Jantung Baru-1X and North Meraksa-1X wells are still under evaluation.
- In September the Kukulambar-2X exploratory well, in the **Sakakemang** block, was completed and, after the appraisal work was carried out, the results were determined to be negative in November.

Malaysia

- In January and February 2016, two exploratory wells (Zoisit-1 and Baiduri-1) in Malaysia in marine block **SB-310** were completed, both with negative results. In addition, in October the Andalusit-1 exploratory well in this same block SB-310 was also completed with negative results.
- On April 6, Repsol entered into an agreement with Petroliam Nasional Berhad (Petronas) and with Vietnam Oil and Gas Group (PetroVietnam) for a 10-year extension of production block **PM3 CAA** PSC (Production Sharing Contract). After agreeing to the extension, Repsol and Petronas will hold a 35% interest each (Repsol's interest was 41.44% at December 31, 2016) and PetroVietnam will hold the remaining 30%. Repsol will continue to operate block PM-3 CAA until the end of the extension agreement in 2027. The block, together with the related production facilities, is located in Malaysia and Vietnam.

Progress was made in 2016 in the sixth phase of development of block PM-3 CAA, the Bunga Pakma project, and production is expected to begin in 2017.

Russia

- In April the P-7 appraisal well was successfully completed in the **Karabashsky 2** exploratory block, located in the West Siberia basin, where Repsol is the operator through the wholly-owned company Eurotek-Yugra.
- In the second half of 2016, the company withdrew from the **Kumolsky** exploratory block, given that it lies an extremely remote area with scant potential.

Vietnam

- In 2016 the company continued with the final phase of determining the details of the Development Plan for the important exploratory discovery of **Ca Rong Do** (CRD) and the marketing of the gas to be produced. The CRD discovery is located in offshore block 07/03, in which Repsol has a 46.75% interest. The final investment decision (FID) regarding the development and entry into production of this important discovery is expected to be taken in the first half of 2017.

Region of Iraqi Kurdistan

- In 2016 the work continued in the phase of defining the project, and analyzing and evaluating viable development alternatives in the **Kurdamir and Topkhana** development blocks, with a 40% and 80% interest, respectively.
- In the first half of 2016, the company withdrew from the **Piramagrun** and **QalaDze** exploratory blocks operated by Repsol with a 50% interest.

Australia and Papua New Guinea

- After obtaining the necessary official authorizations, the agreement reached in September 2015 with the company West Side for the sale of Repsol's interest in the **Laminaria and Corallina** fields took effect in April 2016.
- After production ended in December 2015 in the **Kitan** block, the company began the initial phase of abandonment by withdrawing from the field the FPSO that had been used for production in March 2016. The operator ENI estimates that the second and final phase of the withdrawal will take place in 2018.
- In June 2016, the Strickland-2 exploratory well in **Papua New Guinea** was completed with negative results and in December the Strickland-1 exploratory well was also completed with negative results.

5.2. DOWNSTREAM

5.2.1. SUMMARY INFORMATION

Our activities

The Repsol Group's Downstream division covers the supply and trading of crude oil and other products, oil refining, marketing of oil products, and the production and marketing of chemicals. These activities are performed through five divisions:

- **Refining:** production of fuel and other oil-derived products.
- **Marketing:** marketing and sale of the Company's oil products through its network of service stations and other sales channels.
- **Trading and Gas & Power:** transport and supply of crude oil and products to the refining system, marketing of crude oil and products outside the system, regasification of liquefied natural gas, marketing and trading of natural gas in North America and the supply of natural gas in Spain.
- **Chemicals:** the production and sale of a wide variety of products, ranging from basic petrochemicals to derivatives.
- **LPG:** production, distribution, wholesaling and retailing of LPG.

Main figures

	2016	2015
Refining capacity (kbb/d)	1,013	998
Europe (including the stake in ASES)	896	896
Rest of the world	117	102
Conversion ratio (%)	59	59
Processed crude oil (million t)	43.2	43.3
Europe	39.4	39.8
Rest of the world	3.8	3.5
Refining margin indicator (\$/Bbl)		
Spain	6.3	8.5
Peru	3.1	7.0
Number of service stations	4,715	4,716
Europe	4,275	4,310
Rest of the world	440	406
Oil product sales (kt)	48,048	47,605
Europe	42,787	43,019
Rest of the world	5,261	4,586
Petrochemical product sales (kt)	2,892	2,822
Europe	2,428	2,396
Rest of the world	464	426
LPG sales (kt)	1,747	2,260
Europe	1,261	1,285
Rest of the world	486	975
Gas sales in North America (Tbtu)	414	299
LNG regasified (100%) in Canaport (Tbtu)	16	23

Our performance in 2016

Million euros	2016	2015	Variation
Profit from operations	2,467	3,041	(574)
Income tax	(565)	(821)	256
Investees and non-controlling interests	(19)	(70)	51
Adjusted net income ⁽¹⁾	1,883	2,150	(267)
Inventory effect	133	(459)	592
Special items	261	19	242
Net income	2,277	1,710	567
Effective tax rate (%)	23	27	(4)
EBITDA	3,367	3,092	275
Net investments ⁽²⁾⁽³⁾	(496)	493	(989)

⁽¹⁾ Detail of adjusted net income by geographical area:

Geographical area	2016	2015	Variation
Europe	1,895	2,046	(151)
Rest of the world	(12)	104	(92)
Adjusted net income	1,883	2,150	(267)

⁽²⁾ Gross investments minus divestments for the period.

⁽³⁾ In 2016 and 2015, most investments were allocated to operating improvements at facilities and to fuel quality, in addition to safety and the respect of the environment.

Main events of the period

- In January **an agreement was signed with Pertamina**, a state-owned Indonesian oil company, to study the technical and economic viability of producing extensor oils for the rubber sector at its refinery in Cilacap (Indonesia).
- In 2016 and under the agreements reached in 2015 for the sale of the piped gas business in Spain, the company **sold LPG facilities** to Gas Natural Fenosa, Redexis Gas, S.A., Naturgas Energía y Distribución, S.A.U., Distribución y Comercialización de Gas de Extremadura, S.A. and Madrileña Red de Gas (for more information on these transactions, see the Divestments heading of section 4.1).
- In February, the company **acquired 25% of Rocsole OY**, a Finnish company, which has a technology that enables the flow of multiphase fluids (water, crude oil, air) to be viewed through the interior of the pipes, thus allowing the operator to predict when contamination will occur, to optimize maintenance costs, therefore avoiding unscheduled shutdowns, and to reduce operating expenses.

- In February, Repsol agreed to the **sale of its wind power business in the United Kingdom** to China's SDIC Power (for more information, see the Divestments heading of the section 4.1). The sale included the Inch Cape project, in which it had a 100% interest, and the interest in the Beatrice project.
- In March, AENOR approved the **certification under ISO-50001 standard of Repsol's energy management system**, which will help the company to be more efficient and reduce energy consumption and CO₂ emissions.
- In April, **Repsol launched a new range of lubricants, "Repsol Elite"**, the purpose of which is to obtain maximum performance from engines and improved efficiency, all in line with the new environmental regulations.
- In April, Repsol began to sell **lubricants in India** through GP Petroleum Ltd, a subsidiary of Gulf Petrochem FZC, after signing the strategic agreement last year for exclusive manufacturing rights.
- On April 20, 2016, an agreement was reached with the South American international operator, Abastible, for the **sale of the LPG business in Peru and Ecuador**. The sale of the LPG business in Peru was finalized on June 1 and the LPG business in Ecuador was sold on October 1 (for more information, see the Divestments heading of section 4.1).
- In May, an agreement was reached **with Correos** for the development of a package storage service at our service stations.
- In May, Repsol began to produce a new range of metallocene polyethylene with Chevron Phillips technology. The new range will be sold under the trade name **Repsol Resistex** and offers great value to end products, thus confirming Repsol's focus on product differentiation.
- In June, Repsol received the **award for the best high density polyethylene producer** in Europe and received the **overall award for innovative polymers** as a result of a customer survey carried out by European Plastics Converters (EuPC). In September, Repsol was also recognized as **the best petrochemical company of the year** by the prestigious journal Petroleum Economist.
- In August, an agreement was reached for the **sale of 100% of Viared, S.L.** to Burger King España, which entailed the transfer of 11 premises to the restaurant chain, and entering into a collaboration agreement for the future development of new restaurants in our service station network in Spain.
- In September, Repsol entered into a **technology license agreement** with the Chinese company Tianjin Bohua Chemical Development, through which Repsol will transfer the technology necessary for the construction of a plant in Tianjin with an annual production capacity of 200,000 tons of propylene oxide and 450,000 tons of styrene monomer.
- In September, **production commenced of Repsol lubricants in UAE** through the company Speed House Trading. This local manufacturing agreement would cover the markets of the UAE, Saudi Arabia and Lebanon by combining the product imported from Spain with the product manufactured in Dubai.
- In October, **Repsol announced that its lubricants would be present in the 2017 Dakar Rally** under a technical sponsorship agreement.
- In October, LPG operators (including Repsol) and vehicle and component manufacturers created the first Spanish cluster for the purpose of promoting the use of Autogas as a fuel alternative
- In November, **production of Repsol lubricants commenced in Turkey**, in association with the company Tures Petrolculuk Sanayi Ve Ticaret A.S which will cover the growing Turkish market.
- In December, the **Sines logistics terminal was inaugurated** in order to receive, store and dispatch gasoil.
- The **work on the La Pampilla Refinery** to meet the new fuel quality specifications in Peru continued in 2016. In October, the low sulfur diesel production unit was inaugurated, enabling a **15% increase in the capacity of the La Pampilla Refinery**, up to 117,000 barrels/day.
- In 2016, and taking advantage of the scheduled shutdowns at the **Cartagena and Tarragona refineries**, the following improvements were carried out:
 - In **Cartagena**, the ejectors and condensers of the vacuum column of the Vacuum 5 Unit were modified in order to improve operating conditions, avoid accelerated contamination in the condensation system and improve the cut point between vacuum gasoil and vacuum waste.
 - In **Tarragona**, the existing reactors of the Isomax Unit were replaced and a new hydrogen compressor was installed, which increases the conversion of heavy feed. In addition, new heat exchangers were installed in order to improve the energy consumption rate (savings of 720 t fuel gas/year) and to reduce emissions (1,910 t CO₂/year).

5.2.2. REFINING

Current situation

The Refining margins in 2016 were higher than the average posted in the 2011-2015 period, thanks to the continued low energy costs associated with low international crude oil prices due to the increase in market supply. With regard to products, mid distillate margins began to drop at the end of 2015, but gradually began to recover throughout 2016, especially in the last quarter. The changes in these margins in the last quarter of 2015 reflect the trend in product supply in Europe, with a wide variation in the output of local refineries and the increase in imports as a result of new capacity in the Middle East; this was compounded by the changes in demand, associated with the temperatures recognized during various winter periods (unseasonably warm temperatures in the winter of 2015 and the normal temperatures in the winter 2016). With regard to gasoline consumption, the strong demand in the United States in 2015 was exceeded by that recorded in 2016. However, gasoline margins during the latter year decreased, returning to their previous levels as a result of the greater production of the refineries in the area during the first few months of the year.

While the international price of crude oil continues to drop, the margins are also expected to remain at these levels in the short term for the reasons outlined above. An oil price recovery would impact energy costs, although it would also enable a higher discount on heavy crude oil, which would give a competitive advantage to the conversion schemes, which is the case for Repsol's refinery activities.

Our activity

The Repsol Group owns and operates five refineries in Spain (Cartagena, A Coruña, Bilbao, Puertollano and Tarragona), with a combined distillation capacity of 896 thousand barrels of oil per day (including, in the case of the Tarragona refinery, the share in Asfaltos Españoles, S.A.). In the case of the La Pampilla refinery in Peru, in which Repsol holds an 82.38% interest and is the operator, installed capacity rose from 102 thousand barrels of oil per day to 117 thousand barrels of oil per day after the inauguration of the low sulfur diesel production unit in 2016.

In 2016, the Refining margin stood at US \$6.3 per barrel in Spain, down on the 2015 figure (\$8.5 per barrel). In Peru, the annual Refining margin came in at \$3.1 per barrel, compared to the \$7.0 per barrel seen in 2015.

The following table shows the refining capacity of the facilities in which Repsol had an interest at December 31, 2016:

Refining capacity ⁽¹⁾	Primary distillation (Thousand barrels per day)	Conversion ratio ⁽²⁾ (%)	Lubricants (Thousand metric tons per year)
Spain			
Cartagena	220	76	155
A Coruña	120	66	-
Puertollano	150	66	110
Tarragona	186	44	-
Bilbao	220	63	-
Total Repsol (Spain)	896	63	265
Peru			
La Pampilla	117	24	-
Total Repsol	1,013	59	265

⁽¹⁾ Information disclosed in accordance with Repsol Group's reporting policy: all refineries cited are fully consolidated in the Group's financial statements. Reported capacity in Tarragona includes the stake in ASES.A.

⁽²⁾ Defined as the ratio between the equivalent capacity factor of Fluid Catalytic Cracking (FCC) and primary distillation capacity.

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

Against this backdrop, the Group's refineries processed 43.2 million tons of crude oil, which is in line with the amount processed in 2015. The average use of refining capacity was 88% in Spain, compared to the 88.9% recorded in the previous year. In Peru, refinery use was up on 2015, rising from 67.6% to 68.9% in 2016.

The table below provides a breakdown of refinery production by main products:

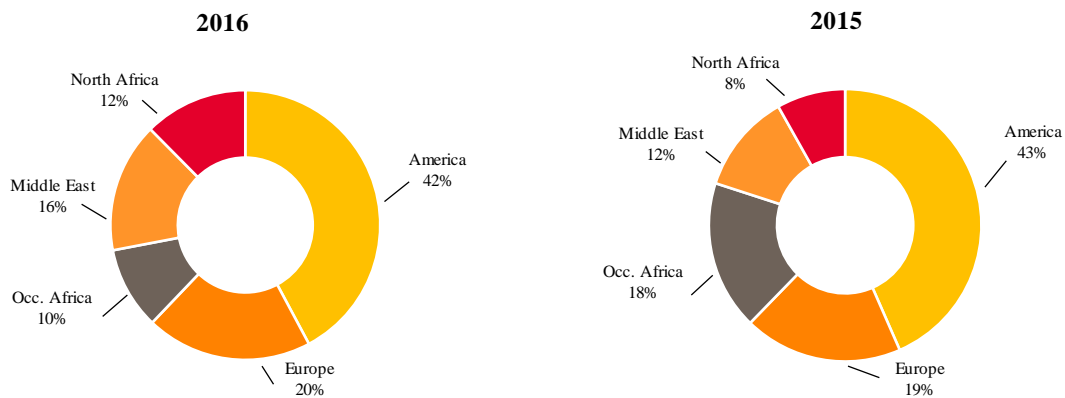
Refinery intake (Thousand tons)	2016	2015
Crude oil	43,226	43,334
Other refinery intake	9,387	8,486
Total	52,613	51,820

Refining production (Thousand tons)	2016	2015
Intermediate distillates	24,882	25,388
Gasoline	9,354	8,880
Fuel oil	4,500	4,041
LPG	1,008	1,010
Asphalts ⁽¹⁾	1,499	1,465
Lubricants	284	221
Other (including petrochemicals) ⁽²⁾	7,574	7,268
Total	49,101	48,273

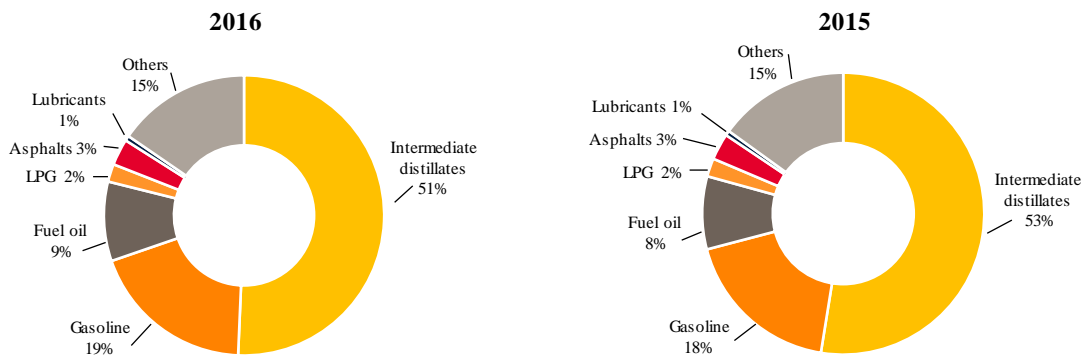
⁽¹⁾ Includes 50% of the asphalt production of Asfaltos Españoles, S.A. (ASESA), a company 50% owned by Repsol and Cepsa. Repsol markets 50% of ASESA's products.

⁽²⁾ Includes figures for petrochemical products (1,976 thousand tons in 2016 and 1,901 thousand tons in 2015).

Source of processed crude



Refining production



OIL PRODUCT SALES

<i>Thousand tons</i>	Europe		Rest of the world		Total	
	2016	2015	2016	2015	2016	2015
Own marketing	20,468	21,124	2,238	2,073	22,706	23,197
Light products	17,114	17,326	2,072	1,917	19,186	19,243
Other products	3,354	3,798	166	156	3,520	3,954
Other sales ⁽¹⁾	8,083	7,771	1,341	1,221	9,424	8,992
Light products	7,867	7,508	1,106	1,049	8,973	8,557
Other products	216	263	235	172	451	435
Exports ⁽²⁾	14,236	14,124	1,682	1,292	15,918	15,416
Light products	5,939	6,295	561	468	6,500	6,763
Other products	8,297	7,829	1,121	824	9,418	8,653
TOTAL SALES	42,787	43,019	5,261	4,586	48,048	47,605

⁽¹⁾ Includes sales to oil product operators and bunker sales.

⁽²⁾ From country of origin.

Refining business activities are framed within the 2016-2020 Strategic Plan, which includes greater integration between refining and marketing activities and a clear goal to reduce energy costs and CO₂ emissions. Investments made in the Cartagena and Bilbao refineries, and the corresponding improvement in the overall margin of the refining system, have been key to placing Repsol at the head of the integrated European companies in terms of efficiency, creation of guaranteed value, and resilience against scenarios of low oil prices.

In addition to a wide range of efficiency measures implemented, the business' competitiveness continues to improve through managing markets and market access logistics, and relating to the business environment. These initiatives are underpinned by appropriate human resources management and an active policy of safety, environmental protection and innovation.

5.2.3. CHEMICALS

The Chemicals division produces and markets a wide variety of products, and its activities range from basic petrochemicals to derivatives. Its products are sold in over 90 countries, and it leads the market on the Iberian Peninsula.

Production is concentrated at three petrochemical plants located in Puertollano and Tarragona (Spain) and Sines (Portugal), where there is a high level of integration between basic and derivative chemicals, and with refining activities at the Spanish facilities. Repsol also has a number of subsidiaries and affiliate companies through which it produces polypropylene compounds, synthetic rubber and chemical specialties. In particular, these chemical specialties are produced through Dynasol, a 50% partnership with the Mexican KUO group, with plants in Spain, Mexico and China, the latter of which work with local partners.

The following table provides a breakdown of production capacity in 2016 and 2015 of the Group's main petrochemical products:

PRODUCTION CAPACITY <i>(Thousand tons)</i>	2016	2015
Basic petrochemicals	2,603	2,603
Ethylene	1,214	1,214
Propylene	864	864
Butadiene	185	185
Benzene	290	290
Methyl tert-butyl ether / Ethyl tert-butyl ether	50	50
Derivative petrochemicals	2,235	2,235
Polyolefins		
Polyethylene ⁽¹⁾	793	793
Polypropylene	505	505
Intermediate products		
Propylene oxide, polyols, glycols, and styrene monomer	937	937

⁽¹⁾ Includes ethylene vinyl acetate (EVA) and ethylene butyl acrylate (EBA) copolymers.

Earnings posted by Repsol's chemical business in 2016 exceeded the already good results obtained in 2015, a year characterized by a more favorable international environment shaped by strong demand and higher margins. Important efficiency improvements were consolidated in 2016 and the company continued to implement new initiatives related to improving margins through greater flexibility in the supply of raw materials to crackers and through the commissioning of important investments in differentiation, which most notably includes the commencement of production in May of a new range of metallocene polyethylene with Chevron Phillips technology. This new range, which is sold under the trade name Repsol Resistex, offers great value to end products, thus confirming Repsol's focus on product differentiation.

In September, Repsol's Chemicals division also entered into a license agreement whereby it provided the Chinese company Tianjin Bohua Chemical Development with a license for the propylene oxide and styrene monomer coproduction technology for the construction of a plant in Tianjin with an annual production capacity of 200,000 tons of propylene oxide and 450,000 tons of styrene monomer.

Sales to third parties in 2016 amounted to 2.9 million tons, marking a 2.5% increase on the 2.8 million tons sold in 2015. This increase in sales was achieved thanks to the favorable market situation and the high operational reliability of the plants during a year in which record-high production values were reached by various units. With regard to the margin environment, the year was marked by record-high values that were slightly higher than those recorded in 2015.

<i>Thousand tons</i>	2016	2015	Variation
Sales by type of product			
Basic petrochemicals	994	948	4.9%
Derivative petrochemicals	1,898	1,874	1.3%
TOTAL	2,892	2,822	2.5%
Sales by region			
Europe	2,428	2,396	1.3%
Rest of the world	464	426	9.1%
TOTAL	2,892	2,822	2.5%

As for investments, they were mainly earmarked to improve and optimize existing assets, enhance efficiency, reduce costs, differentiate products, and improve quality, safety, and environmental standards.

The main expenses incurred in 2016 relate to the projects carried out to adapt the High Density Polyethylene Plant in Tarragona to produce metallocene grades, as well as other projects relating to improving flexibility in the supply of raw materials.

In recognition of the significant improvement to its business in recent years, Repsol received the award for the best high density polyethylene producer in Europe and received the overall award for innovative polymers as a result of a customer survey carried out by European Plastics Converters (EuPC). In September, Repsol was also recognized as the best petrochemical company of the year by the prestigious journal *Petroleum Economist*.

5.2.4. MARKETING

Repsol markets its products through an extensive network of service stations and commercial distributors. The company's marketing activities also include other sales channels that provide differentiated service to sectors such as the aviation sector, marine sector, other large industries and end consumers, as well as the marketing of a wide range of products such as coke, lubricants, asphalts, sulfur, oils, paraffin and derivatives.

Management of marketing margins and credit risk succeeded in achieving positive results in both the service stations and the channel of direct sales to end consumers.

At year-end 2016, Repsol had a network of 4,715 service stations. In Spain, the network comprised 3,501 points of sale, 29% of which were company operated. Service stations in other countries were spread throughout Portugal, Italy and Peru.

The Downstream business had the following points of sale (service stations and supply units) as of December 31, 2016:

Country	No. of points of sale
Spain	3,501
Portugal	453
Peru	440
Italy	321
Total	4,715

In Spain, Law 11/2013, of July 26, introduced a number of measures aimed at ensuring fuel price stability and increasing competition in the sector. This law was supplemented by Law 8/2015 (for further information, see Appendix IV of the 2016 consolidated financial statements). In this new context, Repsol, as a market leader with extensive geographical reach, works to efficiently meet the new challenges posed by legislation.

Creation of value and customer focus

The company has continued its policy of forming strategic alliances with market leaders, such as El Corte Inglés, Nespresso, Disney or Correos. The development and implementation of the new Supercor Stop & Go stores at Repsol's service stations was consolidated with El Corte Inglés. An agreement was entered into with Correos for the development of a package storage service at Repsol's service stations. The strategic alliance has allowed Repsol to be more connected to the new technological trends related to electronic commerce.

In 2016, key projects launched in various segments in 2015 were strengthened, thus enhancing brand value and product quality through innovation, operational excellence and a committed team.

Innovative projects that incorporated very high-quality products and efficiency, such as the Neotech fuels or the Bienergy heating oil, enabled our customers to get the best performance from their vehicles and next-generation boilers with minimum consumption.

The consolidation of programs such as “Repsol Mas” and “Plan Cliente” enabled us to improve our relationship with our consumers.

Repsol confirmed its position as a leader in Europe in the production and marketing of green fuel-grade coke. The company has also continued its policy of creating value, diversification and international expansion, whereby 50% of sales were to foreign markets and reached over 20 countries, mainly in Europe, North Africa and Asia.

In line with this growth and consolidation plan, Servicios Logísticos de Combustibles de Aviación (SLCA), in which Repsol holds a 50% interest, carries out in-plane refueling operations at Spain's two main airports: Madrid-Barajas and Barcelona-El Prat. As a result, SLCA remains the largest operator in Spain by number of airports and business volume. By winning several supply contracts for Air Force operating bases, the company consolidated the presence in France that it gained in 2015.

On December 19, the new Sines logistics terminal was inaugurated in order to receive, store and dispatch gasoil. This project enabled Repsol to reinforce its development and consolidation strategy in Portugal.

Confirming the growth and consolidation strategy, over 50% of sales of lubricant, asphalt and specialized products are made in the international market through operations in over 90 countries and with 73 international lubricant distributors.

True to its social commitments, in 2016 Repsol maintained its policy for the employment and integration of people with disabilities, in collaboration with ONCE and Fundosa, and made progress with its commitment to sustainability, respect for the environment and personal safety. The company also developed other environmentally-friendly products at the Repsol Technology Center, including Bio Repsol Telex 68 oil and green asphalts.

5.2.5. LIQUEFIED PETROLEUM GAS (LPG)

Repsol is a leading retail distributor of LPG, ranking first in Spain and maintaining top positions in Portugal.

LPG sales in 2016 totaled 1,747 thousand tons. Total sales in Spain decreased by 3.1% year-on-year, primarily due to the decrease in sales to the petrochemical industry, despite the slight increase in retail demand. Repsol distributes bottled, bulk, and piped LPG in Spain through the collective distribution and Autogas networks, with over 4 million active customers. Bottled LPG sales accounted for over 61.2% of total retail LPG sales in Spain, through a network of 210 distribution agencies.

LPG sales by geographical area (Thousand tons)	2016	2015
Europe	1,261	1,285
Spain	1,116	1,152
Portugal	145	133
Latin America ⁽¹⁾	486	975
Peru	188	570
Ecuador	298	405
Total	1,747	2,260
LPG sales by product	2016	2015
Bottled	1,049	1,286
Bulk, piped and other ⁽²⁾	698	974
Total	1,747	2,260

⁽¹⁾ After selling the assets of the LPG business in Peru and Ecuador in June and October 2016, respectively, Repsol completed the divestment of its LPG business in Latin America (see the Divestment heading of section 4.1).

⁽²⁾ Includes sales to the automotive market, LPG operators and others.

In Spain, prices continue to be regulated for piped LPG and bottles between 8 kg and 20 kg, not including bottled mixtures for using LPG as fuel with a tare weight greater than 9 kg. For further information on the applicable legal framework in Spain, see Appendix IV of the 2016 consolidated financial statements.

On September 30, 2015, the Board of Directors of Repsol approved the sale of part of the piped LPG business to Gas Natural Distribución and Redexis Gas. In addition, in 2016 the piped gas business in northern Spain and Extremadura was sold to the EDP Group and Gas Extremadura, and an agreement was entered into with Madrileña Red de Gas for the sale of the piped gas business in the Autonomous Community of Madrid. For further information on the impact of these transactions on profit, see the divestments heading of section 4.1.

In Portugal, Repsol distributes bottled, piped and bulk LPG and Autogas to end customers, while also supplying other operators. Sales reached 145 thousand tons in 2016, making the company the third-largest operator and bringing the market share to over 19%.

In Latin America, on April 20, 2016 Repsol reached an agreement with the South American international operator, Abastible, for the sale of the LPG business in Peru and Ecuador. The sale of the LPG business in Peru was finalized on June 1 and the LPG business in Ecuador was sold on October 1. After transferring these assets, Repsol completed the divestment of its LPG business in Latin America.

Autogas (LPG for vehicles) is the most widely-used alternative fuel in the world, in over 26 million vehicles (more than 14 million in Europe). Although it has yet to make a meaningful impact on the Spanish market, sales growth exceeded 6% in 2016, confirming the increased demand for this affordable fuel that also helps improve urban air quality.

Repsol, fully aware of the growing interest in this alternative fuel, had 745 supply points equipped with Autogas pumps in Spain and Portugal by the end of 2016, 369 of which are at service stations in Spain.

5.2.6. GAS & POWER

Gas & Power activities include the transportation, marketing, trading and regasification of liquefied natural gas, as well as renewable energy projects.

At December 31, 2016, the Group had both its regasification and transport assets in its marketing businesses in North America, including the Canaport regasification plant and the gas pipelines in Canada and the United States. The main operating highlights are as follows:

Natural Gas in North America	2016	2015	Variation
LNG regasified (TBtu) in Canaport (100%)	16	23	(7)
Gas marketed in North America (TBtu)	414	299	115

The volume marketed in North America increased by 38%. This growth arises from the development of business and the search for gas trading opportunities on the west coast and the marketing of larger volumes of gas from Upstream.

In the US northeast, where natural gas supplies tend to be more limited, cold temperature scenarios may cause significant peaks in benchmark prices in the region, such as Algonquin (the benchmark price for the Boston area). The company's activity in the northeast is focused on optimizing the margin obtained from the marketing of LNG in capitalizing on the flexibility offered by the Canaport plant. That is, flexibility in send out allows for concentrating gas sales in days of peak prices in winter.

During the year, the absence of sustained low temperatures over time, and the fall in the price of gas substitutes (eg: fuel and other petroleum products) adversely affect the peak prices of the winter period, thus reducing our capacity to capture the plant's commercial margin, which explains the decrease in regasified volume.

In 2016, the wind power business in the United Kingdom was sold to China's SDIC Power. For further information, see the Divestments heading of section 4.1.

5.3. CORPORATION AND OTHERS

Main events of the period

- In March and after their review, the credit rating agencies, Standard & Poor's (S&P), Moody's and Fitch, **confirmed that they would maintain Repsol's long-term debt credit ratings** at BBB-, Baa2 and BBB, respectively.
- On September 21, Repsol, S.A. and Criteria Caixa, S.A.U. sold 20% of **Gas Natural SDG, S.A.** to GIP III Canary 1 S.À R.L. for a total amount of 3,803 million euros. Repsol sold 100,068,934 shares, representing 10% of the share capital of Gas Natural SDG, S.A., for 1,901 million euros, thus generating income before tax of 233 million euros.
- In 2016, Repsol placed **three bond issues** (the first for 100 million euros with a fixed annual coupon of 5.375%, maturing in January 2031; the second for 600 million euros with a floating-rate quarterly coupon of 3-months Euribor plus 0.70%, maturing on July 6, 2018; and the third for 100 million euros with a fixed annual coupon of 0.125%, maturing on July 15, 2019) **through private placements**.

Repsol also repaid **the debt issued by ROGCI** amounting to approximately \$631 million, thus reducing its finance costs.

For further information on the main financial transactions performed in the period, see section 4.2.

- In 2016, within the framework of the 2016-2020 Strategic Plan, Repsol continued to make progress toward its goals and opportunities following the integration of ROGCI and the challenges presented in the sector, through an **organizational workforce adjustment process, thus eliminating 871 positions in Spain**, in addition to significant adjustments in the US and Canada. Management was affected by these changes, with executives numbering 278 at December 31, 2016.
- In 2016, the company continued to make progress on the **transformation program** for the purpose of making an effort to achieve the objectives set out in the Strategic Plan and providing a greater level of ambition regarding the changes required, in order for them to be sustainable over time, thanks to the trend in the company's culture and its management model. Various efficiency and transformation projects were therefore rolled out in several E&P, Downstream and Corporation business lines.

EMERGING BUSINESSES

Corporation and others includes the activities of **Emerging Businesses**. Repsol promotes and manages new initiatives in emerging areas that may generate business opportunities and make it possible to further develop the company's strategy beyond its traditional business. To do this, it has three tools:

- **Corporate Venture Capital:** its goal is to capture and capitalize on external innovation by investing in start-ups with high development potential, in traditional and emerging areas of the company. These stakes are held through Repsol Energy Ventures, S.A. a fully-owned subsidiary of the Repsol Group.
- **Emerging Business Generation:** its goal is to generate long-term sustainable businesses that, in the future, will allow integration with other Repsol areas/businesses, thereby contributing to the overall vision and strategy of the company.
- **Technology Valuation:** its goal is to market the intellectual property generated by the company, whether developed internally or purchased, that may have market value, where such externalization should not involve a loss of know-how and or competitive edge for Repsol.

The projects managed by this area include HEADS. It is a system for the early detection of underwater hydrocarbons, developed jointly with Indra. Its installation is planned in all Repsol refineries with maritime terminals, and it is to be marketed with third parties. It is presently installed in the Tarragona and Pampilla refineries, and on the Casablanca platform. In December 2016, a licensing agreement was signed with Indra, who will be the exclusive marketer of the HEADS system at a worldwide level.

During the year, OGC Climate Investments (OCGI-CI) was incorporated as a vehicle for channeling investment committed by the partners (\$1,000 million over ten years) to develop and accelerate the commercial rollout of innovative technologies of low greenhouse gas emissions. The emerging businesses area will channel Repsol's investment in this vehicle.

In 2016, the investees in the portfolio managed by Emerging Businesses turned in a strong performance. In particular:

- Principle Power, where Repsol holds a stake of 24.79%, is the first company in the world able to design, install and operate a floating semi-submerged structure for offshore wind generation. The first prototype at real scale, WindFloat, is equipped with a Vestas 2 MW turbine, and produced more than 17 GWh from its commissioning in late 2011 until its dismantling in July 2016.
- Graphenea, in whose capital we have held a 5.2% stake since 2013, within the scope of the INNVIERTE¹ program, is one of the main producers of graphene in Europe. It is a member of the Graphene Flagship, the largest research program ever launched by the European Union. In 2016, Graphenea surpassed a million euros in invoicing for the second consecutive year.

Graphenea received a subsidy from the European Commission as part of the H2020 – SME Instrument program to finance the pre-commercial plant of graphene oxide that was built in 2016 and which will boost production capacity.

- IBIL, a company in which Repsol holds a 50% stake, is the vehicle through which Repsol carries on its activities in the area of supplying energy for electric mobility. It has about 859 operational recharge points, both public and private, and continues to consolidate its fast recharge network infrastructure at Repsol Group service stations. Due to the IBIL electric mobility program, through the CLIMA Projects of the Spanish Ministry of Agriculture, Food and Environment, Repsol was able to certify for the fourth consecutive year a reduction in emissions of CO₂. Repsol's CLIMA Electric Car project has already managed to reduce emissions of CO₂ by 518 tons.
- Scutum Logistic, S.L, a company in which we acquired a 15.4% in 2014, under the INNVIERTE program, is dedicated to the design, production and sale of electrical platforms and battery extraction systems for electric motorbikes. Both “removable battery pack” system, patented in Europe, and the industrial design of the electrical platform, adaptable to customer needs, are its main competitive advantages.

In 2016, Scutum's business volume totaled 468 units of electric motorbikes. Some 67% of sales were in Spain, where it continues to lead the sector with a 38% market share, and where it has signed major contracts with large corporate clients. Scutum has continued its international expansion, signing distribution agreements in Benelux, Switzerland and the United Kingdom, which now account for 33% of sales in the year.

The Scutum project received the award for technology innovation in the twelfth edition of the SME awards given by the business newspaper *Expansión* and by the Madrid trade fair organization (IFEMA) in 2016.

- Rocsole, a Finnish company in which we acquired a 15.62% stake in January 2016, is developing technology based on Electrical Capacitance Tomography (ECT) to generate imagery of the flow of multiphase fluids (water, crude oil, air) inside piping and monitor the rates of deposition build-up, thus optimizing maintenance costs and preventing unscheduled stoppages.

¹ The INNVIERTE Program is part of the 2013-2020 Spanish Science, Technology and Innovation Strategy approved by Resolution of the Council of Ministers on February 1, 2013.

6. OTHER WAYS OF CREATING VALUE

At Repsol we believe that our activities and operations contribute to sustainable socio-economic development and to the generation of wealth in the areas in which we operate.

Repsol generates value in several areas: job creation and training for its employees; promotion of safe and environmentally-responsible actions; contribution through the payment of taxes and fees; support for research, development and innovation; investments in new businesses and initiatives; and other areas of social responsibility.

In addition, relying on its strategy and policies, Repsol publicly and voluntarily commits to carrying on its activities in order to be a sustainable and competitive company. This means being an ever more responsible company with its employees, the environment, human rights and the development of the places where it operates.

6.1. PEOPLE¹

One of our main competitive advantages lays in the people within the Company, with which we have a relationship based on respect and mutual trust, something that we believe is intrinsic to our company and essential in order to obtain return and excellent results.

Accordingly, people management is now one of the critical elements for achieving the integration and transformation of the company.

To meet the objectives of value creation and resilience, a review of our processes and ways of working is under way, in a bid to strengthen flexibility so that Repsol will be a company that is best equipped to face future challenges: more efficient, agile and innovative, oriented toward performance and talent development, integrated and inclusive, a reflection of the society in which we live and a reference point of excellence in corporate governance.

In 2016, we have acted on the basis of two major pillars: the organization and the management model. In the former, Repsol is advancing in the implementation of an integrated organizational model that is more simple and efficient, that strengthens collaboration between areas and optimizes governance and control.

In the latter, all people management models are being aligned with a view to achieving global management of talent, by fostering a leadership style based on achieving results through cooperation, with leaders who are an example of desired values and conduct. Meritocracy is being strengthened as a way of recognizing the contribution made by the most committed, best performing and highest potential individuals with a results-oriented focus and ensuring that they are given opportunities for professional development.

In order to evaluate the company's degree of cultural advancement, use is made of an opinion survey of a representative sample of employees in different areas, countries and professional categories. The results help us speed up the decision-making process, and re-focus actions where necessary.

WORKFORCE

At December 31, 2016, a total of 24,532 employees formed part of the Repsol workforce, which is 2,634 people less than in 2015. This workforce reduction was done thanks to an organizational efficiency

¹ All the data in this chapter, except otherwise specified, refers to managed workforce which includes those people who are part of the companies in which Repsol establishes policies and guidelines for people management. Workforce figures include all types of contracts (permanent, temporary, partial retirees, etc.) and are calculated on the basis of the employment percentage of each employee.

process and, inorganically, the sale of non-strategic businesses. Both measures are included in the 2016-2020 Strategic Plan.

The organizational efficiency process is being carried out in phases in several countries in which we operate, taking into account the specific organizational needs of each country or business. In order to implement this process, termination criteria have been applied in accordance with each country's legislation and various labor unions, with which important agreements were reached, participated in the process. The employee terminations in all countries were carried out in accordance with best market practices.

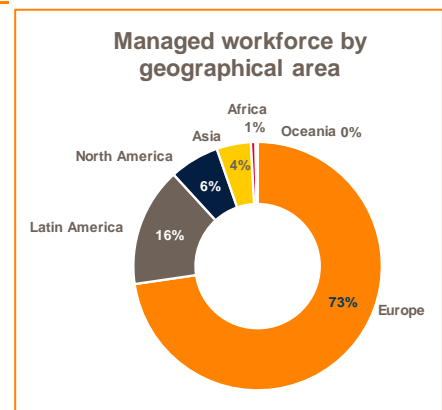
In Spain, the process is being carried out through a collective redundancy procedure. The periods for consulting with employee representatives ended with agreements reached in the nine companies affected. The terminations began in August and will continue until December 31, 2018. A total of 1,047 employees are expected to be terminated, of which 838 relate to voluntary resignations. This level of voluntary resignations meant that we did not have to carry out mandatory appointments at any company, with the exception of Repsol Butano, S.A., which had several factories close as a result of its industrial plan.

WORKFORCE	2016	2015
Total workforce at December 31	26,877	29,494
Managed workforce	24,532	27,166
Non-managed workforce	2,345	2,328
Accumulated average managed workforce	26,444	27,887
No. of new employees in the year ⁽¹⁾	2,445	6,159



⁽¹⁾ Only fixed or temporary employees with no prior working relationship with the company are considered to be new hires. The 43% of new employees in 2016 and 62% in 2015 had permanent contracts. The figures for 2016 relate mainly to new hires in Peru.

TOTAL MANAGED WORKFORCE	2016	2015
BY GEOGRAPHICAL AREA		
Europe	17,833	18,774
Latin America	3,803	4,893
North America	1,589	2,013
Asia	1,095	1,249
Africa	148	160
Oceania	64	77
BY BUSINESS		
Corporation	2,402	2,945
Downstream	17,611	18,862
Upstream	4,519	5,359



The organizational efficiency process has significantly increased the percentage of women in all groups and businesses, with the ratios forecast for 2018 achieved in 2016.

GENDER INDICATORS ⁽¹⁾	2016	2015
% women	35.7	33.4
% women in world leadership positions ⁽²⁾	26.7	23.9
% women in leadership positions in Spain ⁽²⁾	32.0	28.6
% women in world management positions ⁽³⁾	34.7	33.1
% women in management positions in Spain ⁽³⁾	37.7	35.0

⁽¹⁾ Indicators calculated on the basis of the number of people (not on the basis of their employment percentage).

⁽²⁾ Includes the categories of Executives and Technical Managers excluded from the collective labor agreement.

⁽³⁾ Includes the categories of Executives, Technical Managers and managers excluded from the collective labor agreement.

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

WORKFORCE BY CATEGORY	Age	2016			2015		
		Women	Men	% of women	Women	Men	% of women
Executives	30-50	27	94	22%	27	112	19%
	>50	20	137	13%	22	164	12%
	<30	1	5	17%	2	1	67%
Technical managers	30-50	471	987	32%	494	1,118	31%
	>50	172	686	20%	177	903	16%
	<30	826	720	53%	941	1,065	47%
Technicians	30-50	3,218	5,008	39%	3,306	5,733	37%
	>50	437	1,796	20%	491	2,106	19%
	<30	39	28	58%	68	59	54%
Clerical staff	30-50	553	254	69%	588	271	68%
	>50	187	80	70%	258	161	62%
	<30	334	602	36%	345	663	34%
Manual workers junior personnel	30-50	1,996	4,035	33%	1,949	4,174	32%
	>50	340	1,480	19%	307	1,661	16%
	TOTAL	8,620	15,912	35%	8,976	18,190	33%

The company has employees in 37 countries and has over 1,800 employees working outside their home country. The value contributed by this multicultural environment is increasingly apparent throughout the company.

The table below details the countries that have the greatest number of nationalities among their employees (excluding those of their own country):

DESTINATION COUNTRY	2016	2015	2016	2015	2016	2015		
Spain	60	65	Malaysia	11	12	Trinidad and Tobago	7	12
United States	22	23	Vietnam	11	8	Venezuela	6	10
Canada	21	20	Norway	10	12	Bolivia	5	5
Algeria	17	16	Russia	8	11	The Netherlands	5	3
Portugal	15	15	Singapore	8	7	Colombia	4	5
Australia	13	11	Indonesia	7	7	Ecuador	4	7
Brazil	13	16	Peru	7	9	Angola	3	7

VALUE PROPOSAL

Our objective is to sustainably harmonize the company's talent requirements in the short, medium and long term with individuals' opportunities for development.

We believe management of internal talent is key to attaining the company's objectives in the short terms and to ensure that the company will have the profiles necessary to carry out its strategy. We have dedicated and committed professionals that have a positive impact on the Company's results.

Repsol offers a distinctive Employee Value Proposal (EVP) that, in accordance with our culture and values, defines the value of working at Repsol and the reasons why employees seek to work for and commit to the organization. The PVE comprises all aspects that make the company attractive to employees, such as opportunities for professional advancement, compensation according to merit, equal opportunities, promotion of work-life balance, etc. In 2016, we further developed our EVP and our people management processes in order to recruit, retain, commit and recognize our employees.

RETAINING TALENT	2016	2015
Total turnover rate ⁽¹⁾	13%	7%
Voluntary turnover rate ⁽²⁾	4%	3%
Total executive turnover rate ⁽³⁾	22%	8%

⁽¹⁾ Corresponds to the total turnover rate of permanent employees out of the total number of employees at year-end.

⁽²⁾ Corresponds to the voluntary turnover rate of permanent employees out of the total number of employees at year-end.

⁽³⁾ Corresponds to the total turnover rate of executives out of the total number of executives at year-end.

The increase in the total turnover rate is due to the employee termination process, however, the voluntary employee turnover rate has remained stable over the last few years, at a rate that is less than the average in virtually all geographical areas.

We remain committed to the incorporation of young talent. We have adapted to the current environment our Masters programs and are receiving university students and occupational students on internships.

HIRING YOUNG TALENT ⁽¹⁾	2016	2015 ⁽²⁾
New professionals that completed the program	106	142
University internship agreements to consolidate training	423	455
Medium and higher level vocational training internships ⁽³⁾	109	150

⁽¹⁾ Indicators calculated on the basis of the number of people (not on the basis of their employment percentage).

⁽²⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

⁽³⁾ These figures include students from medium and higher level vocational training cycles, with a high percentage of these joining Repsol's workforce through various job vacancies. In 2016, Repsol continued the commitment it had assumed with the FP Dual program.

COMPENSATION AND PERFORMANCE EVALUATION

The Company has assumed a commitment with its employees to provide them with complete compensation schemes that ensure external competitiveness and internal fairness, based on meritocracy, and that assess individual performance, cooperation and teamwork.

In 2016 Repsol modified its complete compensation model, which includes fixed remuneration, benefits, and yearly and multi-year variable remuneration.

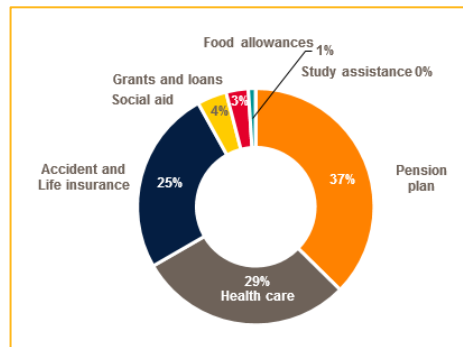
COMPENSATION	2016	2015
Average staff costs per employee (thousand of euros) ⁽¹⁾	76.0	80.2

⁽¹⁾ Corresponds to staff costs (including social security and other expenses, except termination benefits, directors' remuneration and travel expenses) of the average accumulated workforce.

A single, meritocracy-focused, yearly variable remuneration model was implemented for employees excluded from the collective labor agreement. The model unifies criteria, consolidates methodologies, integrates best practices and separately evaluates the How (performance) the What (results) in achieving individual objectives.

Further, a new compensation framework has been designed for employees with international assignments that unifies previous arrangements. It is aligned with market and sector practices, and it can segment according to either duration or purpose criteria.

In 2016, total spending on employee benefits for the managed workforce was 122.5 million euros, compared to 129.1 million euros in 2015.



Additional information regarding pension plans, multi-year variable remuneration plans and share-based employee remuneration plans can be found in Note 28 of the consolidated financial statements for 2016. With regard to the remuneration of members of the Board of Directors and senior management, additional information can be found in Note 27 of the consolidated financial statements and in the annual corporate governance report.

PROFESSIONAL DEVELOPMENT

Repsol is committed to providing an attractive professional development model that offers opportunities to all employees on the basis of meritocracy. This development is focused on the acquisition and/or improvement of skills and knowledge, enabling employees to tackle greater challenges and assume roles that are more complex and entail greater responsibility associated with the changes in the Company.

In 2016 a new career progression model was designed in accordance with Repsol's leadership model. It has the purpose of producing leaders who are able to anticipate change, who are inspiring, who tackle challenges, and who draw the best from their teams in achieving outstanding results.

The new career progression model offers opportunities through mobility, training and promotion.

In 2016 both mobility and training were critical in the task of carrying out the important workforce reductions on a global level and with regard to the organizational changes. Both favor the acquisition of experiences and knowledge in new and/or more complex environments and different roles, in addition to contributing to the Company's growth and sustainability. The challenge was to identify the best profiles for each position in the organization.

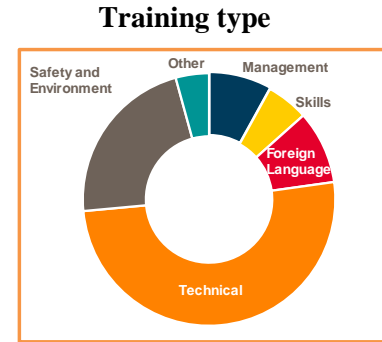
MOBILITY	2016	2015⁽¹⁾
Number of assignments	2,878	2,989
% of women (a number of assignments)	39	37

⁽¹⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

An updated and complete training offer is made available to employees to improve their skills in their various roles and levels of responsibility throughout their professional career. For the purpose of continuing to strengthen the Company's international culture, we have continued to increase our foreign language training and online training, which allows a greater number of employees to access these training activities.

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TRAINING	2016	2015⁽¹⁾
Total investment in training (million euros)	12	18
Investment per employee (€)	490	741
Total hours of training/year	998,045	1,074,858
Average hours/year per employee	41	45
Dedication rate ⁽²⁾	2.25%	2.64%
% of employees receiving training	86.2%	96.4%
No. of people receiving training	20,927	23,185
No. of training activities	12,399	12,207



⁽¹⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

⁽²⁾ Corresponds to the % of annual working hours dedicated to training. It is calculated based on the accumulated average workforce.

Promotion is another way of recognizing employees that can accompany career progression.

PROMOTIONS	2016	2015⁽¹⁾
No. of people	1,349	1,619
% of women	37%	39%

⁽¹⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

WORK-LIFE BALANCE, INCLUSION AND EQUALITY

Repsol is a company known for promoting new working methods, ensuring equal opportunities, and supporting and facilitating a balance between personal and professional life.

With regard to work-life balance, we are gradually moving toward a culture of value creation and contribution. Repsol employees have flexibility in carrying out their work in order to adapt their workday to their personal circumstances, as long as their work activity makes this possible, and in accordance with the uses, customs and restrictions established in each country and geographical area.

The teleworking program is one of the initiatives that is most appreciated and best rated by employees.

TELEWORKING INDICATORS	2016	2015⁽¹⁾
No. of teleworkers worldwide	1,811	1,716
No. of teleworkers in Spain	1,709	1,620
No. of teleworkers in the rest of the world	102	96

⁽¹⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

In 2016, Repsol signed the national teleworking agreement promoted by the Peruvian government.

Repsol also has an integration plan for disabled persons, which covers all areas of the organization. At December 31, 2016, Repsol had 586 disabled employees, representing 2.4% of its workforce.

In Spain, we surpassed the requirements of the General Law on Disability (LGD) in 2016 with 2.7%: 499 employees hired directly and an additional 37 equivalent people hired under other systems.

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INTEGRATION	2016	2015⁽¹⁾
No. of employees with disabilities in Spain	499	546
No. of employees with disabilities in the rest of the world	87	117
Total no. of employees with disabilities	586	663

⁽¹⁾ The figures for 2015 reflected in the table above correspond to the companies managed by the Repsol Group, not including ROGCI companies.

We actively collaborate with several international networks such as the ILO, the Latin American Network of Inclusive Companies, allowing us to export our model and make it available to European and Latin American companies that seek to foster the inclusion of this social group. Especially significant in 2016 was the internal and external dissemination of the second edition of the Differently-Abled White Paper, called the Diverse Talent White Paper, the second edition of the Overcoming Barriers Guide and the second edition of the Accessible Service stations Guide.

In Spain, Repsol, S.A. is a company that has received the "Equality at the Company" Seal of Distinction from the Spanish Ministry of Health, Social Services and Equality. The Company signed an agreement with the Ministry in January 2014 to strengthen its commitment to fostering balanced participation between men and women in top management positions, including Management Committees, up to 37% by 2017. This commitment was surpassed in 2016 (38%, see gender indicator table in the Workforce section).

LABOR/MANAGEMENT RELATIONS

LABOR/MANAGEMENT RELATIONS	2016	2015
Absenteeism ⁽¹⁾	3.56%	3.72%

⁽¹⁾ The rate of absenteeism due to common illnesses among personnel covered by a collective agreement is calculated as a comparison between the workday to be completed and the workday actually completed in the absence of reasons of common illnesses.

In 2016, a number of collective bargaining processes were undertaken with the workers' representatives, and agreements were reached, such as the Tenth Collective Agreement of Repsol Comercial, the Twenty-Fifth and Twenty-Sixth Collective Agreements of Repsol Butano, the Collective Agreement of RIPSA, the Collective Agreement of RITSA, the Eleventh Collective Agreement of Repsol Petróleo, the Thirteenth Collective Agreement of Repsol Química, the Fifth and Sixth Collective Agreements of Repsol, S.A., and the Collective Agreement of Repsol Exploración. Also signed were the Collective Agreement of Repsol Directo, and the Seventh Supplementary Agreement of Repsol Lubricantes y Especialidades, S.A.

In addition, as measures for workforce adjustment, an agreement was reached to implement a collective dismissal procedure in nine Group companies: Repsol, S.A., Repsol Exploración, Repsol Butano, Repsol Comercial, Repsol Química, Repsol Lubricantes y Especialidades, RIPSA, Repsol Petróleo and CAMPSARED.

Internationally, agreements were signed in Brazil, Peru and Portugal.

The European Works Council met on November 22, 2016.

6.2. SAFETY AND ENVIRONMENT¹

The Company's main lines of activity in safety and the environmental issues include:

- Effectiveness in safety and environmental risk management
- Improvement of operational efficiency
- Promotion of a global culture of safety and environment

Safety and environmental objectives form part of the annual targets of employees, with a variable portion of remuneration linked to achieving targets, and they constitute between 10 and 20 percent of such objectives.

The incorporation of environmental and safety criteria in its activity is organized through the safety and environmental management system based on a set of rules, procedures, technical guidelines, tools and indicators applicable across the Company's activities and facilities.

EFFECTIVENESS IN MANAGEMENT OF SAFETY AND ENVIRONMENTAL RISKS

In order to ensure that Repsol facilities are safe, and to protect the parties involved, the correct identification, assessment, and management of the risks associated with industrial processes and assets is critical.

Risks are assessed throughout the assets' life cycles, applying the best international standards in their design and strict maintenance and operating procedures, aimed to prevent incidents affecting the industrial processes involved.

Repsol seeks to attain its goal of zero accidents by 2020. To do so, it has set yearly targets for reducing both the process accident rate and the personal accident rate in the company, and is promoting the necessary commitment of all who are involved in our activities. Irrespective of their position or geographic location, all Repsol employees are responsible for their safety and for contributing to the safety of those around them.

Process **safety enables** Repsol to respond to the main safety challenges facing the company, including quite unlikely risks that may, nevertheless, have very serious consequences for people, the environment, or the company's facilities or reputation.

Repsol tracks its performance following the definitions established by IOGP², API³ and CCPS⁴, which are sets of international best practices in the field. The company would note that process safety accidents decreased by 36% in 2016 from the previous year and surpassed the target.

¹ The figures and indicators in this section have been calculated in accordance with corporate standard that set out the criteria and common methodology to be applied in HSE. In general, safety and environmental data includes 100% of the data of companies in which we have a majority holding or operating control.

² The International Association of Oil & Gas Producers

³ American Petroleum Institute

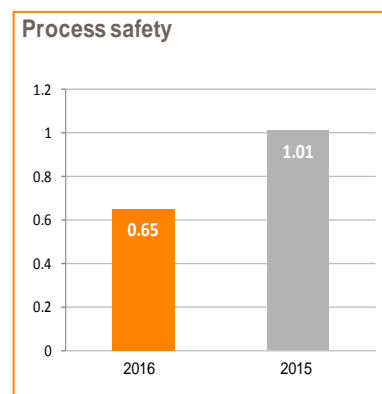
⁴ Center for Chemical Process Safety

PROCESS SAFETY INDICATORS ⁽¹⁾	2016	2015
PSIR ⁽²⁾ TIER 1 + TIER 2	0.65	1.01 ⁽³⁾

- ⁽¹⁾ A process safety accident is one in which the first line of control has been breached, with the following happening simultaneously:
- A chemical product or process is involved.
 - A process safety accident: An accident with loss of primary containment for which the following criteria are simultaneously met:
 - There is a chemical product or process involved.
 - The incident occurs within a certain location: the incident takes place at a production, distribution, or storage facility, at an ancillary services (utilities) facility or pilot plant related to the chemical product or process involved. This includes tanks, farms, auxiliary support areas (e.g. boilers, water treatment plants), and pipe distribution networks under the control of the installations. Drilling operations also meet the location criteria.
 - It gives rise to an unplanned or uncontrolled release of material, including non-toxic and non-flammable matter (e.g. vapor, hot water, nitrogen, compressed air or CO₂), with certain levels of consequence.
- Depending on the established thresholds, the process safety accident may be classified as Tier 1 or Tier 2.

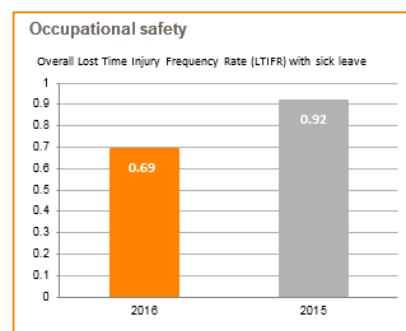
⁽²⁾ PSIR: Process safety incident rate

⁽³⁾ PSIR data have been recalculated, including only the hours worked in activities exposed to process safety events.



In addition, Repsol continues to work on reducing **occupational incidents**.

OCCUPATIONAL SAFETY INDICATORS ⁽¹⁾	2016	2015
Lost time injury frequency rate (LTIF) ⁽²⁾	0.69	0.92
Lost time injury frequency rate (LTIF) for company employees	0.73	1.12
Lost time injury frequency rate (LTIF) for contractor staff	0.66	0.79
Total Recordable Incident Rate (TRIR) ⁽³⁾	1.46	2.25
No. of company employee fatalities	-	-
No. of contractor staff fatalities	2	2



⁽¹⁾ Repsol's corporate regulations set out a common methodology and criteria for recording incidents, which is complemented by an incident management indicator guide.

⁽²⁾ Lost Time Injury Frequency Rate: number of lost time injuries and fatal accidents per million work hours.

⁽³⁾ Total Recordable Incident Rate: sum of fatalities, lost work day cases, restricted work day cases and medical treatment cases, per million work hours.

In 2016, Repsol regrets that two fatalities occurred among its contractors. The first one happened when a driller was struck from behind by a falling tree in the 3D seismic project Sakakemang in Indonesia. The second one occurred in November when a worker died of asphyxia from propane inhalation while changing a manometer on the LPG tank during a periodic and voluntary inspection of a client's LPG plant in Madrid, Spain. Following each accident, an exhaustive investigation was carried out to analyze the causes, with necessary measures and, as appropriate, training and awareness-raising actions, taken to prevent such accidents from recurring.

Moreover, the LTIF decreased by 25% from the previous year, as shown in above table. Since 2014, Repsol has also established TRIR targets. This indicator increases the scope to other types of accidents, encompassing those both with and without lost days. The TRIR is the most appropriate indicator currently for evaluating accident targets. In 2016, this rate decreased by 35% from the previous year.

Repsol worked throughout 2016 on its proactive safety plan called SMARtKeys. It consists of three areas: people, processes, and plants, and it was designed to prevent industrial accidents. It is applicable to businesses susceptible to these types of accidents: E&P, Refining, Chemical, LPG, and LPG.

Furthermore, Repsol is working on different lines of action related to prevention and response to **environmental accidents**, including mechanisms for the prevention and early detection of spills and the management of major hazards in the construction of wells.

SPILLS	2016	2015
Number of oil spills > 1 barrel that reach the environment	11	21
Volume of oil spills that reach the environment (metric tons) ⁽¹⁾	40	23

⁽¹⁾ Figure for oil spills of more than one barrel

In 2016, Repsol had a significant fuel spill¹ in marketing Peru in the road transport of an oil tank.

When a spill occurs, the company activates its emergency response mechanisms and subsequently implements new preventive actions to prevent recurrence.

IMPROVEMENT OF OPERATIONAL EFFICIENCY

Repsol continuously seeks to minimize the environmental impact of its activities by promoting a low-emissions strategy, optimizing and improving water and waste management, treating biodiversity as a key element and improving waste management.

Reducing energy and carbon intensity in our value chain

Repsol shares society's concerns regarding the effect human activity is having on the climate. The company recognizes that the current trend of greenhouse gas emissions is higher than required to limit the rise of the average global temperature to no more than 2°C above pre-industrial levels. Repsol is working to make the company part of the solution to climate change.

Repsol's commitment is articulated through its carbon strategy and the target of reducing CO₂ by 1.9 million tons for the 2014-2020 period. In 2016, Repsol is continuously improving and taking actions that have, so far reduced by 312²kt of CO₂ equivalent, which means that since 2014, a reduction of nearly 65% of the target set for the entire period was achieved.

Repsol is committed to greater energy efficiency in its operations by contributing to increasing the presence of gas in its energy mix and by boosting the development of the capture, use and storage of CO₂. It is also committed to continuously improving the use of energy resources in its facilities and activities throughout their life cycle by optimizing the technology and design of processes, the operation of facilities and supporting the purchase of energy-efficient products and services.

The company considers natural gas to be the most efficient solution for fostering a structured transition to a low-emissions future in the generation of electrical energy. Emissions of CO₂ per energy unit account for approximately half of those related to coal, not including the performance gap between the technologies associated with these fuels in electricity generation.

In this regard, Repsol is well positioned vis-à-vis its competitors: its Upstream portfolio is evolving towards a higher percentage of gas: about 65% in production and 75% of reserves are gas.

The capture, use and storage of CO₂ is a factor to be considered in the policy of reducing emissions of CO₂ in the company's value chain, and its activity will focus on projects that are economically viable, while also socially and reputationally acceptable.

¹ A spill is considered to be significant (based on the spillage volume and the sensitivity of the area) when it reaches the environment and meets any of the following conditions: it is greater than 100 bbl, it is greater than 10 bbl and occurs in a sensitive area, or any spill of a non-hydrocarbon substance, which is over 10 bbl and that has environmental significance due to its high salinity, acidity, toxicity or lack of biodegradability.

² Data under process of regulatory verification pursuant to ISO 14064. Once verification is complete, data will be available on the Repsol website.

In addition, the company also continuously monitors trends and the latest technologies being developed in renewable energy, investing in sustainable mobility and contribution to emissions reductions through production of and research into biofuels.

Repsol is part of the Oil and Gas Climate Initiative (OGCI)¹ in coalition with nine oil & gas sector companies. This is a voluntary initiative designed to share best practices and technology solutions between members, to thereby coordinate actions and intensify our investments in the battle against climate change. The initiative created a fund, the OGCI Climate Investment Fund, which will invest \$1 billion over 10 years to finance businesses and projects that help reduce greenhouse gas emissions.

Also, in June, Repsol signed on to the Climate and Clean Air Coalition (CCAC) - Oil & Gas Methane Partnership of the United Nations Environmental Program (UN Environment) and the Zero Routine Flaring by 2030 initiative of the World Bank. CCAC seeks to strengthen the oil & gas sector's commitment to reducing methane emissions. Methane is roughly 25 times more powerful than carbon dioxide as a heat trapping gas. The latter initiative obliges Repsol to seek out technically and economically viable solutions for minimizing the routine use of gas flaring. The two initiatives boost our emission reduction plans and will contribute to the company's sustainability.

Moreover, Repsol supports the setting of carbon prices as a political instrument that will aim to define a roadmap for investing in low-emission technology to support the quest for future that is compatible with scenarios below 2°C. In its assets subject to legislation under carbon instruments, Repsol takes into account the price in all its new projects and investments and in the modifications it makes in existing operations, which serves as an incentive to increase energy efficiency and reduce emissions of CO₂. In countries that have no carbon regulation, studies of sensitivity to projects and to its portfolio are conducted under different carbon price scenarios.

It must be noted that in 2016, Repsol attained a leading position in the Climate Disclosure Project (CDP)² due to its climate change strategy, with an A- grade. Standing in this range means that the company is outstanding in management of its carbon footprint, meeting its reduction targets and implementing programs to reduce emissions throughout its value chain, while adopting best practices in the field of environmental management.

Toward a strategic vision of water

Water is a strategic resource for Repsol, with a key economic, social, and economic value. For the oil & gas sector, water is essential for producing energy, just as energy is necessary for extracting, transporting, and treating water. The search for a balance in the energy-water relationship is a key challenge in our activity.

The Repsol Water Tool³ (RWT) enabled the creation of a water risk map for the Company. For each facility, specific 2015-2020 Action Plans were created to minimize the main risks identified. At a general level, the following are the main lines of activity on which these Plans are focused:

- Improving inventory quality. In 2016, Repsol worked on standardizing and improving water balances, the identification and reporting of water-related costs and the description of the features of different water currents.

¹ <http://www.oilandgasclimateinitiative.com>

² More information on Repsol's strategy, results and management of risks and opportunities related to climate change at <http://www.cdp.net/en>

³ A tool designed by Repsol incorporating aspects of the Global Water Tool and Local Water Tool, the two main technologies developed and adapted to the oil and gas industry for identifying and evaluating water's impacts and threats.

- Preparation for new regulatory requirements. In 2016, Repsol continued work in Downstream industrial plants to be prepared to comply with new legislative requirements related to BREF¹ and, in exploration and production assets, the spotlight is on the adequacy of the quality of all effluents as set out in company standards.
- Reduction of competition for water. In the year, Repsol continued working to attain excellence in operation throughout the life cycle of water, reducing captures of fresh water, optimizing the efficiency of water use in operation and increasing the use of recirculated water prior to discharge.

For 2016, the Company had set a target of completing more than 85% of the lines of work in the plans. This objective was surpassed, with about 95% progress achieved.

Repsol also worked on adapting the RWT in order to identify and assess the main risks related to management of water in unconventional activities and in assets acquired in the purchase of ROGCI. The objective of the company for 2017 is to implement the Action Plan defined for these new assets.

Protection and conservation of biodiversity and ecosystem services²

Repsol is committed to mitigating potential impacts on biodiversity and the resources it provides (ecosystem services) in its planning and execution of projects and operations. The company is inspired by the following principles for sustainable development in carrying on its activities:

- Preventing, minimizing and restoring the environmental impact in all its operations, and especially in sensitive, protected or biologically diverse natural spaces.
- Integrating biodiversity and protection of ecosystem services in the company's management systems and decision-making processes by including environmental and social assessments.
- Taking part in projects of research, conservation, education and awareness-raising.
- Reporting on biodiversity and collaborating with communities and other stakeholders.

Improve waste management and reduction

Repsol is working to improve waste management throughout the lifecycle of our processes. The company's commitment is reflected in the reduction target of 50,000 tons of waste for the 2015-2020 period.

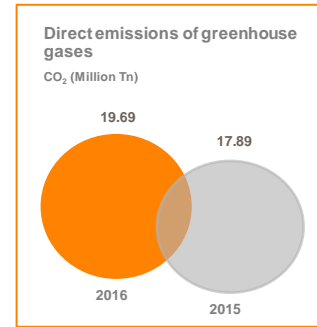
The annual target set was surpassed, with a reduction of 15,508 tons achieved in 2016 which, combined with the 9,000 tons reduction in 2015, meaning that the company has managed to attain nearly 50% its total reduction target for the period in only two years.

In addition to this quantitative target, qualitative measures have been established to improve waste management. Repsol has set improvement targets for the Exploration and Production business through the implementation of company Environmental Performance Practices (EPP) in management of mud and drill cuttings. These guidelines are a set of standards applicable to all geographical areas in which the company operates and regardless each country's specific legislation. In 2016, 100 of the planned EPPS were implemented.

¹ Reference document of best practices.

² For more information on specific action related to safety and environment measures, see the Sustainability Report for 2016, and the website www.repsol.com.

OPERATIONAL EFFICIENCY INDICATORS	2016	2015
ENERGY AND CARBON MANAGEMENT⁽¹⁾		
Energy consumption (10 ⁶ GJ) ⁽²⁾ ⁽³⁾	256	251
Direct emission of CO ₂ (million tons) ⁽³⁾ ⁽⁴⁾	19.69	17.89
Direct emission of CH ₄ (million tons) ⁽³⁾ ⁽⁴⁾	0.200	0.138
Direct emission of N ₂ O (thousand tons)	0.799	0.883
Direct emission of CO ₂ eq (million tons) ⁽³⁾ ⁽⁴⁾ ⁽⁵⁾	24.92	21.61
CO ₂ emissions reduced (million tons) ⁽⁴⁾ ⁽⁶⁾	0.312	0.381
WATER MANAGEMENT		
Fresh water withdrawn (kilotons)	52,022	57,303
Recycled water (kilotons)	10,292	8,964
Water discharged (kilotons)	42,250	49,859
Hydrocarbons in discharged in water (tons)	245	384
WASTE MANAGEMENT ⁽⁷⁾ ⁽⁸⁾		
Hazardous waste (metric tons)	56,920	49,097
Non-hazardous waste (metric tons)	217,552	94,453
OTHER ATMOSPHERIC EMISSIONS		
SO ₂ (tons)	29,214	28,304
NO _x (tons)	34,498	40,268
COVNM (tons) ⁽³⁾	54,874	51,993



- ⁽¹⁾ Figures at December 31, 2016 corresponding to energy and carbon management indicators are subject to an independent verification process that is completed after the preparation of this report. Definitive figures will be published on the Repsol website.
- ⁽²⁾ The calculation of energy consumption includes all fuels burned at the facility in order to generate the energy required by processes (both external fuel, usually natural gas, and internal fuel generated at the facility), as well as the net balance of imports and exports of electricity and steam. Data for 2015 have been modified with respect to the 2015 Management Report due to the update of the conversion factors used for the assets of ROGCI.
- ⁽³⁾ The increase in 2016 on the previous year is due to the inclusion of the assets of ROGCI from the month of January (2015 figures include ROGCI from its acquisition in May).
- ⁽⁴⁾ The 2015 figures have been modified with respect to the 2015 Management Report as a result of verification carried out subsequent to the issue of that report.
- ⁽⁵⁾ The global warming potentials used for the conversion to tons of equivalent CO₂ have been updated, based on the information published in the fourth report of the Intergovernmental Panel on Climate Change (IPCC) to align with the most common use reference in the sector.
- ⁽⁶⁾ CO₂ emissions reduction achieved through the implementation of greenhouse gas reduction actions, compared to the 2010 baseline.
- ⁽⁷⁾ Additionally, waste related to drilling muds should be considered, amounting to 169,372 tons and 243,609 tons in 2016 and 2015, respectively. The increase in the year is mainly a result of the incorporation of the muds of ROGCI.
- ⁽⁸⁾ The increase observed in 2016 over the previous year is due to an increase in land management activities

PROMOTION OF A GLOBAL CULTURE OF SAFETY AND ENVIRONMENT

Repsol understands that developing a safety and environmental culture shared by the entire company is crucial for achieving our goals.

In recent years, we have been working on defining a model of culture attributes, developing a diagnostic methodology that will enable us to ascertain safety and environmental culture and its degree of maturity in each facility, so as to establish improvement plans adapted to each context.

This methodology is based on our own model of safety and environmental culture, which consists of 7 basic pillars upon which work in upcoming years will be based: safety and environmental leadership, fair recognition, trust in reporting, shared information, an organization that learns, sensation of vulnerability, and capacity to adapt. Diagnostics have already been carried out in LPG Spain, in the Bolivia business unit, in the area of Chemicals in Sines, Portugal, and in the Cartagena refinery. We have also conducted workshops in Norway, Canada and the US to share the model, and impressions were shared on the state of each unit with respect to the model, in order to detect the main areas for work to improve in safety culture.

6.3. TAXES

REPSOL TAX STRATEGY AND POLICY

Repsol is aware of its responsibility toward the economic development of the societies in which it operates and of the importance of paying taxes for these purposes.

Taxes paid by the Repsol Group have considerable economic importance and involve a major effort for compliance and collaboration with the authorities, and it entails significant obligations.

The Group's tax strategy and policy, approved by the Board of Directors of Repsol, S.A., is aligned with the company's mission and values, and with its long-term business strategy, and can be summarized as follows

"The Repsol Group is committed to managing its tax affairs by applying best tax practices and acting transparently, paying taxes in a responsible and efficient manner, and promoting cooperative relations with governments and avoiding significant risks and unnecessary disputes."

Repsol strives to align itself with the best practices available with respect to tax transparency. Hence, it has a specific section on the corporate website with its tax policy and performance, which may be accessed at the following link: <https://www.repsol.com>.

IMPACT OF TAXATION ON COMPANY INCOME

Taxes have a significant impact on the Group's results.

Repsol is subject to various types of income tax in the countries where it operates. Each tax has its own structure and withholding rate. The tax rates applicable to profits on production of hydrocarbon (Upstream activities) are usually higher than general rates. In some cases, profits are not only taxed in the country where they are earned but also in the country where the companies that own the operations or their parent companies are domiciled (double taxation).

Additionally, Repsol is subject to other taxes that reduce its profits and, particularly, its operating results. This is the case of taxes on hydrocarbon production (royalties and similar), local taxes and fees, employment taxes and social security contributions, etc.

In 2016, the impact on net income was as follows:

Description	2016		2015	
	Amount	Rate	Amount	Rate
Income tax	238	14.4% ⁽¹⁾	(909)	(33.2%)
Total tax burden ⁽²⁾	1,066	43.1% ⁽³⁾	(76)	(2.9%)

⁽¹⁾ Income tax: Income tax/net income before tax, excluding Gas Natural Fenosa

⁽²⁾ Total tax burden includes: Income Tax + taxes and contributions that are deducted from the operating result.

⁽³⁾ Total tax burden/net income before tax, excluding Gas Natural Fenosa

Sign convention: (+) tax expense; (-) tax income

TAX CONTRIBUTION BY COUNTRY

In 2016, Repsol paid more than 11,764 million euros in taxes and similar public charges¹, and filed more than 53,000 tax returns.

In order to enable monitoring and analysis of the Group's tax contribution, taxes paid are segmented into those that involve an actual expense for the company, reducing its results (for example, corporate income tax, tax on production, social insurance payable by the company) and those that do not reduce results because they are withheld or passed on to the final taxpayer (such as value-added tax, tax on the sale of hydrocarbons, withholding taxes, etc.). The former are called "Tax burden" and the latter "Taxes collected."

Taxes effectively paid in 2016, by country

Million euros

	Tax burden			Taxes collected				Total 2016 taxes paid	Total 2015 taxes paid
	Corporate income tax	Other	Total	VAT	TH ¹	Other	Total		
Spain	783	419	1,202	2,489	4,929	342	7,760	8,962	8,762
Portugal	30	11	41	279	787	19	1,085	1,126	1,140
Italy	-	3	3	30	136	2	168	171	206
The Netherlands	89	-	89	-	-	-1	-1	90	58
Norway	-	3	3	17	-	24	41	44	15
Other	3	11	14	-39	-	32	-7	7	10
Europe	905	447	1,352	2,776	5,852	420	9,048	10,400	10,191
Peru	18	61	79	276	143	22	441	520	564
T&T	4	30	34	-40	-	5	-35	-1	176
Brazil	1	82	83	-	-	20	20	103	137
Bolivia	40	6	46	28	-	5	33	79	125
Colombia	23	1	24	-4	-	19	15	39	56
Venezuela	6	5	11	12	-	2	14	25	81
Ecuador	6	7	13	1	-	5	6	19	43
Other	-	-	-	-	-	-	-	-	46
Latam & Caribbean	98	192	290	273	143	78	494	784	1,228
Indonesia	128	0	128	2	-	6	8	136	130
Malaysia	0	142	142	-18	-	17	-1	141	121
Russia	5	52	57	6	-	2	8	65	66
Vietnam	13	15	28	-2	-	2	0	28	28
Other	-	2	2	4	-	15	19	21	16
Asia and Oceania	146	211	357	-8	-	42	34	391	361
United States	-3	48	45	2	-	42	44	89	80
Canada	2	20	22	-5	-	47	42	64	74
North America	-1	68	67	-3	-	89	86	153	154
Algeria	20	3	23	-	-	5	5	28	27
Other	-	1	1	-	1	6	7	8	28
Africa	20	4	24	0	1	11	12	36	55
TOTAL	1,168	922	2,090	3,038	5,996	640	9,674	11,764	11,989

¹ Tax on hydrocarbons. Includes amounts paid by logistics operators when the company is ultimately responsible for payment.

¹ Only taxes actually paid during the year are counted: hence taxes accrued during the period but that will be paid in the future are not included. Refunds from previous years are not included.

TAX HAVENS

In accordance with its tax policy, Repsol refrains from the use of opaque or artificial structures that aim to conceal or reduce the transparency of its activities. Repsol is committed to not having a presence in tax havens, unless it is for legitimate business reasons.

If it has a presence in a tax haven, the following is guaranteed: (i) authorization by Board of Directors of the incorporation or acquisition of a company, along with periodic reporting on activity; (ii) strict compliance with regulations governing its business activities; (iii) application of the general standards and procedures for administration and control of Group business procedures; and (iv) full transparency and cooperation with relevant authorities in supplying any information requested on the Group's business activities.

The company is actively working to reduce its already limited presence in territories classified as tax havens or that are regarded as non-cooperative by tax authorities. For these purposes, the official lists of tax havens approved by the OECD and the Spanish government are used as a reference.

In recent years, Repsol has significantly reduced its presence in these territories from more than 40 companies to a negligible level, as described below.

Repsol has no presence in territories included in the OECD's list of uncooperative tax havens of 2012, which are classified as "lacking information transparency."

With respect to the Spanish list of tax havens, as of December 31, 2016, Repsol has no active controlled company with its registered address and tax residence in such territories. Nevertheless, the following must be noted:

- a) The Group holds two controlled entities domiciled in a tax haven that are inactive and/or in the process of liquidation:
 - Greenstone Assurance Ltd., (Bermuda): an insurance company whose current purpose is limited to liquidating risks assumed in the past (a run off situation, in insurance jargon), and
 - Permanent establishment in Liberia of Repsol Exploración Liberia BV (The Netherlands): it previously previously conducted hydrocarbon exploration and production activities, but it has ceased its activity and is currently in the process of de-registration.
- b) The Group holds minority, non-controlling interests in four companies located in tax havens:
 - Oil Insurance, Ltd. (5.68%; Bermuda) and Oil Casualty Insurance, Ltd. (1.83%; Bermuda): mutual insurance companies in the oil & gas sector, covering Group risks from Bermuda, where insurance companies dealing with the international risks of E&P oil activity are typically located;
 - Oleoducto de Crudos Pesados, Ltd. (29.66%, Cayman Islands): a company that includes an international association agreement (joint venture) that channels the investment in an Ecuadoran operating company that manages oil activity infrastructures (Oleoducto de Crudos Pesados);
 - Transasia Pipeline Company (15%, Mauritius): a joint venture that channels the investment in an Indonesian operating company that manages gas infrastructures (PT Perusahaan Transportasi Gas Indonesia).

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

- c) There are three Group companies which were originally incorporated in tax havens but that have moved their tax residence either to European Union countries or to other participant countries in G-20 initiatives which are not classified as tax havens:
- Fortuna Resources (Sunda), Ltd: a company that had exploration assets in Indonesia and which is currently inactive and whose liquidation is pending the conclusion of several legal proceedings. The company was originally incorporated in the British Virgin Islands, but it moved its tax residence to the United Kingdom.
 - Foreland Oil Limited: a company with exploration assets in Papua New Guinea, although they are in the process of being transferred to other Group companies as a step towards the company's liquidation. The company was originally incorporated in the British Virgin Islands, but it moved its tax residence to the United Kingdom.
 - Santiago Oil Company, Ltd: non-controlled company (49%) that holds acreage in Colombia. The company was originally incorporated in the Cayman Islands, but it moved its tax residence to Colombia.

Lastly, Repsol has no companies domiciled in countries or territories classified by Spanish law as nil-tax jurisdictions other than the aforementioned tax havens.

Repsol's presence in these territories is not an attempt to reduce the transparency of its activities or engage in undesirable – much less illegal – practices, but is related to appropriate purposes that are in line with conventional sector standards.

COOPERATIVE RELATIONS

The Group is committed to strengthening a relationship with the tax authorities inspired by the principles of trust, good faith, professionalism, collaboration, loyalty and a search for mutual understanding on a basis of reciprocity, all for the purpose of ensuring application of the tax system, increasing legal certainty and reducing litigation.

Repsol in Spain has followed the Code of Best Tax Practices since 2010, an initiative that fosters a cooperative relationship between the Spanish tax agency (AEAT) and companies. As an expression of the commitment to stronger transparency undertaken under the CBPT, Repsol has voluntarily submitted to the AEAT its "2015 Tax Transparency Report," which includes significant information on the Group's economic activity and its tax-related actions and decisions.

In Portugal, Repsol is a founding member of the Large Enterprise Forum, which was created in 2014. The Repsol Group also participates in similar initiatives in Singapore, the United Kingdom and Netherlands.

Lastly, Repsol is also part of the Extractive Industry Transparency Initiative (EITI). It also shares and supports the principles outlined in the BIAC Statement of Tax Principles for International Business and the OECD Guidelines for Multinational Enterprises.

MANAGEMENT OF TAX RISK

Tax affairs are handled in an orderly and expert fashion to guarantee proper compliance with tax obligations and management of risks of a tax nature. Efficient procedures, systems, and internal controls are in place to ensure correct execution of tax-related processes.

The Group has an appropriate organization for ensuring application of its tax policies. The organizational principles provide assurance that tax matters are handled by expert teams in a manner that is professional, integrated (according to a single criteria), and global, as responsibility encompasses all the Group's tax matters in every area of activity.

The Board of Directors is informed periodically, and at least once a year, of the policies and strategies followed during the year, and of the most relevant aspects pertaining to the management of tax affairs and tax risks. Likewise, any transaction which may entail a special tax risk is submitted to the Board of Directors for approval.

Accordingly, investment and divestment proposals and significant company operations include an analysis of tax implications prior to decision making, thus allowing the Group to identify investments or transactions that may involve a special tax risk.

The management of tax risks is embedded in the Group's overall policy of Integrated Risk Management. It is embodied in the existence of internal processes, systems and controls for the management of tax risks.

The Group keeps an updated risk map in which tax-related risks are specifically identified, whether they arise from (i) tax policies applied, (ii) possible non-compliance, (iii) or controversies regarding the interpretation and application of laws, or the instability of the tax, legal or contractual framework.

Similarly, the Repsol Group actively manages its tax risks so as to mitigate or eliminate them and, if it must assume such risks – because an understanding with the tax authorities cannot be reached – it undertakes the best possible defense of the Group's legitimate rights.

6.4. RESEARCH, DEVELOPMENT AND INNOVATION (R+D+i)

The world is in the midst of a process of change and transformation in which the development of new technologies, their transfer and implementation are a guarantee that Repsol can offer quality products and services in the present, and also prepare for the future.

Pursuit of R+D projects, the creation of basic knowledge and its scaling to new technologies being implemented and work in a collaborative network are some of the keys in Repsol's innovation strategy.

In 2016, further advances were made in the development of pioneering technologies in hydrocarbon **exploration and production** and mainly in the implementation phase of technologies in company projects. As examples of new technology achievements, the Sherlock project completed installation of all capacities in digital petrophysics for the description of storage, and Pegasus has now produced its first prototype of cognitive technology for acquisition of assets and optimization of development plans. Among other achievements, the Horus Project successfully completed its concept test with nano-sensors embedded in drilling cement capable of communicating with one another at the bottom of a well and generate energy within their own casing, for the purpose of monitoring wells' integrity.

In our **refinery technology**, processes have been designed in laboratories and pilot plants of the Repsol Technology Center that have been successfully implemented in our industrial plants to improve their efficiency. Noteworthy is the knowledge developed to exploit the processing of opportunity crude oil, allowing for adjusting processes to the supply of such crude, while products are adapted to market demand. Also, prototypes have been developed that allow for offering products with a high technology load, such as smart asphalt, or lubricants designed to save fuel in state-of-the-art engines.

The SPAIN 2017 project, which is an initiative for **research in mobility**, aims to develop a demonstration vehicle that combines a fuel combustion engine with electric propulsion and the recovery of thermal and kinetic energy. The project, undertaken in a consortium with other companies, has advanced according to plan and now has yielded a set of experimental developments that are ready for testing to demonstrate the viability of a propulsion system focused on improving efficiency and reducing local emissions in urban environments.

In R+D for **new energies and materials**, the first steps have been taken in advanced biology for real-scale hydrocarbon bioprospecting and the exploration of ways to apply biotechnology in our present processes and products.

A research project has been undertaken into electric car batteries with CIDETEC, based on advanced lithium technologies.

In materials, the scaling of polyol technologies with CO₂ has begun, with the first steps in the pilot plant and the production of the first batches for evaluation in the market. Further, the concept test at laboratory scale in a chemically modified EBA polymer for the development of new materials with self-repair properties was a success.

Work in a collaborative network remains a pillar of Repsol's strategy. For example, the last stage was completed of the third edition of the **Inspire Program**, with three disruptive projects chosen from among nearly 100 proposals received from 49 Spanish universities and research institutes.

The investment amounted to 78 million euros.

OPERATING INDICATORS	2016	2015
R+D Investment (million euros) ⁽¹⁾⁽²⁾	78	95
No. of external scientific collaboration agreements	98	119
Projects supported by the Spanish government	10	13
Projects supported by the EU	11	11

⁽¹⁾ Indicator calculated in accordance with the Group's reporting model described in Note 2.3, "Segment Reporting," of the financial statements of December 31, 2016.

⁽²⁾ Amounts calculated using the guidelines established in the Frascati Manual of the OECD and the EU Industrial R&D Investment Scoreboard presented annually by the European Commission.

All this activity is led by the Repsol Technology Center, the scientific heart of the company, which is located on a campus of more than 192,000 m² and has more than 56,000 m² of built-up space of facilities and laboratories, bringing Repsol international renown for its technology.

Innovation

The year 2016 was a turning point in the company's innovation activity. The innovation and improvement units present in every business area have been brought under broader areas that also include business strategy and development. Additionally, a significant emphasis has been laid on supporting the objectives of the Transformation Program, which was designed to meet the challenges of value creation and increased resilience set out in the 2016-2020 Strategic Plan. This has enabled the company to lend a more strategic orientation to the initiatives it supports, without losing sight of the aim of promoting a cultural shift that bring a change in working habits.

The lines of work in 2016 were as follows:

- Strategic innovation, as a striving to do things differently, daring to go one step further and accept risks in order to discover new ways of generating value for our organization. Support is being given to 50 highly-transversal work teams, which have been using internal entrepreneurial methods to develop opportunities in diverse areas.
- Continuous improvement as a fundamental element in our management system for aligning day-to-day operations with the Company's strategy, by means of a cultural change aimed at maximizing value contribution in a sustainable way. More than 150 teams have worked on this line, all with positive and tangible results.
- Knowledge, as the company's competitive edge, fostering new forms of work that drive continuous improvement, learning and innovation through working as a community. Third-generation communities of practices are being led by business units' knowledge management areas.

6.5. SHAREHOLDERS AND INVESTORS

Repsol has an Investor Relations area that addresses the information needs of institutional investors as well as minority shareholders, including communication with fixed-income investors and financial analysts.

The primary indicators of its activity are as follows:

INFORMATION FOR SHAREHOLDERS AND INVESTORS	2016	2015
Calls answered by the Shareholder Information Office (SIO) ⁽¹⁾	30,000	27,000
Visits to investor section of Repsol website ⁽²⁾	473,243	380,215
Roadshows and meetings with institutional investors ⁽³⁾	29	49
Roadshows and meetings with socially responsible investors ⁽³⁾	11	8
Roadshows with minority shareholders ⁽³⁾	12	14
Members of the “Repsol en Acción” community	56,100	46,400
Events for minority shareholders	98	79

⁽¹⁾ The SIO deals with both current and potential minority shareholders. Includes calls answered by the Call Center.

⁽²⁾ Total visits to Shareholders and Investors section (Spanish and English versions).

⁽³⁾ Roadshows are visits to different cities to meet institutional investors or minority shareholders.

The company publishes on its website the communication policy, which sets out the principles and criteria that govern communication and contact activities with shareholders, institutional investors and proxy advisers, thereby complying with the recommendations of the Spanish National Securities Market Commission (CNMV) in its Good Governance Code of Listed Companies.

Within its general lines of action in 2016, Repsol continued to strengthen its service model for socially responsible investors (Environmental, Social and Governance investors), whose weight among Repsol shareholders has remained stable at approximately 11%.

With respect to services for minority shareholders, the loyalty program “Repsol en Acción,” through which benefits to such shareholders are coordinated, had about 56,000 members at year-end 2016. Additionally, half the members of the Shareholders' Advisory Committee were renewed, in accordance with its internal regulation. The members elected to the Committee participated in meetings in April, June, September and December.

In 2016, the specialized Extel survey, which includes the vote of more than 20,000 investment professionals in Europe, recognized Repsol’s Chief Executive Officer, the Chief Financial Officer and Investor Relations team for their work in communication with the investment community.

6.6. COMMUNICATION

Repsol’s Communications policy aims to respond to the growing demands of its stakeholders by offering relevant and truthful information. In this manner, the Company reaffirms its commitment to transparency and responsibility, two emblems of its corporate identity.

In its communication activities, Repsol aims to convey its values proactively, and to share all business-related information with shareholders and investors, clients, suppliers, communities, and employees.

To materialize this commitment to transparency, Repsol uses all available channels and technologies: its corporate website guiarepsol.com, digital newsletters, social networks, advertising campaigns, meetings with the media or press releases, among others.

PRIMARY INTERNET ACTIVITY INDICATORS	2016	2015
Press releases	419	471
Visits to website (monthly average)	2,410,539	2,724,000
Unique users on corporate website (monthly average)	1,523,183	1,967,000
LinkedIn followers	196,341	165,775
Facebook followers	192,054	157,250
Twitter followers	113,940	99,990
Instagram uses	145,426	91,310
YouTube users	13,912	8,320
Flickr users	1,382	1,227

Throughout 2016, advertising campaigns were implemented to highlight how Repsol works every day to facilitate access to more efficient, safer, more innovative and more sustainable energy, while promoting talent as one of the core values of the Company's human team, and showing our concern for the wellbeing of the customers of any of our energy solutions and services. As a responsible company, we strive to maintain rigorous standards in our advertising. We continue to adopt voluntary mechanisms and codes that lend transparency and veracity to all such communications (such as membership in the Spanish Association for the Self-Regulation of Advertising Communication, or adhesion to the Code of Self-Regulation regarding Environmental Claims in Advertising and Marketing).

For another year, sponsorship and public relations programs have helped generate notoriety for the Repsol brand name internationally and boost its image as a leading company that is innovative and committed to society.

In the 2016 season, Marc Marquez won his third world MotoGP championship, becoming the youngest rider to have won three championship titles in the highest MotoGP category, and Toni Bou won his twentieth trial, as the rider to have won the most world titles in motor sports. These sponsorship programs unquestionably increase the company's notoriety at a worldwide level, thus helping to clear a path for its international expansion. Also, the experience acquired from developing specific products for top competitions enables Repsol to remain a research leader, improve its commercial products and to meet its customers' high expectations.

In 2016, support continued for the Repsol FIM CEV¹ program and for the scholarship program of the Repsol Monlau Technical School, thus creating opportunities and providing appropriate training for young athletes and future professionals.

¹ Junior international motorcycling championship where young drivers are trained, of which Repsol is the main sponsor.

7. OUTLOOK

7.1 GENERAL OUTLOOK

MACROECONOMIC OUTLOOK

World economic growth continues to be moderate. But following a start to 2016 with high instability, activity rebounded throughout the year. The latest forecasts of the International Monetary Fund (IMF WEO Update, January 2017), estimate 2016 global growth at 3.1%, which is slightly lower than the 3.2% of 2015, but they expect an increase to 3.4% in 2017.

The growth outlook has improved for emerging economies which, after five years of slowdown, grew by 4.1% in 2016, the same rate as in 2015, and they should attain 4.5% growth in 2017. This rebound has been assisted by several factors: (i) the stabilization of the Chinese economy and perspectives for an exit from the crisis in Brazil and Russia; (ii) a certain recovery in commodity prices and (iii) the return of capital inflows, which was initially supported by a context of very low interest rates in the advanced economies, a situation that has recently begun to reverse.

Meanwhile, the advanced economies are expected to maintain a modest pace of recovery, with growth forecast at 1.9% in 2017, three tenths higher than projected in 2016. The US should accelerate its growth to 2.3%, assisted by the fact that the contribution of inventory accumulation will cease to be negative (in 2016, it eroded growth). In addition, a larger fiscal stimulus is expected in the country, although it would mainly take place from 2018. The Eurozone meanwhile, should steady its growth at about its potential (1.6%), but this forecast is subject to considerable uncertainty due to the effects of the following: (i) the British exit from the EU, of which insufficient details are known in order to be able to assess its impact; (ii) doubts that continue to arise about the health of a part of the European banking system; (iii) the upcoming electoral calendar, where the common denominator is the risk of results that call into question European institutions.

The Spanish economy continues to grow at robust rates (3.2% in the third quarter of 2016). The European Commission and the IMF forecast a moderate slowdown of economic growth in Spain for 2017, to about 2.3%, to the extent that some of the tailwinds – such as low crude oil prices – should begin to weaken. However, rising exports and the recent robustness shown by the economy mean that the favorable momentum may continue, with possible upside surprises.

Macroeconomic forecasts, key figures

	GDP (%)		Average inflation (%)	
	2016	2017	2016	2017
World economy	3.1	3.4	3.3 ¹	3.4
Advanced countries	1.6	1.9	0.7	1.7
Spain	3.2	2.3	-0.3	1.0
Emerging countries	4.1	4.5	4.5	4.5

Source: IMF (*World Economic Outlook Update* January 2017) and Repsol Economic Research Department.

Overall, downside risks to world growth have decreased recently. Nevertheless, elevated uncertainty persists and new risks are seen in the medium term. For example, Donald Trump's victory in the US brings to the fore a trend towards questioning the benefits of globalization and trade liberalization policies. An increase in protectionism would harm world trade, and exert downward pressures on activity, especially in emerging countries that are more dependent on external demand.

¹ Data from IMF (*World Economic Outlook* October 2016)

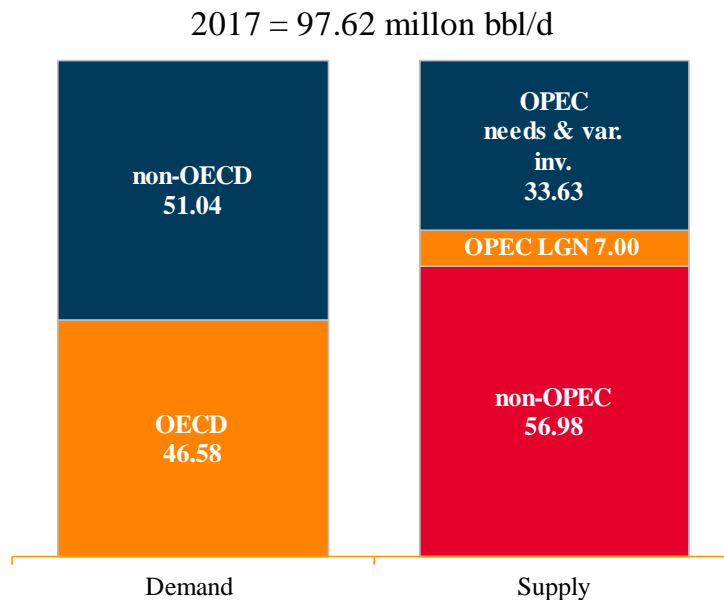
ENERGY SECTOR OUTLOOK

Short term energy sector outlook

In the short term, according to the International Energy Agency (IEA), the balance between supply and demand for oil will be determined mainly by an agreed reduction in OPEC production and some non-OPEC countries. The International Energy Agency (IEA) is expecting a mild recovery in production for 2017 of about 220 thousand barrels a day, nearly all of which would be supplied by Brazil, Canada and the countries of the former Soviet Union. On the OPEC side, the market is keenly watching for fulfillment of the commitments to a production cutback, which would have a direct effect on crude oil prices.

The increase in demand would again be driven by non-OECD countries, with expected growth for 2017 of 1.34 million barrels a day; while in OECD countries, the change will be virtually zero. This scenario means an increase by 0.9 million barrels a day in needs for OPEC oil and inventory changes for 2017 of up to 33.6 million barrels a day. Hence, the agreement reached by the petroleum-exporting countries in November 2016 to reduce output assumes a deficit market in 2017, which would help reduce high inventory levels accumulated in the two previous years.

Short-term outlook of the global balance between supply and demand



Source: AIE and Repsol Economic Research Department.

With regard to the movement of crude oil prices in the short term, the analyst consensus points to an average Brent crude price for 2017 and 2018 that rebounds by about \$10/bbl every year, up to \$57 and 65/bbl, respectively.

With regard to the movement of gas prices in the short term, the adjustment of the balance begun in 2016 is expected to continue into 2017. Thus, two key questions will be how production performs and the pace at which non-temperature related demand begins to consolidate exports (liquefied natural gas (LNG) and Mexico) and industry new petro-chemical plants, fertilizer plants and methanol plants, mainly).

Accordingly, the following trends are expected to continue: (i) reduction in production growth due to the cutback in investment in upstream companies; (ii) new structural demand not related to temperature (industrial projects and exports).

In demand, exports of United States LNG from Cheniere Energy's Sabine Pass plant in Louisiana began in February 2016. At present, three other liquefaction projects are now under construction: Cameron, Freeport and Cove Point. Another three projects (Corpus Christi, Elba Island and Lake Charles) are now

under 20-year contracts even though a final investment decision has not yet been made. Moreover, infrastructures continue to be built to boost the export of gas via pipeline to Mexico. Also, more than 400 intensive industrial projects in gas consumption are planned between now and the year 2020 (fertilizers, methanol and petrochemicals).

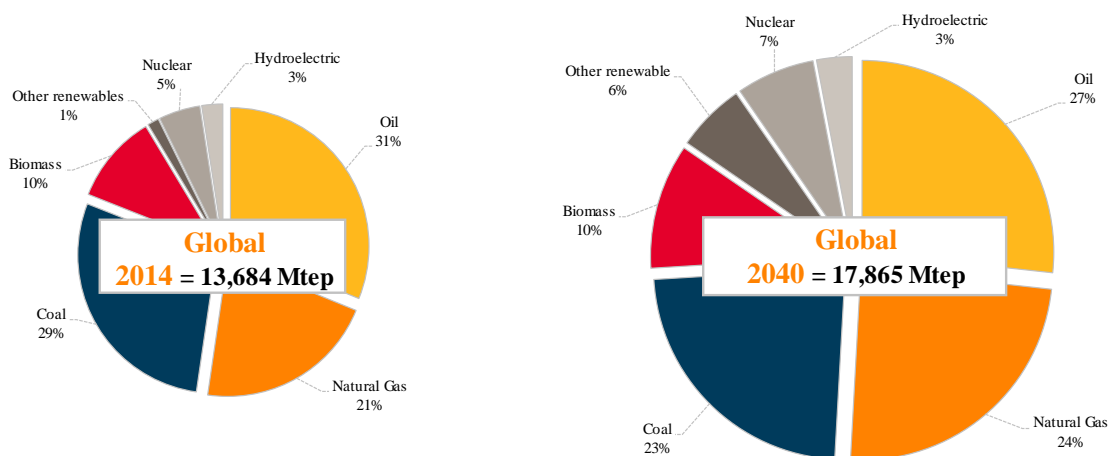
The following factors may have the greatest short-term effect on the balance between supply and demand: (i) higher-than-expected growth in the production of dry gas (due to a significant increase in productivity gains and/or greater volume of oil-related gas in a scenario of higher crude prices); (ii) lower-than-expected LNG exports, which may occur in a scenario of low crude prices); (iii) lower industrial demand, which would influence economic growth (industrial production); the dollar exchange rate (a stronger dollar makes US exports less competitive); and movements in the prices of liquids from natural gas (mainly ethane and liquefied natural gas) which are the raw materials for industrial projects planned in petrochemicals, fertilizers and methanol plants.

Long-term energy sector outlook

On a global scale, hydrocarbons contribute more than half of the primary energy consumed. Specifically, 31% of global primary energy consumption is derived from oil, which is the most commonly used energy source.

No major changes are expected in the coming years. According to the 2015 World Energy Outlook report, published by the International Energy Agency (IEA), in its base scenario, crude oil's share of the 2040 energy matrix will decline by 5 percentage points compared to 2014, while natural gas will reach a 24% share of global energy demand, which is estimated at 17,934 million oil equivalent tons.

Long-term outlook of world primary energy matrix



Source: AIE and Repsol Economic Research Department.

7.2 OUTLOOK FOR BUSINESS

In October 2015, Repsol presented its Strategic Plan for the 2016-2020 period, in which the company undertook to capitalize on the growth achieved through its fulfillment of the objects set out in the previous Strategic Plan.

In order to meet the challenges of creating value and boosting resiliency set forth in SP 2016-2020, in 2017 the Company will focus, among other aspects, on the design and deployment of the Transformation Program rolled out in 2016, as well as the implementation of key efficiencies and synergies in all business areas and countries.

The Efficiency Program announced with the Strategic Plan and applicable to the entire Company, has incorporated capex and opex savings which, along with the Talisman integration synergies, contributed more than 1,600 million euros in 2016. This enables Repsol to take on significant challenges as it looks forward to the year 2017 period. The plan is expected to grow in 2017, and generate 2,100 million euros in savings, thus beating expectations and anticipating the objective for 2018.

In addition, a substantial portion of the planned divestments of the first two years of the Strategic Plan materialized in 2016, thus surpassing the established target of 3,100 million euros. Consequently, and following the streamlining of our portfolio, the year 2017 should be a year of business consolidation and of focus on the efficiency of current assets.

In 2017, exploration and production will remain focused on our three core regions: North America, Latin America and Southeast Asia, regions with high organic development potential, with production volumes in 2017 that will remain at levels similar to those attained in 2016, even after the aforementioned divestments.

Planned investments in this region for the 2016-2017 period will amount to approximately 5,500 million dollars, a figure that represents a reduction of more than 30% in year-on-year and like-for-like terms, compared to 2015. This is due, inter alia, to the optimization process and Efficiency Program. Investment in 2017 will focus on high value-added projects and will mainly concentrate on development and construction of facilities in Trinidad, United States, Brazil, Venezuela, Canada, the UK, Peru, Bolivia, Indonesia, Malaysia and Vietnam, and the drilling of exploration wells.

This will continue to enable this business area to lower the price above which crude oil generates a positive cash flow and to increase the return on average capital employed (ROACE).

The greater degree of efficiency in exploration and production will be supplemented by the strengths shown downstream, which has reaffirmed the benefits Repsol has gained as an integrated company.

Investments made in the Cartagena and Petronor refineries, and the corresponding improvement in the margin of the refining system, have been key to placing Repsol at the head of the integrated European companies in terms of efficiency, which guarantees value creation and resilience against scenarios of low oil prices. The targets set for 2017 are:

- In Refining and Chemical facilities, increased plant reliability and orientation, via the Efficiency Program, toward the reduction of energy costs and CO₂ emissions, which will lead to continuous improvement of margins;
- Maximize business value of marketing and consolidate competitive position in the new legal framework, while streamlining operations.
- Efficiency improvement policy, with strict cost containment, while adapting to the particular situation of growth businesses.

In the expected price environment, and owing to the integration of our businesses, among other factors, Repsol expects to be able to generate sufficient cash to fund its investment needs, remunerate its shareholders and reduce its debt.

8. RISKS

8.1. RISK FACTORS

Repsol's operations and earnings are subject to risks as a result of changes in competitive, economic, political, legal, regulatory, social, industrial, business and financial conditions, such as those listed below.

STRATEGIC AND OPERATIONAL RISKS

Uncertainty in the current economic landscape

Although global economic growth has stabilized and perspectives are better, uncertainty and risk remain elevated. In this regard, geopolitical risk has assumed special significance. The result of the US elections and the vote in favor of the UK's exit from the European Union have brought to the fore a greater polarization in society, and the fact that the status quo of the last 30 years – that is, liberalization of trade and low levels of intervention – are being called into question. In Europe, important elections are being held in the coming months, in which support for European institutions will be put to the test.

The impact of these events on world growth and, accordingly, the performance of markets is as yet uncertain, but not necessarily adverse, although it may shift the distribution of world growth. If the one-trillion euro fiscal stimulus envisaged in Donald Trump's program takes shape, it would trigger greater growth in the US, but if it is accompanied by protectionist measures, it would weaken the growth of emerging countries.

Further, from a financial perspective, another risk for the world economy is the potential wider divergence in economic policy between the leading central banks. Although the European Central Bank and the Bank of Japan will pursue an expansive monetary policy, if Donald Trump's policies cause an uptick in inflation, the Federal Reserve may have to hike interest rates more quickly than expected, which would strengthen the dollar. A stronger dollar would tighten financial conditions in the emerging countries and endanger the solvency of governments and enterprises with dollar-denominated debt.

Nor can a risk event in China be discounted, as activity has been driven by sharp growth in depth, which is now equal to 250% of GDP and is highly concentrated in the corporate sector.

Following the recent OPEC meeting of November 30, 2016, which decided to set aside two years of a policy of defending market share, and to cut back production in order to backstop prices, the future of the market appears to be more promising. However, there are factors that may add uncertainty to the market; but given the scale of OPEC's output cut of 1.2 million bl/d, and the more than likely adhesion of non-OPEC countries with an additional cut of 0.6 million, the adverse impact will tend to be low. These factors include: i) lower-than-expected demand from emerging countries; ii) a quicker-than expected response to non-convention US shale to the expected price rise; iii) an increase in the output of Libya and Nigeria, OPEC countries that were left out of the cutbacks decided in the November 30 meeting, and iv) a very low level of fulfillment by OPEC countries of their individual commitments to production cutbacks.

Climate change

Repsol is exposed to possible changes in the regulatory framework for greenhouse gas emissions arising from either our industrial operations or the use of our products.

Also, following the Paris Agreement, country's commitments under their respective National Determined Contributions (NDC) will have a significant impact on climate policies. The agreement is undoubtedly another step toward a low-emissions economy in which a more sustainable model of company will be crucial.

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails*

Repsol's assets are subject to risks arising from physical changes caused by climate change, and risks deriving from the rising level of the sea, changes in precipitation patterns, changes in extreme temperatures or droughts, or even more frequent occurrence of extreme meteorological phenomena (cyclones, hurricanes, etc.). Repsol is present in areas that are liable to suffering these effects.

Further, a change in consumers' behavior as they seek out less carbon-intensive products could also affect Repsol's competitiveness if it fails to adapt to these changes.

Repsol, and the oil and gas industry, are exposed to adverse trends of opinion that may affect the share price. Initiatives that promote disinvestment in fossil fuel extraction companies to reduce the impact of their products on climate change may affect the shareholding base of the company.

Repsol cannot predict the exact impact that the described risks may have on its activities, the income from its operations or the financial position of the Repsol Group, or its competitiveness.

Fluctuations in international prices of crude and reference products and in demand owing to factors beyond Repsol's control

World oil prices have fluctuated widely in recent years, and are driven by international supply and demand factors over which Repsol has no control.

The international prices of products are influenced by the price of crude oil and by demand for such products. Also, international prices of crude oil and of products impact the refining margin. International oil prices and demand for crude oil may also fluctuate significantly during economic cycles.

Reductions in oil prices adversely affect Repsol's profitability, the value of its assets and its plans for investment, which may be altered as a result of delays. Similarly, a significant drop in capital investment could negatively affect Repsol's ability to replace its crude oil reserves.

Regulatory and tax framework of Repsol's operations

The oil industry is subject to extensive regulation and intervention by governments in Upstream activities such as the award of exploration and production permits, the imposition of specific drilling and exploration obligations, restrictions on production, price controls, divestments of assets, foreign currency controls, and the nationalization, expropriation or cancellation of contractual rights.

Likewise, in Downstream, oil refining and petrochemical activities, in general, are subject to extensive government regulation and intervention in matters such as safety and environmental controls.

Also, the energy sector, particularly the oil industry, is subject to a unique tax framework. In Upstream activities there are often energy taxes on profit and production, while in Downstream activities, taxes on consumption products are common.

Repsol cannot foresee the exact scope of changes to such laws or their interpretation, or the implementation of certain policies, which could adversely affect its business, results and financial position.

Repsol is subject to extensive environmental and safety legislation and risks

Repsol is subject to a wide variety of environmental and safety legislation and regulations in every country where it operates. These regulations govern, among other matters, Repsol's operations, environmental quality standards for products, air emissions and climate change, energy efficiency, extractive technologies, water discharges, remediation of soil and groundwater and the generation, storage, transport, treatment and final disposal of waste materials and safety thereof.

Lastly, following the acquisition of ROGCI, the company increased its activity in non-convention hydrocarbons. From an environmental standpoint, concern over the environmental impact of exploring for and producing this type of resources could prompt governments and authorities to approve new regulations or impose new requirements on their development. If they do, it could have an adverse impact on the Company.

Repsol cannot predict the exact scope of the changes in environmental and safety regulations, or how they will be interpreted or if certain policies will be implemented. Any regulatory change could cause an adverse impact on the Repsol Group's operations, the income from its operations and financial position.

Operating risks of Repsol's activities

Hydrocarbon exploration and production (Upstream): reliance on the cost-effective acquisition or discovery of, and, thereafter, development of, new oil and gas reserves.

Oil and gas exploration and production activities are subject to particular risks, many of which are beyond the control of Repsol. These activities are exposed to production, equipment and transportation risks, errors or inefficiencies in operations' management and purchasing processes, natural hazards and other uncertainties relating to the physical characteristics of oil and natural gas fields and their dismantling.

Furthermore, exploration projects are complex in terms of their scale and are susceptible to delays in execution and cost overruns with respect to initially-approved budgets. In addition, some of the development projects are located in deep waters, mature areas and other difficult environments, such as the Gulf of Mexico, Alaska, the North Sea, Brazil and the Amazon rainforest, or in complex oilfields that could aggravate these risks further. It should also be noted that any form of transport of oil products always has inherent risks: by road, rail or sea transport, or by pipeline, oil or another hazardous substances could leak; this poses a significant risk due to the potential impact a spill could have on the environment and on people, especially considering the high volume of products that can be carried at any one time. Should these risks materialize, Repsol may suffer major losses, interruptions to its operations and harm to its reputation.

Moreover, Repsol must replace depleted oil and gas reserves with new proven reserves in a cost-effective manner for subsequent production to be economically viable. Repsol's ability to acquire or discover new reserves is, however, subject to a number of risks. For example, drilling may involve negative results, not only with respect to dry wells, but also with respect to wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs are taken into account. In addition, Repsol generally faces intense competition in bidding for exploratory blocks, in particular those blocks offering the most attractive potential reserves. Such competition may result in Repsol failing to obtain desirable production blocks, or otherwise acquiring them at a higher price, which could render subsequent production economically unviable.

If Repsol fails to acquire or discover, and, thereafter, develop new oil and gas reserves in a cost-effective manner, or if any of the aforementioned risks materializes, its business, results of operations and financial situation could be significantly and adversely affected.

Industrial businesses and marketing of oil products (Downstream)

Refining, Chemical, Trading, production, and distribution activities related to oil derivative products and LPG are exposed to the risk inherent to their activities, and are related to the products' specific characteristics (flammability and toxicity), their use (including that of clients), emissions resulting from the production process (such as greenhouse gas effects), as well as the materials and waste used (dangerous waste, as well as water and energy management), which might impact health, safety, and the environment. Repsol's industrial assets (refineries, regasification plants, warehouses, ports, ducts, sea vessels, cistern trucks, service stations, etc.) are exposed to accidents such as fire, explosions, leaks of toxic products, as well as large-scale contaminating environmental incidents. Such accidents may cause

death and injury to employees, contractors, residents in surrounding areas, as well as damage to the assets and property owned by Repsol as well as third parties.

Downstream activities take place in a highly competitive environment. Refining and commercialization margins may be affected by a number of factors, such as low demand arising from a deterioration of the economic situation in the countries where it operates, the high price of crude oil and other raw materials, trends in production-related energy costs and other commodities, excess refining capacity in Europe, and the growing competition from refineries in areas such as Russia, the Middle East, East Asia, and the US, where production costs are lower. Commercial businesses compete with international hydrocarbons industry operators as well as with other non-oil operators (supermarket chains as well as other commercial operators) to acquire or open service stations. Repsol service stations mainly compete based on price, service, and the availability of non-oil products.

If any of the above risks materialize, the Repsol's business, results of operations and financial position could be significantly and adversely affected.

Location of reserves

Part of Repsol's oil and gas reserves are located in countries that are or could be economically or politically unstable.

Reserves in these areas as well as related production operations may be exposed to risks, including increases in taxes and royalties, the establishment of limits on production and export volumes, the compulsory renegotiation or cancellation of contracts, the nationalization or denationalization of assets, changes in local government regimes and policies, changes in business customs and practices, payment delays, currency exchange restrictions and losses and impairment of operations due to the attacks of armed groups. In addition, political changes may lead to changes in the business environment. Economic downturns, political instability or civil disturbances may disrupt the supply chain or limit sales in the markets affected by such events and affect the safety of employees and contractors.

If any of the above risks materializes, the Group's business, results of operations and financial situation could be significantly and adversely affected.

Estimations of oil and gas reserves

To estimate proved and unproved reserves and oil and gas resources, Repsol uses the criteria established by the SPE/WPC/AAPG/SPEE Petroleum Resources Management System, commonly referred to by its acronym SPE-PRMS (SPE standing for Society of Petroleum Engineers).

The accuracy of these estimates depends on a number of different factors, including: development activities and operations, including drilling, production testing and studies. After the date of the estimate, the results of activities may entail substantial upward or downward corrections based on the quality of available geological, technical and economic data used – including changes in hydrocarbon prices – and their interpretation and evaluation. Moreover, the production performance of reservoirs and recovery rates depend significantly on available technologies as well as Repsol's ability to implement them.

Therefore, measurements of reserves are not precise and are subject to revision. The estimate of proven and unproven reserves of oil and gas will also be subject to correction due to errors in the application of published standards and changes in such standards. Any downward revision in estimated quantities of proven reserves could adversely impact company results, and would lead to increased depreciation, depletion and amortization charges and/or impairment charges, thus reducing earnings or shareholders' equity.

Projects and operations in joint ventures and partnerships

Many of the Repsol Group's projects and operations are conducted through joint ventures and partnerships. Where Repsol does not act as the operator, its ability to control and influence the performance and management of the operations, and to identify and manage risks is limited.

Additionally, any of Repsol's partners or another member in a joint venture or associated company may fail to comply with its financial obligations, or they may commit another breach that could affect a project's viability.

Acquisitions, investments and disposals

As part of Repsol's strategy, the company may engage in acquisitions, investments and disposals of ownership interests. There can be no assurance that Repsol will identify suitable acquisition opportunities, obtain the financing necessary to complete and support such acquisitions or investments, acquire businesses on satisfactory terms, or that any acquired business will prove to be profitable. In addition, acquisitions and investments involve a number of risks, including possible adverse effects on Repsol's operating income, risks associated with unanticipated events or liabilities relating to the acquired assets or businesses which may not have been disclosed during due diligence investigations, difficulties in the assimilation of the acquired operations, technologies, systems, services and products, and risks arising from provisions in contracts that are triggered by a change of control of an acquired company.

Any failure to successfully integrate such acquisitions could have a material adverse effect upon Repsol's business, results of operations or financial position. Any disposal of an ownership interest may also adversely affect Repsol's financial position, if such disposal results in a loss.

On May 8, 2015, Repsol completed the acquisition of Talisman, a Canadian group devoted to oil and gas exploration and production activities. As in any business combination, Repsol's ability to reap the strategic benefits expected from the acquisition will depend on its ability to integrate equipment, processes and procedures and maintain existing relationships with its customers and partners.

If any of these risks were to materialize following the takeover of ROGCI, they could have an adverse impact on the Repsol Group's operations, financial performance or financial position.

Repsol's current insurance coverage may not be sufficient for all operational risks

Repsol holds insurance coverage against certain risks inherent to the oil and gas industry, in line with industry practice. Insurance coverage is subject to deductibles and limits that, in certain cases, may be significantly lower than its losses and/or liabilities. In addition, Repsol's insurance policies contain exclusions that could leave the Group with limited coverage in certain circumstances, or indemnities may not be totally or partially collectible in case of insolvency of the insurers. Furthermore, Repsol may not be able to maintain adequate insurance at rates or on terms considered reasonable or acceptable, or be able to obtain insurance against certain risks that could materialize in the future. If the company experiences an incident against which it is not insured, or the costs of which materially exceed its coverage, it could have a material adverse effect on its business, financial position and results of operations.

Repsol's natural gas operations are subject to particular operational and market risks

Natural gas prices tend to vary between the different regions in which Repsol operates as a result of significantly different supply, demand and regulatory conditions, and such prices may be lower than current prices in other regions of the world. In addition, excess supply conditions that exist in some regions cannot be utilized in other regions due to a lack of infrastructure and difficulties in transporting natural gas.

In addition, Repsol has entered into long-term contracts to purchase and supply natural gas in various parts of the world. These contracts have different price formulas, which could result in higher purchase prices than the price at which such gas could be sold in increasingly liberalized markets. Furthermore, gas availability could be subject to the risk of counterparty breach of contractual obligations. Thus, it might be necessary to look for other sources of natural gas in the event of non-delivery from any of these sources, which could require payment of higher prices than those envisaged under the breached contracts.

Repsol also has long-term contracts to sell and deliver gas to customers, which present a different type of risk to the Group as they are pegged to existing proven reserves in these countries. Should such reserves in these countries prove insufficient, Repsol might not be able to satisfy its obligations under these contracts, some of which include penalty clauses for breach of contract.

The above risks may adversely affect Repsol's business, results and financial position.

Cyclical nature of petrochemical activity

The petrochemicals industry is subject to wide fluctuations in supply and demand, reflecting the cyclical nature of the chemicals market on a regional and global scale. These fluctuations affect the prices and profitability of petrochemicals companies, including Repsol. Repsol's petrochemicals business is also subject to extensive governmental regulation and intervention in such matters as safety and environmental controls. Any fluctuations and changes in regulations may have an adverse effect on the Repsol's business, financial position and results of operations.

Repsol Group's strategy requires efficiency and innovation in a highly competitive market

The oil, gas and petrochemical industry operates in the context of a highly competitive energy sector. This competition influences the conditions for accessing markets or following new business leads, the costs of licenses and the pricing and marketing of products.

The implementation of the Group's strategy requires a significant ability to anticipate and adapt to the market and continuous investment in technological advances and innovation.

The Repsol Group is subject to the effects of administrative, judicial and arbitration proceedings

The Repsol Group is subject to the effects of administrative, judicial and arbitration proceedings arising in the ordinary course of business, in relation to which it is unable to predict the scope, subject-matter or outcome. Any present or future litigation involves a high degree of uncertainty and, therefore, the resolution of these disputes could affect the business, results or financial position of the Repsol Group.

Information technology and its reliability and robustness are a key factor in maintaining our operations

The reliability and security of the Group's information technology (IT) systems are critical to maintaining the availability of its business processes and the confidentiality and integrity of the data owned by the company and by third parties. Given that cyber-attacks are constantly increasing, the Repsol Group cannot guarantee that it will not suffer economic or/and material losses in the future as a result of such attacks.

Misconduct or violations of applicable legislation by our employees can damage the reputation of the Repsol Group

Repsol's new Ethics and Conduct Code, which is mandatory for all Repsol directors, executives and employees, regardless of the type of contracting governing their professional or employment relationship, establishes the overall framework for understanding and putting into practice the conduct and

expectations the company places in each employee in their daily work, in line with the principles of loyalty to the company, good faith, integrity and respect for the law and the ethical values defined by the Group.

The company's diverse compliance and control models include controls designed to detect and mitigate significant incidents of non-compliance. Management misconduct or breach of any applicable legislation could cause harm to the company's reputation, in addition to incurring sanctions and legal liability.

Repsol is exposed to negative opinion trends which could have an adverse impact on its image and reputation, thereby affecting its business opportunities

The company carries on its operations in multiple environments with diverse stakeholders, which are mainly local communities in the areas influence of its operations, as well as local and national civil, political, labor, and consumer organizations, among others.

Should the interests of the above groups be contrary to the Company's activities, and attempts to reach agreements prove unsuccessful, Repsol may be affected by the publication of biased or manipulated information that generates opinion contrary to the company's activities.

This could result in an adverse impact on the social or media acceptance of Repsol's activities, leading to erosion of the Company's image as well as loss business opportunities in the area or country in question, with potential adverse effects on its business, financial position, and the result of its operations.

FINANCIAL RISKS

Repsol has a risk management structure and systems that enable it to identify, measure and control the financial risks to which the Group is exposed. Note 16 "Financial risk management" in the Group's audited consolidated financial statements analyzes the exposure to those risks and measures and the impact they may have on those financial statements.

The main financial risks are described below:

Liquidity risk

Liquidity risk is associated to the ability of the Group to finance its obligations at reasonable market prices, as well as to carry out its business plans with stable financing sources.

In the case that Repsol were unable to meet its needs for liquidity in the future or had to incur increased costs to meet them, this could have an adverse effect on its business, financial position and results of operations.

Credit risk

Credit risk is defined as the possibility of a third party not complying with his contractual obligations, thus creating losses for the Group.

The Group's credit risk exposure mainly relates to trade accounts payable, which are measured and controlled by individual client or third party. To this end, the Group has its own systems, in line with best practices, for constantly monitoring the creditworthiness of all its debtors and for determining the risk limits of third parties.

As a general rule, the Group considers a bank guarantee issued by financial entities to be the most suitable instrument of protection from credit risk. In some cases, the Group has taken out credit insurance policies to partially transfer to third parties the credit risk related to the trade of some of its businesses.

The Group also has exposure to counterparty risk arising from non-trade contractual operations that may lead to defaults. In these cases, the Group also analyzes the solvency of counterparties with which it maintains or could maintain non-trade contractual relations. Any breach of payment obligations by Repsol's customers and counterparties, in the agreed time frame and form, could have an adverse effect on Repsol's business, results or financial position.

Credit rating risk

Credit rating agencies regularly rate the Group, and their ratings are based on external factors, such as the conditions that affect the oil & gas sector, the general state of the economy and the performance of the financial markets.

Credit ratings affect the cost and other conditions under which the Repsol Group is able to obtain finance. Any downgrade in Repsol S.A.'s credit rating could restrict or limit the access of the Group to financial markets, increase the cost of any new finance, and have a negative effect on its liquidity.

See credit rating table in section 4 "Credit rating" in this document.

Market risks

The Group is exposed to various types of market risk: exchange rate, commodity price, interest rate and credit rating, which are described below:

Exchange rate fluctuation risk: Fluctuations in exchange rates may adversely affect Repsol's operational result and the value of its equity.

In general, this exposure to exchange rate risk stems from the existence in the Group companies of assets, liabilities and cash flows denominated in a currency other than the company's functional currency, with particular emphasis on the fact that: (i) Cash flows generated by oil, natural gas and refined product sales are generally denominated in United States dollars, (ii) A large portion of Repsol's assets and investments are also denominated in United States dollars.

In addition, it should be taken into consideration that: (i) Cash flows from transactions carried out in the countries in which Repsol conducts its activities are exposed to fluctuations in currency exchange rates of the respective local currencies against the major currencies in which the commodities used as reference for the fixing of prices in the local currency are traded, (ii) Repsol's consolidated financial statements are expressed in euros and, consequently, the assets and liabilities of subsidiary investee companies with a different functional currency are translated into euros.

To mitigate exchange rate risks, and it deems appropriate, Repsol carries out investments or transactions in those currencies in which foreign exchange risk exposures have been identified and it can hedge the risk with derivative financial instruments in currencies where there is a liquid market and reasonable transaction costs.

Notes 16 "Financial risk management" and 17 "Derivative and other transactions" in the consolidated financial statements for 2016 include additional details on the financial risks described in this section and the hedging transactions performed.

Commodity price risk: In the normal course of operations and trading activities, the earnings of the Repsol Group are exposed to volatility in the price of oil, natural gas, and related derivative products (see the risk factors titled "Fluctuations in crude oil and reference products' international prices and demand owing to factors beyond Repsol's control" and "Repsol's natural gas operations are subject to particular operational and market risks" above). Note 17 "Derivative and other transactions" in the consolidated financial statements for 2016 include additional details on the financial risks described in this section.

Interest rate risk: The market value of the Group's net financing and net interest expenses could be affected as a consequence of changes in interest rates which could affect interest income and expenses of financial assets and liabilities tied to floating interest rates and the fair value of financial assets and liabilities tied to a fixed rate. Fluctuations in interest rates may also affect the value of assets and liabilities due to a change in the applicable cash flow discount rate, investments' profitability and the future cost of raising funds.

To mitigate interest rate risks, and when it deems appropriate, Repsol can hedge the risk with derivative financial instruments where there is a liquid market and with reasonable transaction costs.

Notes 16 "Financial risks" and 17 "Derivative and other transactions" in the consolidated financial statements for 2016 include additional details on the financial risks described in this section and the hedging transactions performed.

8.2. RISK MANAGEMENT

The Repsol Group operates in many different countries, under multiple conditions and regulatory frameworks and in all parts of the energy value chain. Accordingly, it is exposed to different types of risk (strategic, operational and financial) that may affect the future performance of the organization, and these must be mitigated as effectively as possible.

For this reason, the Company has the organization, procedures and systems that allow it to reasonably manage the risks to which the group is exposed, as an integral part of the Group's decision-making processes in both corporate governance bodies and business management.

For years, Repsol has been working on an integrated risk management model to be able to anticipate, manage, and control risks from a global perspective. The Integrated Risk Management System (SGIR in Spanish) provides a comprehensive and reliable view of all risks that might affect the company, regardless of their nature.

Repsol's commitment to implement the SGIR is reflected in its Risk Management Policy and its principles are specified in the Integrated Risk Management Standard approved by the Company's Board of Directors. This management model is based on the ISO 31000 international standard and the Three Lines of Defense Model.

The main pillars of the SGIR are:

- Senior Management leads integrated risk management.
- It is integrated with all the company's management processes and activities of the Company, always with the overall approach provided by the Risk Division.
- Businesses and corporate areas play a role in the implementation of the model as units with different levels of responsibility and specialization (risk management units, supervisory units and audit units) as well as the Risk Division, which governs and coordinates system.
- Assurance that all risks are managed in accordance with a common process of identification, assessment and treatment.
- Promotion of continuous improvement to gain efficiency and responsiveness.

Repsol's Senior Management sees the SGIR not only as a tool to define corporate strategy, but also to improve operations and approach critical situations with flexibility so as to strengthen the company.

Repsol's Integrated Risk Management System – (SGIR)



Source: Repsol Risk Division

For Repsol, the Risk Map is the core element that identifies significant risks and classifies them according to their importance. To build it, the Company has a methodology for characterizing risks in a simple, understandable and robust manner and quantifying their potential economic, reputational and people impact in the business unit or area if they should materialize.

In 2016, and with the aim of producing a consolidated, Group-wide risk map, the company continued to develop the risk maps of each business/area in Repsol in collaboration with a large number of experts. This consolidated risk map allows for attaining an overall vision of key risks with a common metric and for identifying efficient mitigation measures.

For certain highly-critical risks, the organization has also started working on a methodology which makes it possible to gain an integrated understanding of the factors leading to the materialization of the risk event and its consequences, in order to prevent its occurrence and/or reduce its impact. This allows for focusing efforts on the risk treatment, especially, on detecting and managing barriers and controls (preventive and contingency measures).

Also, as an essential element for the functioning of the risk management model, new activities were maintained and developed in order to strengthen a culture more oriented toward integrated management of risks in the company. Therefore, during this year we have been working on the definition, development and provision of in-person training as a supplement to online training that had already been offered in the company catalog.

Section 6 provides specific information on Safety and Environment Risk Management and Tax Risk Management.

ABOUT THIS REPORT

This report should be read together with the Repsol Group consolidated financial statements at December 31, 2016. Users of it should be aware that the forward-looking information contained in this document reflects the plans, forecasts or estimates of the Group's managers. These are based on assumptions that are considered reasonable, and that cannot be considered as a guarantee of the entity's future performance, in the sense that such plans, forecasts or estimates are subject to numerous risks and uncertainties, meaning that the future development of the Group will not necessarily coincide with what was initially planned. The main risks and uncertainties are described in section 8.1 "Risk Factors."

For the preparation of this report, consideration was given to the recommendations contained in the "Guidelines for the preparation of listed company Management Reports" of the National Security Markets Commission (Comisión Nacional del Mercado de Valores – CNMV), published in 2013.

APPENDIX I: ALTERNATIVE PERFORMANCE MEASURES

Repsol's financial information contains indicators and measures prepared in accordance with applicable financial information regulations, as well as other measures prepared in accordance with the Group's Reporting Model¹ defined as Alternative Performance Measures (APMs). APMs are measures which are "adjusted" compared to those presented under IFRS-EU or with Supplementary Information on Oil and Gas Exploration and Production Activities (hereinafter, "E&P Information")², and therefore should be considered by the reader in addition to, but not instead of, the GAAP information.

APM are highly useful for users of financial information as they are the measures employed by Repsol's Management to evaluate its financial performance, cash flows, or its financial position when making operational or strategic decisions for the Group.

For further information, see <https://www.repsol.com>.

1. Financial performance measures

Adjusted net income

Adjusted net income is the key financial performance measure which Management (the Corporate Executive Committee, E&P Corporate Executive Committee, and Downstream Executive Committee) consults when making decisions in accordance with IFRS 8 "Operating segments".

Repsol presents its segment results, including joint ventures or other companies which are jointly managed³, in accordance with the Group's investment percentage, considering its operational and economic indicators within the same perspective and degree of detail as those for companies consolidated under the full consolidation method. Thus, the Group considers that the nature of its businesses and the way in which results are analyzed for decision-making purposes is adequately reflected.

Adjusted net income is calculated as the **Result from continuing operations at Current Cost of Supply** (Current Cost of Supply, or CCS⁴), net of taxes and the result from investments minority interests. It does not include certain income and losses ("**Special items**") and the **Inventory effect. Financial income** corresponds to the "Corporation and others' Adjusted net income.

Adjusted net income is a useful APM for investors in order to be able to evaluate the performance of operating segments while permitting increased comparability with Oil & Gas sector companies using different inventory measurement methods (see the following section).

¹ See Note 2.3 of the consolidated financial statements for the year 2016.

² The hydrocarbon exploration and production information, which is compiled and disclosed by the Group annually, is prepared in accordance with the principles generally accepted in the oil and gas industry and, specifically, is based on the disclosure criteria outlined in Topic 932 issued by the Financial Accounting Standards Board (FASB).

³ See Note 8 "Investments accounted for using the equity method" and Appendix I "Main companies comprising the Repsol Group at December 31, 2016", where the Group's main joint ventures are identified.

⁴ The Current Cost of Supply (CCS) is commonly used in this industry to present the results of downstream businesses which must work with huge inventories subject to continual price fluctuations. It is not a commonly-accepted European accounting regulation, yet does enable the comparability with other sector companies as well as monitoring businesses independently of the impact of price variations on their inventories. Due to the above, the adjusted net income does not include the Equity Effect.

Inventory effect

This is the difference between the **Result from continuing operations at Current Cost of Supply (CCS)** and the result calculated as the Average Weighted Cost (AWC, which is an inventory valuation method used by the Company to determine its results in accordance with European accounting regulations). It only affects the Downstream segment, in that for the **Current Cost of Supply**, the cost of volume sold during the period is determined in accordance with supply costs, and production during the year. Apart from the above effect, the **Inventory effect** includes other adjustments to the valuation of inventories (write-offs, economic hedges) and is presented net of taxes and minority interests. Repsol management considers that this measure is useful for investors, considering the significant variations arising in the prices of inventory between periods.

The AWC is a generally-accepted European accounting method which measures inventories, in that it contemplates purchase prices and historic production costs, valuing inventory at the lower between said cost and its market value.

Special items

Significant items of which separate presentation is considered convenient to easily monitor the ordinary management of business operation. It includes capital gains/losses arising from divestitures, restructuring costs, impairments, and provisions for risks and expenses. Special items are presented net of taxes and minority interests.

Section 4.1 "Results" includes the specific cumulative results for 2015 and 2016. We present below the Specific results for the fourth quarter of 2015 and 2016.

<i>Million euros</i>	Fourth Quarter							
	Upstream		Downstream		Corporation		TOTAL	
	4Q 2016	4Q 2015	4Q 2016	4Q 2015	4Q 2016	4Q 2015	4Q 2016	4Q 2015
Divestments	(13)	-	150	19	(33)	(5)	104	14
Workforce restructuring charges	(9)	(5)	(12)	(1)	(1)	(1)	(22)	(7)
Impairment	(259)	(2,525)	(141)	(28)	-	(39)	(400)	(2,592)
Provisions and other	(236)	(75)	(3)	(18)	338	125	99	32
TOTAL	(517)	(2,605)	(6)	(28)	304	80	(219)	(2,553)

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The following is a reconciliation of the Adjusted Income under the Group's reporting model under IFRS-EU.

	Fourth Quarter											
	ADJUSTMENTS											
	Adjusted Result		Joint Arrangements reclassification		Special items		Inventory Effect ⁽²⁾		Total Adjustments		Profit/loss under EU-IFRS	
<i>Million euros</i>	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Operating income	564 ⁽¹⁾	144 ⁽¹⁾	214	444	(478)	(3,608)	193	(202)	(71)	(3,366)	493	(3,222)
Financial result	70	11	(63)	57	47	151	-	-	(16)	208	54	219
Income from equity affiliates	77	129	(135)	(453)	-	-	-	-	(135)	(453)	(58)	(324)
Net income before tax	711	284	16	48	(431)	(3,457)	193	(202)	(222)	(3,611)	489	(3,327)
Income tax	(3)	191	(16)	(48)	(90)	903	(50)	54	(156)	909	(159)	1,100
Net income from continuing operations	708	475	-	-	(521)	(2,554)	143	(148)	(378)	(2,702)	330	(2,227)
Income attributed to minority interests	(10)	(22)	-	-	3	1	(6)	18	(3)	19	(13)	(3)
Net income from continuing activities attributable to the parent	698	453	-	-	(518)	(2,553)	137	(130)	(381)	(2,683)	317	(2,230)
Profit from discontinued operations	-	-	-	-	299	-	-	-	299	-	299	-
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT COMPANY	698	453	-	-	(219)	(2,553)	137	(130)	(82)	(2,683)	616	(2,230)

	As of December 31											
	ADJUSTMENTS											
	Adjusted Result		Joint Arrangements reclassification		Special items		Inventory Effect ⁽²⁾		Total Adjustments		Profit/loss under EU-IFRS	
<i>Million euros</i>	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Operating income	2,067 ⁽¹⁾	1,764 ⁽¹⁾	98	355	(448)	(4,147)	194	(696)	(156)	(4,488)	1,911	(2,724)
Financial result	(315)	244	(68)	44	149	173	-	-	81	217	(234)	461
Income from equity affiliates	371	469	(177)	(558)	-	-	-	-	(177)	(558)	194	(89)
Net income before tax	2,123	2,477	(147)	(159)	(299)	(3,974)	194	(696)	(252)	(4,829)	1,871	(2,352)
Income tax	(164)	(539)	147	159	(323)	1,182	(51)	194	(227)	1,535	(391)	996
Net income from continuing operations	1,959	1,938	-	-	(622)	(2,792)	143	(502)	(479)	(3,294)	1,480	(1,356)
Income attributed to minority interests	(37)	(86)	-	-	4	1	(10)	43	(6)	44	(43)	(42)
Net income from continuing activities attributable to the parent	1,922	1,852	-	-	(618)	(2,791)	133	(459)	(485)	(3,250)	1,437	(1,398)
Profit from discontinued operations	-	-	-	-	299	-	-	-	299	-	299	-
TOTAL NET INCOME ATTRIBUTABLE TO THE PARENT COMPANY	1,922	1,852	-	-	(319)	(2,791)	133	(459)	(186)	(3,250)	1,736	(1,398)

⁽¹⁾ Result from continuing operations at replacement cost (CCS).

⁽²⁾ The inventory effect represents an adjustment to "Consumption of raw materials and other consumables" and "Changes in inventory of finished goods and work in progress" on the income statement under IFRS-EU.

EBITDA:

EBITDA is defined as "Earnings Before Interest, Taxes, Depreciation, and Amortization", and is a financial indicator which determines the operating margin of a company prior to deducting interest, taxes, impairments, restructuring costs, and amortization. Since it does not include financial and tax indicators or accounting expenses not involving cash outflow, it is used by Management to evaluate the company's results over time, thereby making comparisons with other Oil & Gas sector companies a more straightforward exercise.

EBITDA is calculated as Operating Income + Amortization + Impairments + Restructuring costs as well as other items which do not represent cash entry or outflows from transactions (capital gains/losses from divestitures, provisions, etc.). Operating income corresponds to the result from continuing operations at average weighted costs (AWC). In cases in which the **Result from continuing operations at Current Cost of Supply (CCS)** is used, it is considered **EBITDA CCS**.

	Fourth Quarter							
	Group Reporting Model		Joint arrangements reclassification and others		Inventory effect		Cash flow statement IFRS-EU ⁽¹⁾	
	2016	2015	2016	2015	2016	2015	2016	2015
EBITDA	1,668	1,022	(253)	(159)	-	-	1,415	863
EBITDA CCS	1,475	1,224	(253)	(159)	193	(202)	1,415	863

	As of December 31							
	Group Reporting Model		Joint arrangements reclassification and others		Inventory effect		Cash flow statement IFRS-EU ⁽¹⁾	
	2016	2015	2016	2015	2016	2015	2016	2015
EBITDA	5,226	4,416	(808)	(687)	-	-	4,418	3,729
EBITDA CCS	5,032	5,112	(808)	(687)	194	(696)	4,418	3,729

⁽¹⁾ Corresponds to "Net income before tax" and "Adjustments to net income" on the consolidated Cash Flow Statement prepared under IFRS-EU.

ROACE:

This APM is used by Repsol Management to evaluate the capacity of its operating assets to generate profit, and therefore measures invested capital (equity and debt).

ROACE is calculated as: (operating results adjusted for joint ventures outcomes excluding “**Special items**” + Income taxes + Recurrent results from investees) / (Capital employed during the continuing operations period). **Capital employed** measures own and external capital invested in the company, and corresponds to Total Equity + **Net debt**. It includes that which corresponds to joint ventures or other companies whose operations are generated as such.

NUMERATOR	2016	2015
Operating profit EU-IFRS	1,911	(2,724)
Adjustment joint ventures	(98)	(355)
Adjustment special items	448	4,147
Income tax ⁽¹⁾	(340)	(303)
Share of profit (loss) of entities accounted for using the equity method - net of dividends	371	469
I. ROACE result at average weighted cost	2,292	1,234
DENOMINATOR		
Total equity	31,111	28,762
Net financial debt	8,144	11,934
Capital employed at year end	39,255	40,696
II. Average capital employed ⁽²⁾	39,818	41,090
ROACE (I/II)	5.8	3.0

⁽¹⁾ Does not include income tax corresponding to financial results.

⁽²⁾ Corresponds to the average balance of capital employed at the beginning and end of the year.

2. Cash flow measures

Free Cash Flow, Cash Generated and Liquidity:

The two main metrics used by Group management to measure cash generation in the period are **Free cash flow** and **Cash generated**.

Free Cash Flow measures cash flow generation from operating and investment activities, and is quite useful for evaluating the funds available for paying shareholder dividends, and debt service payments.

Cash generated is equal to **free cash flow** less dividend payments and remuneration of other equity instruments such as net interest and lease payments. This APM measures the funds generated by the Company prior to financial transactions (mainly debt issues and cancellations).

The following is a reconciliation of **Free Cash Flow** and **Cash Generated** with the consolidated statements of cash flow prepared under IFRS-EU.

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	Fourth Quarter					
	Adjusted Cash Flow		Joint arrangements reclassification and others		Cash Flow Statement IFRS-EU	
	2016	2015	2016	2015	2016	2015
I. Cash flows from / (used in) operating activities	1,402	2,453	246	(246)	1,648	2,207
II. Cash flows from / (used in) investing activities	29	(1,015)	(482)	896	(453)	(119)
Free cash flow (I+II)	1,431	1,438	(236)	650	1,195	2,088
III. Cash flows from / (used in) financing activities and others ⁽¹⁾	(85)	(1,039)	190	(620)	105	(1,659)
Net increase / (decrease) in cash and cash equivalents	1,346	399	(46)	30	1,300	429
Cash and cash equivalents at the beginning of the period	3,572	2,370	(185)	(351)	3,387	2,019
Cash and cash equivalents at the end of the period	4,918	2,769	(231)	(321)	4,687	2,448

	As of December 31					
	Adjusted Cash Flow		Joint arrangements reclassification and others		Cash Flow Statement IFRS-EU	
	2016	2015	2016	2015	2016	2015
I. Cash flows from / (used in) operating activities	3,832	5,513	58	(577)	3,890	4,936
II. Cash flows from / (used in) investing activities	491	(11,531)	(100)	2,571	391	(8,960)
Free cash flow (I+II)	4,323	(6,018)	(42)	1,994	4,281	(4,024)
Cash generated	3,246	(7,222)	9	(35)	3,255	(7,257)
III. Cash flows from / (used in) financing activities and others ⁽¹⁾	(2,174)	3,760	132	(1,926)	(2,042)	1,834
Net increase / (decrease) in cash and cash equivalents	2,149	(2,258)	90	68	2,239	(2,190)
Cash and cash equivalents at the beginning of the period	2,769	5,027	(321)	(389)	2,448	4,638
Cash and cash equivalents at the end of the period	4,918	2,769	(231)	(321)	4,687	2,448

⁽¹⁾ Includes payments for dividends and payments on other equity instruments, interest payments, other proceeds from/ (payments for) financing activities, proceeds from / (payments for) equity instruments , proceeds from / (payments for) financial liabilities and the exchange rate fluctuations effect.

The Group measures liquidity as the total of “Cash and cash equivalents” and undrawn committed lines of credit at year end which correspond to loans granted by financial institutions which may be drawn down by the company in installments, the amount, and the remaining terms of the agreement.

	As of December 31					
	Group Reporting Model		Joint arrangements reclassification and others		IFRS-EU	
	2016	2015	2016	2015	2016	2015
Cash and Cash equivalents	4,918	2,771	(231)	(323)	4,687	2,448
Undrawn credit lines	4,429	6,360	-	0	4,429	6,360
Liquidity	9,347	9,131	(231)	(323)	9,116	8,808

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Net Operating Investments:

Group management uses this APM to measure each period's investing effort, as well as its assignment by businesses segment, and corresponds to net investments of divestments made by different Group businesses. It includes what corresponds to joint ventures or other companies whose operations are generated as such.

	Fourth Quarter					
	Net operating investments		Joint arrangements reclassification and others		Cash flow statement IFRS-EU⁽¹⁾	
	2016	2015	2016	2015	2016	2015
Upstream	164	918	(77)	(361)	87	557
Downstream	(42)	332	(163)	(322)	(205)	10
Corporation and others	(15)	14	(5)	(13)	(20)	1
TOTAL	107⁽²⁾	1,264	(245)	(696)	(138)	568

	As of December 31					
	Net operating investments		Joint arrangements reclassification and others		Cash flow statement IFRS-EU⁽¹⁾	
	2016	2015	2016	2015	2016	2015
Upstream	1,889	11,370	(565)	(1,233)	1,324	10,137
Downstream	(496)	493	1	(9)	(495)	484
Corporation and others	(1,893)	97	6	1	(1,887)	98
TOTAL	(500)⁽²⁾	11,960	(558)	(1,241)	(1,058)	10,719

⁽¹⁾ This corresponds to "Proceeds from divestments" and "Payments on investments" on the consolidated statement of cash flows prepared under IFRS-EU, and does not include items corresponding to "Other financial assets."

⁽²⁾ Gross capital expenditure amounted to 3,410 million euros in 2016 (915 million euros in Q4 2016).

3. Financial position measures

Debt and financial position ratios

Net Debt is the main APM used by management to measure the Company's level of debt. It is comprised of financial liabilities less financial assets, cash and cash equivalents, and the effect arising from net market valuation of financial derivative (ex - exchange rates). It also includes the net debt corresponding to joint ventures and other companies operationally managed as such.

	Net Debt		Joint arrangements reclassification and others ⁽¹⁾		Figure according to IFRS-EU balance sheet	
	Dec-16	Dec-15	Dec-16	Dec-15	Dec-16	Dec-15
Non-current assets						
Non-current financial instruments ⁽²⁾	424	121	657	512	1,081	633
Current assets						
Other current financial assets	52	118	1,228	1,119	1,280	1,237
Cash and Cash equivalents	4,918	2,771	(231)	(323)	4,687	2,448
Non-current liabilities⁽³⁾						
Non-current financial debt	(9,540)	(10,716)	58	135	(9,482)	(10,581)
Non-current liabilities⁽³⁾						
Current financial liabilities	(4,085)	(4,320)	(2,824)	(2,753)	(6,909)	(7,073)
Items not included on the balance sheet						
Net mark to market valuation of financial derivatives (ex: exchange rate) ⁽⁴⁾	87	92	-	-	87	92
NET DEBT	(8,144)	(11,934)			(9,256)	(13,244)

- (1) Mainly includes the net financing of the Repsol Sinopec Brazil Group, broken down in the following sections:
December 2015: (cash and cash equivalents of 11 million euros and current financial liabilities as a result of an intra-group loan of 2,819 million euros, less a 300 million euros third-party loan).
December 2016: (cash and cash equivalents of 43 million euros and current financial liabilities as a result of an intra-group loan of 2,942 million euros, less a 344 million euros third-party loan).
- (2) Corresponds to the consolidated balance sheet heading, "Non-current financial assets" (but does not include available-for-sale financial assets).
- (3) Does not include finance lease obligations.
- (4) The net mark to market value of financial derivatives different from exchange rate derivatives has been eliminated from this section.

Gross Debt is a measure used to analyze the Group's solvency; it includes the financial liabilities and the net fair value of the Group's exchange rate derivatives.

	Gross Debt		Joint arrangements reclassification and others		Figure according to IFRS-EU balance sheet	
	Dec-16	Dec-15	Dec-16	Dec-15	Dec-16	Dec-15
Current financial liabilities	(4,061)	(4,252)	(2,824)	(2,752)	(6,885)	(7,004)
Net valuation at the market rates of financial derivative, such as current exchange rate	7	(1)	-	-	7	(1)
Current gross debt	(4,054)	(4,253)	(2,824)	(2,752)	(6,878)	(7,005)
Non-current financial liabilities	(9,452)	(10,626)	57	135	(9,395)	(10,491)
Non-current gross debt	(9,452)	(10,626)	57	135	(9,395)	(10,491)
TOTAL GROSS DEBT	(13,506)	(14,879)	(2,767)	(2,617)	(16,273)	(17,496)

The following ratios are based on **Debt** and are used by Group management to evaluate leverage ratios as well as Group solvency.

The **Leverage** ratio corresponds to **Net Debt** divided by **Capital employed** at year end. This ratio can be used to determine the financial structure and degree of indebtedness with regard to capital contributed by shareholders and entities which provide financing. It is the chief measure used to evaluate and compare the Company's financial position with others in the Oil & Gas sector.

Hedging instruments correspond to **Net debt** divided by EBITDA, and makes it possible to evaluate the company's capacity for repaying external financing over a number of years (x times), as well as to compare it to similar sector companies.

The **Solvency ratio** is calculated as **Liquidity** (section 2 of this Appendix) divided by **Current Gross debt**, and is used to determine the number of times the Group may handle its current debt using its existing liquidity.

Interest cover is calculated in the same way as debt interest (which comprises finance income and expense, see Note 23 "Finance income and expense" of the 2016 consolidated financial statements) divided by EBITDA. This ratio is a measurement that can determine the company's ability to cover interest payments with its EBITDA.

	Group Reporting Model		Reclassif. Joint Arrangements		Figure according to IFRS - EU balance sheet	
	Dec-16	Dec-15	Dec-16	Dec-15	Dec-16	Dec-15
Debt interest	426	443	73	42	353	401
EBITDA	5,226	4,416	(808)	(687)	4,418	3,729
Interest cover	8.2%	10.0%			7.99%	10.75%

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APPENDIX II: CONVERSION TABLE AND ABBREVIATIONS

			OIL				GAS		ELECTRICITY
			Liters	Barrels	Cubic meters	toe	Cubic meters	Cubic feet	kWh
OIL	1 barrel ⁽¹⁾	b	158.99	1	0.16	0.14	162.60	5.615	1.7x10 ⁶
	1 cubic meter ⁽¹⁾	m ³	1,000	6.29	1	0.86	1,033	36,481	10,691.5
	1 ton of oil equivalent ⁽¹⁾	toe	1,160.49	7.30	1.16	1	1.187	41,911	12,407.4
GAS	1 cubic meter	m ³	0.98	0.01	0.001	0.001	1	35.32	10.35
	1,000 cubic feet=1.04x10 ⁶ Btu	ft ³	27.64	0.18	0.03	0.02	28.3	1.000	293.1
ELECTRICITY	1 megawatt hour	MWh	93.53	0.59	0.10	0.08	96.62	3,412.14	1.000

			Meter	Inch	Foot	Yard
LENGTH	Meter	m	1	39.37	3.281	1.093
	Inch	in	0.025	1	0.083	0.028
	Foot	ft	0.305	12	1	0.333
	Yard	yd	0.914	36	3	1

			Kilogram	Pound	Ton	
MASS	Kilogram	kg		1	2.2046	0.001
	Pound	lb		0.45	1	0.00045
	Ton	t		1,000	22,046	1

			Cubic feet	Barrel	Liter	Cubic meter
VOLUME	cubic foot	ft ³	1	0,1781	28,32	0,0283
	Barrel	b	5.615	1	158,984	0,1590
	Liter	l	0.0353	0.0063	1	0.001
	cubic meter	m ³	35.3147	6.2898	1,000	1

⁽¹⁾ Benchmark average: 32.35° API and relative density of 0.8636.

Term	Description	Term	Description	Term	Description
bbbl / bbl/d	Barrel/ Barrel per day	Mb	Thousand barrels of oil	Mm³/d	Million cubic meters per day
bcf	Bcf Billion cubic feet	kbbbl/d	Thousand barrels per day	Mscf/d	Million standard cubic feet per day
Bm3	Billion cubic meters	Mboe	Thousand barrels of oil equivalent	kscf/d	Thousand standard cubic feet per day
Boe	Barrel of oil equivalent	Mboe/d	Thousand barrels of oil equivalent per day	MMW	Million watts
Btu/MBtu	British thermal unit/ Btu/millions of Btu	km²	Square kilometer	MWh	Megawatt hour
LPG	Liquefied petroleum gas	Kt/Mt	Thousand tons/Million tons	Tcf	Trillion cubic feet
LNG	Liquid Natural Gas	MMb	Million barrels	toe	Tons of oil equivalent
GWh	Gigawatts per hour	MMboe	Million barrels of oil equivalent	USD / Dollar / \$	US dollar

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In the event of a discrepancy, the Spanish language version prevails*

APPENDIX III: ANNUAL CORPORATE GOVERNANCE REPORT

Included as Appendix to this document, and as an integral part of the whole document, is the Annual Corporate Governance Report for 2016, as is required under Article 538 to the Spanish Companies Act (“Ley de Sociedades de Capital”).

ANNUAL CORPORATE GOVERNANCE REPORT

LISTED COMPANIES

DETAILS OF ISSUER

DATED END OF YEAR

2016

TAX REGISTRATION NUMBER: A78374725

Name: REPSOL, S.A.

Registered office: C/ Méndez Álvaro, 44 28045 Madrid

**ANNUAL CORPORATE GOVERNANCE REPORT
LISTED COMPANIES**

Read the instructions at the end of this report to correctly understand and complete the form.

A OWNERSHIP STRUCTURE

A.1 Complete the following table on the capital of the company:

Date latest modification	Capital (€)	Number of shares	Number of voting rights
14-07-2016	1,465,644,100	1,465,644,100	1,465,644,100

Indicate whether there are different classes of shares with different associated rights:

Yes No

A.2 Give details on the direct and indirect holders of significant interests in your company at year-end, excluding directors:

Name of shareholder	Number of direct voting rights	Indirect voting rights		Interest / total voting rights (%)
		Direct holder of the interest	Number of voting rights	
Sacyr , S.A.	0	Sacyr Participaciones Mobiliarias, S.L.	122,208,433	8.34
Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona	0	CaixaBank,S.A.	147,246,412	10.05
Temasek Holdings (Private) Limited	0	Chembra Investments Pte. Ltd	71,207,943	4,79
Blackrock,Inc.	0	Subsidiaries Blackrock	43,797,508	3.04

Indicate the principal movements in the shareholding structure during the year:

Name of shareholder	Date of transaction	Description of the transaction
Blackrock, Inc	12/01/2016	Interest raised to over 3% of the capital
Temasek Holdings (Private) Limited	15/01/2016	Interest lowered to below 5% of capital

A.3 Complete the following tables on directors' voting rights corresponding to shares in the company:

Name of director	Number of direct voting rights	Indirect voting rights		Interest / total voting rights (%)
		Direct holder of the interest	Number of voting rights	
Antonio Brufau Niubó	462,957			0.032
Gonzalo Gortázar Rotaeché	10,722	-	-	0.001
Manuel Manrique Cecilia	127	Cymofag, S.L.U.	1.121	0.000
Josu Jon Imaz	123,346	-	-	0.008
Artur Carulla Font	83,922	-	-	0.006
Luis Carlos Croissier Batista	1,584			0.000
Rene Dahan	35,614	-	-	0.002
Ángel Duráñez Adeva	11,478	-	-	0.001
Javier Echenique Landiribar	-	Bilbao Orvieta, S.L.	22,751	0.002

Mario Fernández Pelaz	5,290	-	-	0.000
María Isabel Gabarró Miquel	11,092	Amtrak, S.L.	3,534	0.001
José Manuel Loureda Mantiñán	70	Prilou, S.L.	1.024	0.006
Antonio Massanell Lavilla	10,000	0		0.001
Henri Philippe Reichstul	50	0		0.000
J. Robinson West				0.000
Luis Suárez de Lezo Mantilla	41,031	0		0.003

Total % of voting rights held by board members	0.061%
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Complete the following tables on directors with stock options in the company:

Name or corporate name of the director	Number of direct stock options	Indirect options		Equivalent number of shares	% of total stock options
		Direct holder	Number of options		

A.4 Indicate family, commercial, contractual or corporate relationships among controlling shareholders known to the company, if any, except any that are insignificant and those deriving from ordinary commercial business:

Name of related parties	Type of relationship	Brief description

A.5 Indicate commercial, contractual or corporate relationships between controlling shareholders and the company and/or its group, if any, except any that are insignificant and those deriving from ordinary commercial business:

Name of related parties	Type of relationship	Brief description
Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona	Corporate	Repsol, S.A. with Criteria Caixa, S.A.U. (a company controlled by Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona) and with GIP III Canary 1,S.á.r.l. participate in Gas Natural SDG, S.A., which has as business purpose, among other activities, supply, production, piping and distribution of any type of combustible gas. Additionally, Repsol,Criteria Caixa, S.A.U. and GIP III Canary 1,S.á.r.l. have also signed an agreement in relation to some corporate governance commitments of Gas Natural SDG, S.A., which aim at the composition of the Board of Directors and its Committees.

A.6 State whether the company has been notified of any shareholders' agreements that may affect it pursuant to the Companies Act articles 530 and 531. If any, describe them briefly and list the shareholders related by the agreement:

Yes No

Parties to shareholders' agreement	% of capital affected	Brief description of agreement

Indicate and describe any concerted actions among company shareholders of which the company is aware:

Yes No

Parties to concerted action	% of capital affected	Brief description of arrangement

Expressly indicate any change or break-up of those agreements or concerted actions, if any, that has taken place during the year:

A.7 Indicate any individuals or entities that exercise or may exercise control over the company in pursuance of section 5 of the Securities Market Act:

Yes No

Name

Comments

A.8 Complete the following tables on the company's treasury stock:

At year-end:

Number of direct shares	Number of indirect shares (*)	Treasury stock/capital (%)
94,185	0	0.006%

(*) Through:

Name of direct holder of the shares	Number of direct shares

Give details on any significant variations during the year, according to the provisions of Royal Decree 1362/2007:

Explain the significant variations

A.9. Indicate the term and conditions of the authorisation granted by the General Meeting to the Board to issue, buy back or sell own shares.

The Annual General Meeting of Shareholders of Repsol, S.A. held on first call on March 28, 2014, adopted the following resolution under item twenty on the Agenda:

“First. To authorize the Board of Directors for the derivative acquisition of shares of Repsol, S.A., by sale, purchase, exchange or any other onerous legal business modality, directly or through subsidiaries, up to a maximum number of shares, that added to those already own by Repsol, S.A. and its subsidiaries, not exceeding 10% of the share capital and for a price or equivalent value that may not be lower than the nominal value of the shares nor exceed the quoted price on the stock market.

The authorization includes the acquisition of shares that, if any, may be disbursed among the employees and directors of the Company and its Group or used to satisfy the exercise of option rights that such persons may hold.

This authorization, which is subject to the compliance of all other applicable legal requirements, shall be valid for 5 years, counted as from the date of the present General Shareholders Meeting, and leaves without effect the authorization granted by the Ordinary General Shareholders Meeting held on April 30, 2010 under the sixth point on the Agenda.

Second. To authorize the Board of Directors to delegate, pursuant to the provisions of article 249.2 of Companies Act, the delegated powers contemplated in section first of these resolutions.”

A.9. bis Estimated free float share capital

	%
Estimated free float share capital	76,78

A.10 State whether there are any constraints on the transferability of shares and/or any restrictions on voting rights. In particular, indicate the existence of any type of constraint or limitation that may hamper takeover of the company through the acquisition of its shares on the market.

Yes No

Description of constraints
<p>Article 34 of Royal Decree-Law 6/2000 establishes certain constraints on the exercise of voting rights in more than one principal operator in any one market or sector. Among others, it lists the fuel production and distribution, liquefied petroleum gas production and supply and natural gas production and supply markets. The principal operators are the entities holding the five largest shares of the market in question.</p> <p>These constraints are as follows:</p> <ul style="list-style-type: none">– Individuals or entities directly or indirectly holding more than 3% of the capital or voting rights of two or more principal operators on the same market may not exercise the voting rights corresponding to the excess over that percentage in more than one of such operators.– No principal operator may exercise the voting rights corresponding to an interest of more than 3% in the capital of another principal operator on the same market. <p>These constraints shall not be applicable to parent companies that are principal operators in respect of their subsidiaries that are in the same position, provided this structure is imposed by law or the result of a mere redistribution of securities or assets among group companies.</p> <p>The Comisión Nacional de los Mercados y Competencia, regulator of the energy market,</p>

may authorise exercise of the voting rights corresponding to the excess provided this does not favour the exchanging of strategic information or imply any risks of coordination of their strategic actions.

Act 3/2013, of 4 June, which created the National Markets and Competition Commission (Comisión Nacional de los Mercados y de la Competencia, CNMC) establishes a procedure for controlling certain business operations in the energy sector, among them the acquisition of interests in companies involved in certain activities related to liquid hydrocarbons or that own shares in the strategic energy sector (oil refineries, oil pipelines and oil product storage). In particular, in cases where a buyer acquires a percentage of the capital of an energy company affected by this Law which gives the buyer significant influence over the management of that company, the buyer will be obligated to notify the CNMC of the transaction. If the buyer is not a national of the EU or the EEE and if it were considered to pose a real and sufficiently serious threat to the supply of hydrocarbons, special conditions could be established for the business operations of the affected companies or the buyer.

- A.11 Indicate whether the General Meeting has resolved to apply the breakthrough rule against a takeover bid, under Act 6/2007:**

Yes No

If yes, explain the measures approved and the terms on which the restrictions will become ineffective:

- A.12 State whether the company has issued any shares that are not traded on an EU regulated market:**

Yes No

If yes, indicate the different classes of shares and, for each class, the rights and obligations conferred.

At 31 December 2016, Repsol shares in the form of *American Depositary Shares* (ADSs) are listed on the OTCQX market.

In addition, the shares in Refinería La Pampilla, S.A. are listed on the Lima Stock Exchange.

B GENERAL MEETING

- B.1 Indicate whether there are any differences between the quorums established for General Meetings and the minimums stipulated in the Companies Act and, if any, explain:**

Yes No

	% quorum differing from that stipulated in the Companies Act article 193 for ordinary resolutions	% quorum differing from that stipulated in the Companies Act article 194 for special resolutions
Quorum required on 1st call		
Quorum required on 2nd call		

Description of the differences

B.2 Indicate whether there are any differences in respect of the system stipulated in the Companies Act for adopting corporate resolutions and, if any, explain:

Yes No

What differences exist in respect of the system stipulated in the Companies Act?

	Larger majority than that established in the Companies Act article 201.2 for cases contemplated in article 194.1	Other cases requiring a larger majority
% established by the company for adopting resolutions		75%
Describe the differences		
<p>On both, first and second call the favourable vote of 75% of the voting capital attending the general meeting is required to validly adopt resolutions on the following matters:</p> <ul style="list-style-type: none"> • Alteration of Articles 22A and 44A of the Articles of Association on related party transactions and directors' prohibition from competing. • Authorisation of related party transactions in the cases contemplated in Article 22A of the Articles of Association. • Releasing of a director from his obligation to not compete, pursuant to Article 44A of the Articles of Association. • The amendment of this special regulation. 		

B.3 Indicate the rules to amend the company’s Articles of Association. In particular, indicate the majorities stipulated for amend the Articles of Association and the rules, if any, protecting shareholders’ rights in any amendment of the articles.

The Articles of Association of Repsol do not establish different conditions for altering articles of association from those set down in the Companies Act, except as provided in Article 22, which provides that to alter Articles 22A (“Related party transactions”), 44A (“No competition obligation”), and the special rule on alteration of the Articles of Association set out in Article 22, which requires the favourable vote of seventy-five per cent (75%) of the voting capital attending the general meeting on both first and second call.

Article 22 provides that annual and extraordinary general meetings must be attended on first call, in person or by proxy, by shareholders holding at least fifty per cent (50%) of the voting capital in order to adopt valid resolutions to alter the Articles of Association. On second call, the attendance of twenty-five per cent (25%) of that capital will be sufficient.

If a general meeting is attended by less than fifty per cent (50%) of the voting capital, resolutions altering the articles may only be validly adopted with the favourable vote of two-thirds of the capital present or represented at the general meeting.

B.4 Give details of attendance of general meetings held during the year of this report and the previous year:

Date General Meeting	Details of Attendance				Total
	% in person	% by proxy	% distance voting		
			Electronic vote	Others	
30-04-2015	21.40	35.79	0	4.05	61.24
20-05-2016	20.44	32.43	0.02	1.53	54.42

B.5 Indicate if there are any restrictions established in the articles of association requiring a minimum number of shares to attend general meetings

Yes No

Number of shares required to attend general meetings

B.6 Section repealed.

B.7 Indicate the address and the way to access to the company’s website, and where to find information on corporate governance and other information on general meetings that must be made available to shareholders through the company’s website.

The contents of corporate governance and other information about the last general meetings are directly accessible through the corporate website of Repsol, S.A., www.repsol.com, in the

section “Information for shareholders and investors, Corporate Governance”, http://www.repsol.com/es_en/corporacion/accionistas-inversores/gobierno-corporativo/default.aspx.

C MANAGEMENT STRUCTURE OF THE COMPANY

C.1 Board of Directors

C.1.1 Maximum and minimum numbers of directors stipulated in the articles of association:

Maximum number of directors	16
Minimum number of directors	9

C.1.2 Give details of the board members:

Name of director	Representative	Condition	Position on Board	Date first appointment	Date latest appointment	Election procedure
Antonio Brufau Niubó		External	Chairman	23-07-1996	30-04-2015	Vote at General Meeting
Gonzalo Gortázar Rotaèche		Proprietary	1 st Deputy-Chairman	30-04-2015	20-05-2016	Vote at General Meeting
Manuel Manrique Cecilia		Proprietary	2 nd Deputy-Chairman	25-04-2013	31-05-2013	Vote at General Meeting
Josu Jon Imaz		Executive	CEO	30-04-2014	30-04-2015	Vote at General Meeting
Artur Carulla Font		Independent	Member	16-06-2006	28-03-2014	Vote at General Meeting
Luis Carlos Croissier Batista		Independent	Member	09-05-2007	30-04-2015	Vote at General Meeting
Rene Dahan		Proprietary	Member	31-05-2013	31-05-2013	Vote at General Meeting
Ángel Durández Adeva		Independent	Member	09-05-2007	30-04-2015	Vote at General Meeting
Javier Echenique Landiribar		Independent	Member	16-06-2006	28-03-2014	Vote at General Meeting

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Mario Fernández Pelaz		Independent	Member	15-04-2011	30-04-2015	Vote at General Meeting
María Isabel Gabarró Miquel		Independent	Member	14-05-2009	31-05-2013	Vote at General Meeting
José Manuel Loureda Mantiñán		Proprietary	Member	31-01-2007	30-04-2015	Vote at General Meeting
Antonio Massanell Lavilla		Proprietary	Member	28-09-2016	28-09-2016	Cooptation
Henri Philippe Reichstul		Independent	Member	29-12-2005	28-03-2014	Vote at General Meeting
J. Robinson West		Independent	Member	28-01-2015	30-04-2015	Vote at General Meeting
Luis Suárez de Lezo Mantilla		Executive	Member & Secretary	02-02-2005	31-05-2013	Vote at General Meeting

Total Number of Directors	16
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Indicate any retirements from the board during the reporting period:

Name of director	Type of director at time of retirement	Date of retirement
Isidro Fainé Casas	Proprietary	21-09-2016

C.1.3 Complete the following tables on the categories of the board members:

EXECUTIVE DIRECTORS

Name of Director	Position in company's organisation
Josu Jon Imaz	CEO
Luis Suárez de Lezo Mantilla	Director, Company Secretary and Secretary of the Board

Total number of executive directors	2
% of board	12.5

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NON-EXECUTIVE PROPRIETARY DIRECTORS

Name of Director	Name of controlling shareholder represented or that proposed appointment
Gonzalo Gortázar Rotaeché	CaixaBank, S.A.
Antonio Massanell Lavilla	CaixaBank, S.A.
Manuel Manrique Cecilia	Sacyr, S.A.
José Manuel Loureda Mantiñán	Sacyr, S.A.
Rene Dahan	Temasek Holdings (Private) Limited

Total number of proprietary directors	5
% of board	31.25

NON-EXECUTIVE INDEPENDENT DIRECTORS

Name of director	Profile
Artur Carulla Font	Graduate in Economics. His professional career began in 1972 when he joined Arbora & Ausonia, S.L., where he occupied various positions before being named its Managing Director. In 1988 he joined Agrolimen as Director of Strategy. In 2001 he was named Managing Director of Agrolimen, S.A. Currently, he is Chairman of Agrolimen, S.A. and its participated companies; Affinity Petcare, S.A., and Roger Goulart, S.A.; member of Advisory Board of EXEA Empresarial, S.L. and member of Advisory Board of Roca Junyent. He is also member of Círculo de Economía, Member of the Management Board of Instituto de la Empresa Familiar and Member of Foundation MACBA (Museo de Arte Contemporáneo de Barcelona).
Luis Carlos Croissier Batista	He has been the professor in charge of economic policy of the Universidad Complutense of Madrid. During his long professional tenure, amongst other positions, he was Subsecretary of the Ministry of Industry and Energy, President of the National Institute of Industry (Instituto Nacional de Industria, I.N.I.), Minister of Industry and Energy and President of

	Spanish Securities Market Commission (Comisión Nacional del Mercado de Valores). Currently he is Director of Adveo, S.A., Alantra Partners, S.A. and Sole Director of Eurofocus Consultores, S.L.
Mario Fernández Pelaz	Graduate in Law at Deusto University in 1965. He has been Professor of Mercantile Law in the Faculty of Law of Deusto University and in the Faculty of Business Science at the same University, and Professor of different Masters at Deusto University. In his long professional career, he has served, among other charges, as Minister and later Vice-president of the Basque Government, Chairman of the Central Administration-Basque Government Transfers Mixed Committee, Chairman of the Basque Financial Council, Chairman of the Economic Committee of the Basque Government, Member of the Arbitration Committee of the Basque Autonomous Community. He was also Executive Director of BBVA Group and member of the Executive Committee from 1997 to 2002, and Main Partner of Uría Menéndez from that date to June 2009. From July 2009 to November 2013 he has been Chairman of BBK. He has been Executive Chairman of Kutxabank, S.A. Chairman of its Risk Delegate Committee and Chairman of its Executive Committee, and Vicechairman of Confederación Española de Cajas de Ahorros (CECA). He has the title of Consul of the Bilbao Consulate and Illustrious of Bilbao. He has also published on mercantile and financial matters.
Ángel Duráñez Adeva	BA Economics, Professor of Commerce, chartered accountant and founding member of the Registry of Economic Auditors. He joined Arthur Andersen in 1965 where he was Partner from 1976 to 2000. Up to March, 2004 he headed the Euroamerica Foundation, of which he was founder, entity dedicated to the development of business, political and cultural relationships between

	<p>the European Union and the different Latin American Countries. Currently he is Director of Mediaset España, S.A., Director of Quantica Producciones, S.L., Director of Ideas4all, S.L., Chairman of Arcadia Capital, S.L. Member of Foundation Independiente and Vice-President of Foundation Euroamérica.</p>
<p>Javier Echenique Landiribar</p>	<p>BA Economics and Actuarial Science. Former Director-General Manager of Allianz-Ercos and General Manager of BBVA Group. Currently Vice chairman of Banco Sabadell, S.A., Director of Telefónica, S.A., Actividades de Construcción y Servicios (ACS), S.A., Grupo Empresarial Ence, S.A. and Delegate of the Board of Telefónica, S.A. in the Basque region, Member of Foundation Novia Salcedo, Foundation Altuna and Member of the Círculo de Empresarios Vascos.</p>
<p>María Isabel Gabarró Miquel</p>	<p>Graduate in Law at the University of Barcelona in 1976. In 1979 she joined the Bar of Notaries. She has been a board member of important entities in different sectors: financial, energy, telecommunications, infrastructure and also property, where she was also a member of the Nomination and Compensation Committee and of the Audit and Control Committee. Currently, she is registered on the Bar of Notaries of Barcelona, since 1986, and is a member of the Sociedad Económica Barcelonesa de Amigos del País.</p>
<p>Henri Philippe Reichstul</p>	<p>Ba Economics, University of São Paulo and Phd at Hertford College, Oxford. Former Secretary of the State Business Budget Office and Deputy Minister of Planning in Brazil. From 1988 to 1999 he held the position of Executive Vice President of Banco Inter American Express, S.A. From 1999 to 2001 he was Chairman of Brazilian State Oil Company Petrobrás. He is Member of the Advisory Board of Lhoist do Brasil Ltda., Member of the Advisory Board of AES Brasil, Member of the Supervisory Board of Peugeot Citroen, S.A., Member of the Supervisory Board of Fives Group,, Member of the Board of Directors of LATAM Airlines</p>

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	<p>Group, Member of the Board of Directors of BRF S.A., Member of the Board of Directors of Semco Partners and Vice-Chairman of the Board of the Brazilian Foundation for Sustainable Development.</p>
<p>J. Robinson West</p>	<p>Graduate of the University of North Carolina Chapel Hill and Jurist Doctor from Temple University Law School in Philadelphia. West is an international expert in energy markets, especially all areas related to oil&gas. In 1984 he founded PFC Energy, a company over which he presided until 2013.</p> <p>He has held positions of responsibility in government with different administrations. Working as the Secretary of the Interior under Ronald Reagan, he developed and implemented the five-year lease of the US continental platform, organising the largest non-financial auction in the world. During Gerald Ford's presidency, he worked for the White House and the Secretary of Defence for International Economic Affairs, for which he received the Medal of Defence in recognition of his civil service.</p> <p>He is currently the Managing Director of the BCG Center for Energy Impact in Washington DC, advisers to the international energy industry, Director of Magellan Petroleum and of Paragon Offshore.</p> <p>He is also a member of the National Petroleum Council, Co-President of the <i>German Marshall Fund of the US</i> and President emeritus of the United States Peace Institute.</p>

Total number of independent directors	8
% of board	50

State whether any director qualified as independent receives from the company or any other company in the same group any sum or gain other than directors' emoluments, or has or has had a business relationship with the company or any other company in its group during the past year, in his/her own name or as controlling shareholder, director or senior executive of a company which has or has had such a relationship.

If appropriate, include a reasoned statement by the board explaining why it considers that the director in question can perform his/her duties as an independent director.

Name of director	Description of relationship	Reasoned statement

OTHER EXTERNAL DIRECTORS

State other external directors and explain why they cannot be considered proprietary or independent directors and their relationships, with the company or its executives or with the shareholders:

Name of director	Reasons	Company, executive or shareholder with which the director is related
Antonio Brufau Niubo	Mr. Brufau was the Executive Chairman of Repsol until 30 April 2015.	Repsol, S.A.

Total number of other non-executive directors	1
% of board	6.25

Indicate any variations during the reporting period in the category of each director:

Name of director	Date of change	Previous category	Present type

C.1.4 Complete the following table with details of the number of female directors at the year-end for the past 4 years and the category of female directors:

	Number of female directors				Female directors / total directors of each category (%)			
	Year t	Year t-1	Year t-2	Year t-3	Year t	Year t-1	Year t-2	Year t-3
Executive	-	-	-	-	-	-	-	-
Proprietary	-	-	-	-	-	-	-	-
Independent	1	1	1	2	12.5%	12.25%	14.28%	25%
Other non-executive	-	-	-	-	-	-	-	-
Total	1	1	1	2	6.25%	6.25 %	6.67%	12.5%

C.1.5 Explain any measures taken to endeavour to include in the board a number of women to give a balanced composition of men and women directors

Explanation of measures
<p>Article 32 of the company's articles of association stipulates that both the general meeting and the board, exercising its power to propose to the board and cooptation to fill vacancies, shall endeavour to apply policies of professional, international and gender diversity and diversity of knowledge and experiences in respect of the composition of the board.</p> <p>The Regulations of the Board also include this provision and also expressly assigns to the Nomination Committee the duty to: (i) ensure that the policies for selecting directors favours knowledge, experience and gender diversity and (ii) set a target for the gender least represented on the board of directors and devise a strategy for achieving that goal.</p> <p>In this sense, on 16 December 2015 the Board of Directors approved, based on a favourable prior report of the Nomination Committee, the Repsol, S.A. Director Selection Policy containing the specific target of 30% of female directors present on the Board of Directors by 2020 and laying down the functions of the Nomination Committee throughout the selection process.</p> <p>During 2016 the only vacancies open on the Board of Directors have been for External Directors, and therefore, the tasks of the Nomination Committee have been limited to informing the proposals for appointment or re-election of Directors, consisting of significant shareholders, to fill those vacancies.</p>

C.1.6 Explain any measures agreed by the nomination committed to ensure that the selection procedures are not implicitly biased against the selection of female directors and that a conscious effort is made to include women with the target profile among the candidates:

Explanation of measures

See previous section above.

The Nomination Committee is responsible for ensuring that the Director Selection Policy promotes diversity of knowledge, experiences and gender. In this sense, the Policy contains, among other guidelines, that Director candidates must be individuals, the appointment of whom favours that diversity in the Board of Directors, as well as the specific target for the presence of women on the Board of Directors by 2020.

If, despite the measures taken, if any, there are few or no female directors, explain the reasons that justify this situation:

Explanation of reasons
See sections above.

C.1.6 bis Explain the conclusions of the nomination committee on the verification of compliance with the directors' selection policy. In particular, how the policy is promoting the goal that by 2020 the number of female directors represent at least 30% of the total members of the board.

The Nomination Committee has verified compliance with the Director Selection Policy, which includes the specific objective concerning the presence of 30% of women on the Board of Directors in 2020.

The only vacancies open on the Board of Directors during 2016 have been for External Directors and the task of the Nomination Committee has been to inform of the proposals for appointment or re-election of Directors, put forward by the significant shareholders, to fill those vacancies, in accordance with applicable legislation and the Director Selection Policy.

C.1.7 Explain the form of representation on the board of shareholders with significant interests.

All controlling shareholders with the right to proportional representation are represented on the Repsol board of directors.

C.1.8 Explain, if appropriate, why proprietary directors have been appointed at the request of shareholders holding less than 3% of the capital:

Name of shareholder	Explanation
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State whether any formal requests for presence on the board have been rejected from shareholders holding interests equal to or greater than others at whose request proprietary directors have been appointed. If appropriate, explain why such requests were not met.

Yes No

Name of shareholder	Explanation

C.1.9 State whether any director has retired before the end of his/her term of office, whether said director explained the reasons for such decision to the Board and through what means, and if the explanations were sent in writing to the entire Board, explain below at least the reasons given by the director:

Name of director	Reason for retirement
Isidro Fainé Casas	Letter of 21 September 2016 communicating his resignation for professional reasons

C.1.10 Indicate the powers delegated to the Managing Director(s), if any:

Name of director	Brief description
Josu Jon Imaz	All powers of the Board except those that are legally or statutory non delegable.

C.1.11 Name Board members, if any, who are also directors or executives of other companies in the same group as the listed company:

Name of director	Name of Group company	Position
Josu Jon Imaz	Repsol Oil & Gas Canada, Inc.	Chairman

C.1.12 Name the company directors, if any, who are on the Boards of non-group companies listed on stock exchanges, insofar as the company has been notified:

Name of director	Listed company	Position
Josu Jon Imaz San Miguel	Gas Natural SDG,S.A.	Vice-Chairman
Luis Suárez de Lezo Mantilla	Gas Natural SDG, S.A.	Director
Manuel Manrique Cecilia	Sacyr, S.A.	Chairman and CEO
Gonzalo Gortázar Rotaache	CaixaBank, S.A.	CEO
Antonio Massanell Lavilla	CaixaBank, S.A.	Vice-Chairman
Antonio Massanell Lavilla	Telefonica, S.A.	Director
Antonio Massanell Lavilla	Erste Group	Member Supervisory Board
Luis Carlos Croissier Batista	Adveo, S.A.	Director

	Luis Carlos Croissier Batista	Alantra Partners, S.A.	Director
	Ángel Durández Adeva	Mediaset España, S.A.	Director
	C Javier Echenique Landiríbar	Banco Sabadell, S.A.	Deputy Chairman
	Javier Echenique Landiríbar	Telefonica, S.A.	Director
1	Javier Echenique Landiríbar	Actividades de Construcción y Servicios (ACS), S.A.	Director
3	Javier Echenique Landiríbar	ENCE Energía y Celulosa, S.A.	Director
	Henri Philippe Reichstul	BRF, S.A.	Director
	J. Robinson West	Magellan Petroleum	Director
3	J. Robinson West	Paragon Offshore	Director

C.1.1

Explain whether the board regulations provides rules on the maximum number of directorships its directors may hold:

Yes No

Explanation of the rules
<p>Article 18 of the Board of Directors Regulations provides in its section 5 the following:</p> <p><i>“Directors may not hold more than four (4) other mandates in other listed companies different from Repsol, S.A. To these effects:</i></p> <p>a) <i>It will be considered as one single mandate all those mandates held in companies belonging to the same group as well as those Board memberships held as proprietary director proposed by a company of said group although the stock held in the company or the level of control may not qualify to consider said company as part of the group; and</i></p> <p>b) <i>Board memberships in holding companies or companies ancillary to the development of the professional services of the own Director, the spouse, persons having equivalent emotional ties or closest family.</i></p> <p><i>Exceptionally and due to reasons properly justified, the Board may waive the Director from this prohibition. In addition, the Director shall inform the Nomination and Compensation Committee of any other professional obligations they may have and any material changes in their professional situation, as well as any that may affect the nature or condition by virtue of which they have been appointed Director.”</i></p>

C.1.14 Section repealed.

C.1.15 Indicate the overall remuneration of the board:

Remuneration of the board (thousand euros)	[...]
Amount of the vested rights of current directors in pension schemes (thousand euros)	3,840

Amount of the vested rights of former directors in pension schemes (thousand euros)	0
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C.1.16 Name the members of top management who are not executive directors and indicate the aggregate remuneration accrued in their favour during the year:

Name or corporate name	Position/s
Luis Cabra Dueñas	ED Exploration & Production
Begoña Elices García	ED Communication & Chairman's Office
Pedro Fernández Frial	ED Strategy, Sustainability and Technical Secretary (through 1 April 2016)
Arturo Gonzalo Aizpiri	Corporate Director of People & Organisation (from 1 April 2016)
Miguel Klingenberg Calvo	Corporate Director of Legal Affairs
Antonio Lorenzo Sierra	Corporate Director of Strategy, Planning and Global Solutions
Isidoro Mansilla Barreiro	Corporate Director of Audit and Control
Jaime Martín Juez	Director of Sustainability and Technology (from 1 April 2016)
Miguel Martínez San Martín	CFO
Cristina Sanz Mendiola	ED People & Organisation (through 1 April 2016)
M ^a Victoria Zingoni	ED Downstream
Total remuneration top management (thousand euros)	13,885

C.1.17 Name any board members who are also on the boards of companies of significant shareholders and/or in companies of its group:

Name of director	Name of significant shareholder	Position
Gonzalo Gortázar Rotaèche	VidaCaixa, S.A.U.	Chairman
José Manuel Loureda Mantiñán	Valoriza Gestión, S.A (Grupo Sacyr)	Chairman
José Manuel Loureda Mantiñán	Sacyr, S.A.U. (Grupo Sacyr)	Director
Manuel Manrique Cecilia	Sacyr, S.A.	Chairman & CEO
Manuel Manrique Cecilia	Sacyr Construcción, S.A.U. (Grupo Sacyr)	Chairman & CEO
Manuel Manrique Cecilia	Sacyr Concesiones, S.L. (Grupo Sacyr)	Chairman & CEO
Manuel Manrique Cecilia	Valoriza Gestión, S.A. (Grupo Sacyr)	Director
Manuel Manrique	Sacyr Fluor, S.A. (Grupo	Director

Cecilia	Sacyr)	
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Describe the significant relationships other than those contemplated above of the board members with the controlling shareholders and/or companies in their group:

Name of related director	Name of related controlling shareholder	Description of relationship
José Manuel Loureda Mantiñán	Sacyr , S.A.	Indirect holder of 7.81% of the capital of Sacyr, S.A. through Prilou, S.L. and Prilomi, S.L.
José Manuel Loureda Mantiñán	Sacyr , S.A.	Representative of Prilou, S.L. on the board of Sacyr Vallehermoso, S.A.
Manuel Manrique Cecilia	Sacyr , S.A.	Indirect holder of 1.864% of the capital of Sacyr Vallehermoso, S.A. through Cymofag, S.L.U.
Manuel Manrique Cecilia	Sacyr Vallehermoso Participaciones Mobiliarias,S.L.	Representative of Sacyr, S.A. as Sole Director
Manuel Manrique Cecilia	Sacyr Gestión de Activos, S.L.	Representative of Sacyr, S.A. as Sole Director
Manuel Manrique Cecilia	Sacyr Finance, S.A.	Representative of Sacyr, S.A. as Sole Director

C.1.18 State whether any modifications have been made during the year to the Regulations of the Board:

Yes No

Description of modifications
On 27 July 2016, the Board of Directors resolved to amend the Regulations of the Board of Directors in order to adapt the wording of its article 19.1. f) to the provisions of Regulation (EU) No. 596/2014 of the European Parliament and of the Council, of 16 April 2014, on market abuse, amending the notice period for the Company with regard to certain transactions involving shares or financial instruments in accordance with the new provisions of the European regulations.



C.1.19 Describe the procedures for selection, appointment, re-election, assessment and removal of directors. Indicate the competent bodies, the formalities and the criteria to be followed in each of these procedures.

Selection: The Nomination Committee, which is exclusively composed by External Directors, assesses the knowledge, expertise and experience required on the Board and defines accordingly the duties and skills required in the candidates who are to fill each vacancy and assess the time and dedication necessary for them to perform their duties adequately.

In turn, that committee is responsible for ensuring that the procedures for selecting directors promote the diversity of knowledge, experiences and gender and for setting a target for the gender least represented on the board of directors and devising a strategy to achieve that goal.

Additionally, the Board of Directors has approved on December 16th, 2015 the Directors Selection Police.

Appointment: Board members are appointed by the General Meeting, without prejudice to the right of the Board to nominate shareholders by co-optation to fill any vacancies that arise, up to the next General Meeting.

Within its powers of proposal to the General Meeting or appointment by cooptation, the Board may not propose as candidates or appoint as Directors any persons affected by any of the incompatibilities or prohibitions established in law, the Articles of Association or regulations or any persons, companies or entities in a situation of permanent conflict of interest with the company, including competitors of the company or their directors, executives or employees, or any persons related to or proposed by them.

Directors shall be persons who, apart from meeting the requirements stipulated for the position in the law and the Articles of Association, have recognised prestige and sufficient professional experience and expertise to perform their duties as such.

Furthermore, those persons indicated in section 2 of Article 13 of the Board's Regulations may not be nominated or appointed as Independent Directors. In addition, External Proprietary Directors who lose this status when the shareholder they represent sells its shares in the Company may only be re-elected as External Independent Directors when the shareholder they represented up to that time has sold all of its shares in the Company.

A Director who holds a shareholding interest in the Company may be appointed as External Independent Director, provided he meets all the conditions established in this article and does not hold a significant interest.

Nominations for the appointment or ratification of directors submitted by the Board to the General Meeting and appointments made by cooptation must be approved by the Board (i) upon proposal of the Nomination Committee, in the case of Independent Directors, or (ii) subject to a report by said Committee for other directors.

Re-election: Directors shall hold office for a maximum of four years, after which they shall be eligible for re-election for one or several periods with an equal duration. Directors appointed by cooptation shall hold office up to the next General Meeting following their appointment at which their appointment shall be subject to ratification.

The Nomination Committee shall be responsible for assessing the quality of their work and dedication of the directors proposed during their previous term in office.

Proposals to the General Meeting for the re-election of Directors shall be approved by the Board (i) upon proposal of the Nomination Committee, in the case of Independent Directors, or (ii) subject to a report by said Committee for other directors.

Assessment

At least once a year, the Board of Directors shall assess its functioning and the quality and efficiency of its work. It shall also annually assess the work of its Committees, based on the reports they submit to it.

The Chairman shall organise and coordinate this regular assessment of the Board with the Chairmen of the Committees.

The Board shall commission an external assessment of its performance to an independent specialized firm at least once every three years.

Cessation

Directors shall retire from office upon expiry of the term for which they were appointed and in all other cases stipulated in law, the Articles of Association and the Regulations of the Board of Directors.

The Board shall not propose the removal of any Independent Director before the end of the period for which he was appointed, unless it has justified reasons for doing so, based on a report by the Nomination Committee. In particular, such a proposal shall be justified if the Director (i) has defaulted the duties corresponding to his position; (ii) is in any of the situations described in section C.1.21 below; or (iii) falls into any of the circumstances by virtue of which he may no longer be considered an Independent Director.

The removal of Independent Directors may also be proposed following takeover bids, mergers or other similar corporate operations causing a change in the shareholding

structure of the Company, insofar as may be necessary to establish a reasonable balance between Proprietary Directors and Independent Directors.

Directors shall also tender their resignations in any of the circumstances defined in section C.1.21.

C.1.20. Explain to what extent the annual assessment of the Board has given rise to major changes in its internal organisation and the procedures applicable to its activities:

Description of modifications
With respect to 2016, the self-assessment of the Board of Directors has not resulted in major changes in its internal organisation or the procedures applicable to its activities.

C.1.20 bis Describe the process of assessment and the assessed areas carried out by the board of directors assisted, where appropriate, by an external consultant, regarding the diversity in its composition and powers, the operation and composition of its committees, the performance of the chairman of the board and of the chief executive of the company and the performance and contribution of each director.

According to the provisions of Article 45quater of the Bylaws and Article 11 of the Regulations of the Board, at least once a year the Board will evaluate its operations and the quality and efficiency of its work. The operation of Board committees will likewise be assessed annually, based on the annual reports submitted by each one. The Chairman will organize and coordinate the periodic evaluations with the Committee Chairs. At least once every three years, the Board will be assisted in the evaluation process by an external consulting firm.
With respect to the annual assessment of the Board of Directors and its Committees, for 2016, the Board of Directors performed, on 22 February 2016, the assessment of its own performance and efficiency, as well that of its Committees, and the performance of the Chairman of the Board of Directors, the CEO and the remaining Directors. This assessment is conducted using the respective questionnaires covering various issues related to the composition of the bodies, their organisation and operation, their functions and the conclusions.

C.1.20. ter Breakdown, if any, business relations that the consultant or any company of its group has with the company or any company of its group.

C.1.21 State the events in which directors are obliged to step down.

Directors shall tender their resignations and step down from the Board, should the latter consider this appropriate, in the following events:

- a) If they fall into circumstances of incompatibility or prohibition contemplated in law, the Articles of Association or applicable regulations.
- b) If they receive a serious warning from the Nomination Committee or the Audit and Control Committee for defaulting their obligations as directors.
- c) If, in the opinion of the board, in view of a report by the Nomination Committee:
 - (i) Their remaining on the Board could jeopardise the interests of the company or adversely affect the functioning of the Board or the standing and reputation of the Company; or
 - (ii) If the reasons why they were appointed disappear. Directors shall find themselves in this position, particularly in the following cases:
 - External Proprietary Directors, when the shareholder they represent or that nominated them directors transfers its entire shareholding interest. They shall also offer their resignation and, should the Board deem fit, step down from the Board, in the corresponding proportion, if the shareholder reduces its shareholding interest to a level requiring a reduction in the number of its External Proprietary Directors.
 - Executive Directors, when they cease to hold the executive positions outside the board to which their appointment as director was linked.

C.1.22 Section repealed

C.1.23 Are special majorities differing from those stipulated in law required for any type of decision?

Yes No

If yes, describe the differences:

Description of the differences
The alteration of Articles 20 and 23 of the Regulations of the Board regarding the no competition obligation and related party transactions, respectively, requires the favourable vote of three-quarters of the board members.
The favourable vote of two-thirds of the members not involved in a conflict of interest is required to authorise the directors to provide counselling or

representation services to the company's rivals, subject to a favourable report by the Nomination Committee.

The favourable vote of two-thirds of the members not involved in a conflict of interest is also required to release from disqualification due to conflict of interest in respect of a proposal put to the general meeting or an appointment of candidates or directors by cooptation.

Finally, the favourable vote of two-thirds of the members not involved in a conflict of interest is also required to authorise related party transactions of the company with directors, controlling shareholders represented on the board or persons related to them for a sum exceeding 5% of the Group's assets according to the latest consolidated annual accounts approved by the general meeting, in respect of strategic assets of the company, involving the transfer of significant technology of the company, intended to establish strategic alliances and which are not mere agreements of action or execution of existing alliances. This is conditional upon the transaction being fair and efficient for the interests of the company, the Nomination Committee having issued a favourable report after obtaining the corresponding report from a reputed independent financial expert indicating that the related party transaction will be made on reasonable, arm's length terms and if it is considered unadvisable to wait for the next general meeting to obtain authorisation, for reasons of opportunity.

C.1.24 Are there any specific requirements, other than those established for directors, to be appointed Chairman of the Board of Directors?

Yes No

Description of requirements

C.1.25 Does the Chairman have a casting vote?

Yes No

Matters on which there is a casting vote
According to Article 36 of the Articles of Association, save where greater majorities have been specifically established, resolutions of the Board shall be approved by the absolute majority of directors attending, and in the event of a tie, the Chairman or acting chairman shall have the casting vote.

C.1.26 Do the Articles of Association or Regulations of the Board establish an age limit for directors?

Yes No

Age limit Chairman

Age limit managing director

Age limit director

C.1.27 Do the Articles of Association or Regulations of the Board establish a limited term of office for independent directors other than as stipulated in law?

Yes No

Maximum number of years in office	
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C.1.28 Do the Articles of Association or Regulations of the Board establish specific rules for the delegation of votes at board meetings, how they are to be delegated and, in particular, the maximum number of delegations that a director may hold, and whether there is any limitation as to the categories of directors that can be delegated beyond the limitations imposed by legislation. If yes, include a brief description.

Without prejudice to the directors' duty to attend the meetings of the bodies they belong to or, if they are unable for justified reasons to attend the meetings to which they have been called, to issue the appropriate instructions to the director who is to represent them, if any, each Board member may grant a proxy to another member, with no limit on the number of proxies that may be held by any director for attendance of Board meetings, all subject to the provisions of the applicable laws.

Absent directors may grant proxies by any written means, including telegram, telex or telefax addressed to the Chairman or Secretary of the Board.

C.1.29 State the number of meetings held by the Board of Directors during the year, indicating, if appropriate, how many times the Board has met without the Chairman. Proxies made with specific instructions shall be considered attendance:

Number of board meetings	11
Number of board meetings held without the chairman	0

If the chairman is an executive director, indicate the number of meetings held without the attendance or representation of any executive directors and chaired by the coordinating director

Number of meetings	
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Indicate the number of meetings held by the different Committees of the Board:

Number of meetings of the Executive or Delegate Committee	8
Number of meetings of the Audit and Control Committee	8
Number of meetings of the Nomination Committee	5
Number of meetings of the Remuneration Committee	3
Number of meetings of Sustainability Committee	3

C.1.30 State the number of meetings held by the Board during the period attended by all its members. Proxies made with specific instructions will be considered attendances:

Number of meeting with the attendance of all directors	10
% attendance over total votes during the year	99,43%

C.1.31 Are the separate and consolidated annual accounts submitted to the Board for approval previously certified?

Yes No

If yes, name the person(s) who certify the separate or consolidated annual accounts of the company before they are approved by the Board:

Name	Position
Josu Jon Imaz San Miguel	CEO
Miguel Martínez San Martín	Managing Director and CFO

C.1.32 Explain the mechanisms, if any, established by the Board to avoid a qualified auditors' report on the separate and consolidated accounts laid before the General Meeting.

The Audit and Control Committee, set up on 27 February 1995, has as main duty, the supporting to the Board in its supervisory duties, through regular checking of the preparation of economic and financial reporting, the effectiveness of its executive controls and the independence of the external auditors, as well as supervising the internal audit department, and checking the compliance with all the legal provisions and internal regulations applicable to the Company.

This Committee has the following duties, among others:

- Supervise the integrity and process of preparing the mandatory financial information on the company and its group, ensuring compliance with all requirements, adequate definition of the consolidated group and correct application of the accounting principles.
- Regularly check the internal control, internal audit and risk management systems, including tax risks, to ensure that the principal risks are identified, handled and reported on adequately.

- Prior to their submission to the board, analyse the financial statements of the company and its consolidated group included in the annual, half-year and quarterly reports and any other financial information that the company is obliged to publish regularly by virtue of being a listed company, with the necessary requirements to ensure that they are correct, reliable, adequate and clear. For this purpose it shall have all the necessary information and such degree of aggregation as it may deem fit, assisted as necessary by the top management of the group. It shall, in particular, see that the annual accounts that are to be submitted to the board are certified pursuant to the internal or external regulations applicable from time to time.
- Ensure that the Board of Directors submits the accounts to the General Meeting without there being any reservations or provisos in the auditor's opinion and that in those exceptional cases where there are provisos, both the Chairman of this Committee and the auditors provide the shareholders with a clear explanation of the scope and contents of the reservations or provisos.
- Regularly receive information from the external auditors on the audit plan and results of their work, and check that the executives heed their recommendations.
- Regularly require the external auditors, and at least one a year, to assess the quality of the group's internal control procedures and systems.
- Be informed of any situations requiring adjustments that may be detected during the work of the external auditors whenever they are significant, considering this to mean any situations which, per se or in combination with others, may cause a material impact or damage to the net worth, results or reputation of the group. This consideration shall be left to the discretion of the external auditors, who shall, in case of doubt, opt for notification. The Chairman of the Committee shall be notified accordingly as soon as the auditors become aware of the situation in question.
- Oversee the degree of fulfilment by the audited units of the corrective measures recommended by the internal audit department in previous audits.

The committee shall be informed of any significant irregularities, anomalies or defaults detected by the internal audit department in the course of its work.

For this purpose, the members of this Committee shall have the necessary experience, capacity and dedication to perform their duties. Moreover, the Chairman shall have experience in business or risk management and a working knowledge of accounting procedures, and at least one of the members shall have the financial experience that may be required by the regulatory bodies of the stock markets on which the stocks or shares of the company are listed.

C.1.33 Is the Secretary of the Board a Director?

Yes No

C.1.34 Section repealed.

C.1.35 Describe any concrete mechanisms established by the company to preserve the independence of the external auditor, financial analysts, investment banks and rating agencies.

Article 34 of the Board Regulations states that one of the duties of the Audit and Control Committee is to ensure the independence of the External Auditors, in two ways:

- a) Avoiding any factors that may compromise the warnings, opinions and recommendations of the External Auditors, and
- b) Establishing and overseeing any incompatibilities between auditing and consultancy services and any others, the limits on concentration of the External Auditor's business and, in general, all other rules established to guarantee the auditor's independence.

According to these duties, in 2003 the Audit and Control Committee agreed on a procedure to approve previously all the services, auditing or otherwise, provided by the External Auditor, whatever their extent, scope and nature. This procedure is regulated in an Internal Rule mandatory for the whole of the Repsol Group.

In addition, article 34 of the Regulations of the Board of Directors provides that the Committee shall receive, annually, from the External Auditor written confirmation of its independence towards the Company or entities related to the same directly or indirectly, as well as information on the additional services of any kind to these entities by the Auditors or by individuals or entities related to them and the fees charged, in accordance with the regulations governing the activity of auditors. The Committee shall issue annually, prior to the delivery of the Auditing report, a report stating an opinion on the independence of the Auditors. This report must necessarily contain an assessment of any non-auditing services rendered, considered both individually and as a whole, vis-à-vis the rules governing independence or the regulations of the auditing profession.

Furthermore, Repsol Group has the Investor Relation Corporate Division whose responsibilities include ensuring that the information supplied by the Company to the market (financial analysts and investment banks, amount other) is transmitted fairly, commensurate and in useful time and, according with the Repsol Group Internal Conduct Regulations Regarding the Securities Market, that such information is accurate, clear, complete and, when required by the nature of the information, quantified, and shall by no means be misleading or confusing.

The Repsol Group has also approved and published a communication and contact policy for shareholders, institutional investors and proxy adviser which defines and establishes the principles and guidelines for contacting and communicating with these groups.

C.1.36 Indicate whether the external auditors have changed during the year. If so, name the incoming and outgoing auditors:

Yes No

Outgoing auditor	Incoming auditor

Explain any disagreements with the outgoing auditor:

Yes No

Explanation of disagreements

C.1.37 State whether the firm of auditors does any work for the company and/or its group other than standard audit work and if so, declare the amount of the fees received for such work and the percentage it represents of the total fees invoiced to the company and/or its group:

Yes No

	Company	Group	Total
Cost of work other than auditing (thousand euro)	797	817	1,614
Cost of work other than auditing / Total amount invoiced by the auditors (%)	17	18	22

C.1.38 Indicate whether the auditors' report on the annual accounts of the previous year was qualified. If so, state the reasons given by the Chairman of the Audit Committee to explain the content and scope of the qualifications.

Yes No

Explanation of reasons

C.1.39 State the number of years in succession that the current firm of auditors has been auditing the annual accounts of the company and/or its group. Indicate the ratio of the number of years audited by the current auditors to the total number of years that the annual accounts have been audited:

	Company	Group
Number of years in succession	15	15

	Company	Group
Number of years audited by current auditors / Number of years that the company has been audited (%)	58%	58%

C.1.40 Indicate, giving details if appropriate, whether a procedure has been established for

directors to receive external counselling:

Yes No

Details of procedure
<p>The Regulations of the Board of Repsol, S.A. expressly recognise the directors' right to advisory services. Article 25 provides as follows:</p> <ul style="list-style-type: none">- The Directors shall likewise have the power to propose to the Board, by majority vote, the contracting at the Company's expense of legal advisers, accountants, technical, financial, and commercial experts, and experts of any other kind they consider necessary to the Company's interests, to provide assistance in the performance of the Directors' functions in regard to concrete problems of some magnitude and complexity relating to their positions.- Said proposals must be submitted to the Chairman of the Company through the Secretary of the Board. The Board of Directors may veto their approval on the grounds that they are unnecessary to the performance of the assigned functions, or that the number is disproportionate to the importance of the problem and to the Company's assets and income, or that the technical assistance in question could be adequately provided by experts within the Company. <p>Furthermore, the Regulations of the Board of Directors establish that the Audit and Control Committee, the Nomination Committee and the Sustainability Committee may obtain counselling from lawyers or other independent professionals, in which case the Secretary of the Board shall, at the request of the Chairman of the Committee, take whatever action may be necessary to engage the services of such lawyers or other professionals, which shall be provided directly to the corresponding Committee.</p>

C.1.41 Indicate, with details if appropriate, whether there is an established procedure for directors to obtain sufficiently in advance any information they may need to prepare the meetings of the governing bodies:

Yes No

Details of procedure
<p>The Regulations of the Board of Directors of Repsol, S.A. establish that the notice of call to Board meetings shall be sent to each director at least 48 hours prior to the date specified for the meeting, and shall include the agenda. The minutes of the previous meeting shall be enclosed, regardless of whether they have been approved, and any information considered necessary and that is available.</p> <p>The Regulations of the Board of Directors of Repsol, S.A. contemplate procedures to ensure that directors have the necessary information</p>

sufficiently in advance to prepare Board meetings. In this regard, Article 25 provides as follows:

- The Directors shall have access to all the Company's services and may obtain, with the broadest possible powers, the information and advising they need on any aspect of the Company provided they request it in connection with the performance of their functions. The right to information extends to the subsidiaries, whether national or foreign, and shall be channelled through the Chairman or the Secretary of the Board of Directors or of the appropriate Board Committee, who shall respond to Directors' requests and directly furnish them the information, offering them access to appropriate sources or taking all necessary measures to answer questions.

C.1.42 Indicate, with details if appropriate, whether the company has established any rules obliging Directors to report and, if necessary, retire in any situations that could be detrimental to the prestige and reputation of the company:

Yes No

Explain the rules
<p>According to Article 16 of the Regulations of the Board of Directors, Directors shall offer their resignation and, should the board deem fit, step down as directors if, in the opinion of the Board, in view of a report by the Nomination Committee, their remaining on the board could jeopardise the interests of the company or adversely affect the functioning of the board or the standing and reputation of the company.</p> <p>In this regard, Article 19 of the Regulations of the Board of Directors provides that Directors shall notify the board as soon as possible and keep it up to date on any situations in which they may be involved and that could be detrimental to the standing and reputation of the company, to enable the board to assess the circumstances, particularly in pursuance of the preceding paragraph.</p>

C.1.43 Has any member of the Board informed the company that he/she has been sued or brought to trial for any of the offences contemplated in article 213 of the Companies Act?

Yes No

Name of Director	Prosecution	Comments

Has the Board studied the case? If so, indicate and explain the decision made as to whether or not the director should remain in office or, if appropriate, describe the actions taken by the board up to the date of this report, or which it plans to take.

Yes No

Decision made / action taken	Reasoned explanation

C.1.44 Describe any significant agreements entered into by the company which enter into force, are modified or terminated in the event of a takeover of the company following a takeover bid, and the effects thereof.

<p>The company usually participates in the exploration and exploitation of hydrocarbons through consortiums or joint ventures with other oil companies, both public and private. The agreements regulating the relations among partners of the joint ventures commonly grant the other partners a right of pre-emption on the participation of the member who intends to directly transfer all or part of its participation. This also applies to indirect transfers, that is, when there is a change of control in a particular partner's company and the value of the participation is significant in relation to the total assets included in the transaction, or other circumstances which are contractually regulated.</p> <p>The laws regulating the oil and gas industry in several countries in which the company operates also submit to prior authorisation by the competent government of any transfer of all or part of licences for hydrocarbon exploration and exploitation concessions, and such authorisation is sometimes also required for takeovers of the concessionary company or companies, especially the one that operates the mining business.</p>

C.1.45 Indicate globally and describe in detail any agreements made between the company and its directors, executives or employees contemplating golden handshake clauses in the event of resignation or unfair dismissal or termination of employment following a takeover bid or any other type of transaction.

Number of beneficiaries	244
Type of beneficiary	Description of the agreement
Directors: 4 members of the Management Committee (excluding the Executive Directors) and 238 Directors	<p>The company has established a single statute for executives, defined in the Executive Contract, regulating the severance pay applicable in cases of termination of their employment, contemplating the grounds for compensation stipulated in law. For members of the Executive Committee they include resignation by the Executive as a result of takeover of the company or a major change in its ownership, leading to a renewal of its governing bodies or the content of and approach to its main business activity.</p> <p>The amount of severance pay of the current members of the Executive Committee and of</p>

	<p>the rest of Directors appointed before December 2012 is calculated according to the age, seniority and salary of each executive. In the case of directors appointed after that date, the amount is calculated based on salary and years of management, within a range between 12 and 24 months, or the legal, if this higher.</p> <p>Further compensation is set to pledge not post-contractual competition of an annuity of total annual remuneration in the case of members of the Executive Committee (six months the case of one of them) and an annuity of fixed remuneration in the rest of Directors. . In the management agreements of some countries it is not contemplated the post-contractual commitment of non-competition or no compensation whatsoever is established for the same is not contemplated.</p>
Executive Directors: 2	A deferred economic compensation is contemplated for executive directors in the event of termination of their relationship with the company, provided it does not occur as a result of default of their obligations or at their own will without one of the justifying causes contemplated in their contract. The details of such deferred economic compensation are set out in the Annual Remuneration Report for the Directors

State whether these contracts have to be notified to and/or approved by the governing bodies of the company/group companies:

	Board of Directors	General Meeting
Body authorising the clauses	YES	NO

Is the General Meeting informed on the clauses?	YES
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C.2. Committees of the Board

C.2.1 Give details of the different committees, their members and the proportion of executive, proprietary, independent and other non-executive directors in each committee:

EXECUTIVE COMMITTEE

Name	Position	Category
Antonio Brufau Niubó	Chairman	Other external
Josu Jon Imaz	Member	Executive
Gonzalo Gortázar Rotaeché	Member	Proprietary
Manuel Manrique Cecilia	Member	Proprietary
Rene Dahan	Member	Proprietary
Artur Carulla Font	Member	Independent
Henri Philippe Reichstul	Member	Independent
J. Robinson West	Member	Independent
Luis Suárez de Lezo Mantilla	Member & Secretary	Executive

% executive directors	22.22%
% proprietary directors	33.33%
% independent directors	33.33%
% other non-executive directors	11.11%

Explain the committee's functions. Describe the procedures and the rules of organisation and operation of the committee and summarise its most important achievements during the year.

The Delegate Committee is composed of the Chairman of the Board and up to a maximum of eight Directors from the three existing categories, maintaining a similar proportion to that existing on the Board of Directors. Its members shall be appointed with a majority of at least two-thirds of the current Board members. The Chairman and the Secretary of the Delegate Committee shall be those of the Board.

All the powers of the Board are permanently delegated to the Delegate Committee, except those that may not be lawfully delegated. Whenever the business is sufficiently important, in the opinion of the Chairman or three members of the Delegate Committee, the resolutions adopted by the Delegate Committee shall be submitted to the full Board for ratification. The same shall be applicable in any business referred by the Board to be studied by the Delegate Committee, while reserving the ultimate decision thereon. In all other cases, the resolutions adopted by the Delegate Committee shall be valid and binding with no need for subsequent ratification by the Board.

In 2016, the Delegate Committee has analysed, among other questions, the participation in Gas Natural SDG, S.A., investments proposals and reports from the Corporate and Business Units, the Transformation Program and the Efficiency Program and the strategic lines in the different business..

State whether the composition of the Delegate or Executive Committee reflects the percentage of the different board members by category:

Yes No

If not, explain the composition of the Delegate or Executive Committee

AUDIT AND CONTROL COMMITTEE

Name	Title	Category
Javier Echenique Landiribar	Chairman	Independent
Ángel Duráñez Adeva	Member	Independent
Luis Carlos Croissier Batista	Member	Independent
Mario Fernández Pelaz	Member	Independent

% of proprietary directors	-
% of independent directors	100%
% of other external directors	-

Explain the committee's functions. Describe the procedures and the rules of organisation and operation of the committee and summarise its most important achievements during the year.

The Audit and Control Committee is composed exclusively of Independent Directors, no fewer than three in number, appointed by the Board on the basis of their experience and expertise in accounting, auditing or risk management. The Board shall appoint the members of this Committee for a term of four years. Without prejudice to one or several re-elections, they shall retire at the end of that term, when they retire from the Board, in case they cease to be considered as Independent Directors or whenever so resolved by the Board, subject to a prior report by the Nomination Committee. The chairman shall hold office as such for a maximum of four years, after which he shall not be eligible for re-election until one year has passed, without prejudice to his continuation or re-election as member of the Committee. The Secretary shall be the same of the Board.

This Committee supports the Board in its supervisory duties, through regular checking of the preparation of economic and financial reporting, the efficacy of executive controls, and the independence of the external auditors, as well as checking compliance with all the legal provisions and internal regulations applicable to the company. This Committee is competent to submit proposals regarding the appointment, renewal and removal of external auditors, drawing up an Annual Report on its activities which is submitted to the Board and is public.

The Committee establishes an annual calendar of meetings, as well as an Action Plan for each year. Meetings shall be called whenever so requested by any two of its members.

In 2016, the Committee analysed the financial statements of the company and the consolidated group, made a proposal to re-elect Deloitte as the external auditors for the year 2016, supervised internal risk control and information systems and has informed of the new Ethics and Conduct Code for the Repsol Group.

Identify the board member named to the Audit Committee because of his or her knowledge of accounting, auditing or both and state how many years the Chairman of this committee has held the position.

Name(s) of director (s) with experience	Ángel Durández Adeva
No. of years chairman has held office	2

NOMINATION COMMITTEE

Name	Title	Category
Artur Carulla Font	Chairman	Independent
María Isabel Gabarró Miquel	Member	Independent
Mario Fernández Pelaz	Member	Independent
José Manuel Loureda Mantiñán	Member	Proprietary
Antonio Massanell Lavilla	Member	Proprietary

% of proprietary directors	40%
% of independent directors	60%
% of other external directors	-

Explain the committee's functions. Describe the procedures and the rules of organisation and operation of the committee and summarise its most important achievements during the year.

The Nomination Committee consists of no fewer than three External Directors, being the majority Independent, taking account of the expertise, skills and experience of the directors and the duties of the Committee. The Board shall appoint the members of this Committee for a term of four years. Without prejudice to one or several re-elections, they shall retire at the end of that term, when they retire from the Board or whenever so resolved by the Board, subject to a prior report by the Audit and Control Committee. The Chairman of this Committee shall be one of its members, who shall necessarily be an External Independent Director, and the Secretary shall be the Secretary of the Board.

This Committee has the duties of proposing and reporting to the Board on the selection, appointment, re-election and removal of Directors, establishing a target for the gender that is underrepresented on the board, reporting on the proposed appointment and removal of senior executives and the directors' compliance with the principles of corporate governance and other obligations.

The Committee shall meet whenever the Board or Chairman of the Board requests reports or proposals within the scope of its duties, and whenever called by the Chairman of the Committee, requested by two Committee members or when reports are required.

In 2016 the Nomination Committee analysed the selection of the director Mr. Antonio Massanell Lavilla and the evolution of the Group's organisational structure.

COMPENSATION COMMITTEE

Name	Title	Category
Artur Carulla Font	Chairman	Independent
María Isabel Gabarró Miquel	Member	Independent

Mario Fernández Pelaz	Member	Independent
José Manuel Loureda Mantiñán	Member	Proprietary
Gonzalo Gortázar Rotaeché	Member	Proprietary

% of proprietary directors	40%
% of independent directors	60%
% of other external directors	-

Explain the committee’s functions. Describe the procedures and the rules of organisation and operation of the committee and summarise its most important achievements during the year.

The Compensation Committee consists of no fewer than three External Directors, being the majority Independent, taking account of the expertise, skills and experience of the directors and the duties of the Committee. The Board shall appoint the members of this Committee for a term of four years. Without prejudice to one or several re-elections, they shall retire at the end of that term, when they retire from the Board or whenever so resolved by the Board, subject to a prior report by the Audit and Control Committee. The Chairman of this Committee shall be one of its members, who shall necessarily be an External Independent Director, and the Secretary shall be the Secretary of the Board.

This Committee has the duties of making proposals and reporting to the Board of Directors on the compensation policy for senior management and the basic contractual conditions of senior management, verifying compliance with the Company’s established compensation policy, verifying the compensation information contained in corporate documents and reporting on the use of company information and assets for private purposes, among others.

The Committee shall meet whenever the Board or Chairman of the Board requests reports or proposals within the scope of its duties, and whenever called by the Chairman of the Committee, requested by two Committee members or when reports are required.

During 2016 the Committee has reported and proposed to the Board of Directors, among other matters, the Annual Remuneration report for 2015, the inclusion of a target tied to share value in the annual variable remuneration for 2016 of the Managing Director and the Stock Ownership Plan for Beneficiaries of the Multi-Year Variable Remuneration Program.

SUSTAINABILITY COMMITTEE

Name	Title	Category
María Isabel Gabarró Miquel	Chairman	Independent
Luis Carlos Croissier Batista	Member	Independent
Antonio Massanell Lavilla	Member	Proprietary
José Manuel Loureda Mantiñán	Member	Proprietary
Javier Echenique Landiribar	Member	Independent

% of executive directors	-
% of proprietary directors	40%

% of independent directors	60%
% of other external	-

Explain the committee’s functions. Describe the procedures and the rules of organisation and operation of the committee and summarise its most important achievements during the year.

The Sustainability Committee is composed by of fewer than three directors, the majority of whom must be external directors. They are appointed by the Board taking account of the expertise, skills and experience of the directors and the duties of the Committee. The Board shall appoint the members of this Committee for a term of four years. Without prejudice to one or several re-elections, they shall retire at the end of that term, when they retire from the Board or whenever so resolved by the Board, subject to a prior report by the Nomination Committee. One of the members of this Committee shall be appointed Chairman and the secretary shall be the Secretary of the Board.

This Committee has, among others, the duties of shaping the Group’s policies, objectives and guidelines on environmental, safety and social responsibility matters, analysing and reporting to the Board of Directors on the expectations of the Company’s stakeholders and supervising the relations with them, proposing to the Board of Directors the approval of a Sustainability Policy and reviewing and evaluating the management and control systems for non-financial risks.

The Committee meets with the established frequency, whenever called by its Chairman or requested by two of its members.

During 2016 the Committee has reviewed, among other matters, the sustainability report for year 2015, the Group's risk map, the new Code of Ethics and Conduct of the Repsol Group and the monitoring system of safety and environmental protection indicators.

The respective Chairmen of the Committee shall regularly report to the Board on the actions taken by the Committees. At least once a year, the Committee shall assess its functioning and the quality and efficiency of its work, reporting to the full Board. The Secretary of the Committee shall issue minutes of the resolutions adopted at each meeting, which shall be made available to Board members.

C.2.2 Complete the following table with information on the number of directors who sat on Board Committees at the close of the last four fiscal years:

	Number of directors			
	FY t Number - %	FY t-1 Number - %	FY t-2 Number - %	FY t-3 Number - %
Delegate Committee	-	-	-	-
Audit and Control Committee	-	-	-	1 – 25%
Nomination Committee	1 – 20%	1 – 20%	N.A.	N.A.
Compensation Committee	1 – 20%	1 – 20%	N.A.	N.A.
Sustainability Committee	1-20%	1 – 20%	N.A.	N.A.

C.2.3 Section repealed.

C.2.4 Section repealed.

C.2.5 Indicate the existence, if appropriate, of regulations of the board committees, where they are available for consultation and any modifications made during the year. State whether an annual report has been issued voluntarily on the activities of each committee.

Delegate Committee

The internal regulation of the Delegate Committee is currently set out in the Articles of Association and the Regulations of the Board of Directors. The Articles of Association and the Regulations of the Board of Directors are entered in the Madrid Trade Registry and accessible to the public through the company's web site (www.repsol.com).

Audit and Control Committee

The internal regulation of the Audit and Control Committee is currently set out in the Articles of Association and the Regulations of the Board of Directors. The Articles of Association and the Regulations of the Board of Directors are entered in the Madrid Trade Registry and accessible to the public through the company's web site (www.repsol.com). The Audit and Control Committee has drawn up a Report of its activities during 2016 which will be made available to shareholders for the General Shareholders Meeting 2017.

Nomination Committee

The internal regulation of the Nomination Committee is currently set out in the Regulations of the Board of Directors. The Regulations of the Board of Directors are entered in the Madrid Trade Registry and accessible to the public through the company's web site (www.repsol.com).

Compensation Committee

The internal regulation of the Compensation Committee is currently set out in the Regulations of the Board of Directors, which are entered in the Madrid Trade Registry and accessible to the public through the company's web site (www.repsol.com).

Sustainability Committee

The internal regulation of the Sustainability Committee is currently set out in the Regulations of the Board of Directors, which are entered in the Madrid Trade Registry and accessible to the public through the company's web site (www.repsol.com).

*Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish-language version prevails.*

C.2.6 Section repealed.

D **RELATED PARTY AND INTER-COMPANY TRANSACTIONS**

D.1 Name the competent body and explain the procedure, if any, for approving related party and inter-company transactions:

Procedure for reporting the approval of related party transactions
<p>According to Article 22bis of the Articles of Association, any transaction that the company makes directly or indirectly with directors, controlling shareholders represented on the board or persons related thereto which (i) are for a sum exceeding 5% of the Group's assets according to the latest consolidated annual accounts approved by the general meeting; (ii) involve strategic assets of the company; (iii) involve the transfer of significant technology of the company; or (iv) are intended to establish strategic alliances and are not mere agreements of action or execution of existing alliances, can only be made if they meet the following conditions:</p> <ul style="list-style-type: none">a) the transaction is fair and efficient for the interests of the company;b) after obtaining the corresponding report from a reputed independent financial expert indicating that the related party transaction will be made on reasonable, arm's length terms, the Nomination Committee will issue a report assessing fulfilment of the requirement of (a) above; andc) the General Meeting authorises the related party transaction with a favourable vote of seventy-five per cent (75%) of the capital present and represented at the general meeting. This notwithstanding, if it is considered unadvisable to wait for the next general meeting to obtain authorisation, for reasons of opportunity, the transaction may be approved by the board, provided (i) the report by the Nomination and Compensation Committee contemplated in (b) above is favourable for the transaction, and (ii) the resolution is adopted with the favourable vote of at least two-thirds of the board members not affected by a conflict of interest. In this case, the board shall inform shareholders at the next general meeting on the terms and conditions of the transaction. <p>When calling the general meeting to discuss or be informed on the authorisation of the related party transaction, the board shall make available to shareholders the reports issued by the Nomination Committee and the independent expert contemplated in (b) above and, should it so deem fit, its own report on the matter.</p> <p>Other related party transactions must be authorised by the Board of Directors after obtaining a report from the Nomination Committee. On an exceptional basis, related party transactions that would normally require Board approval may be authorised by the Delegate Committee, subject to prior ratification by the full board, whenever so required in cases of emergency.</p>

The board's authorisation is not needed for related party transactions that meet all three of the following conditions:

- i. the transaction is made under contracts with standard terms and conditions which are applied across the board to a large number of clients;
- ii. it is made at prices or rates generally established by the person acting as supplier of the good or provider of the service in question or, if the transaction refers to goods or services for which there are no prices established, on arm's length terms, similar to those applied in commercial relations with clients of a similar nature; and
- iii. the amount of the transaction does not exceed 1% of the company's annual income.

Related party transactions are assessed from the point of view of equal treatment and arm's length terms and are described in the Annual Corporate Governance Report and the regular public information on the terms set out in the applicable laws and regulations.

D.2 List any transactions for a significant amount or object between the company and/or companies in its group and controlling shareholders of the company:

Name of controlling shareholder	Name of company or group company	Relationship	Type of transaction	Amount (thousand euros)
SACYR, S.A.	REPSOL GROUP	Contractual	Operating lease contracts	89
SACYR, S.A.	REPSOL GROUP	Commercial	Receipt of services	13,299
SACYR, S.A.	REPSOL GROUP	Contractual	Purchase of goods finished or not	133
SACYR, S.A.	REPSOL GROUP	Commercial	Rendering of services	4,051
SACYR, S.A.	REPSOL GROUP	Commercial	Sale of goods finished or not	5,705
SACYR, S.A.	REPSOL GROUP	Commercial	Others	244,531
SACYR, S.A.	REPSOL GROUP	Commercial	Purchase of property and equipment	67,066
SACYR, S.A.	REPSOL GROUP	Contractual	Guarantees & bonds	47,837
SACYR, S.A.	REPSOL GROUP	Corporate	Dividends and other distributed profits	92,634
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Interest paid	6,901
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Operated leases	1
CAIXABANK ,S.A.	REPSOL GROUP	Commercial	Receipt of services	5,035
CAIXABANK ,S.A.	REPSOL GROUP	Commercial	Contributions to pension plans and life insurance	22,771
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Interest charged	593

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CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Interest accrued but not collected	24
CAIXABANK ,S.A.	REPSOL GROUP	Commercial	Rendering of services	3,348
CAIXABANK ,S.A.	REPSOL GROUP	Commercial	Sale of goods finished or not	7
CAIXABANK ,S.A.	REPSOL GROUP	Commercial	Purchase of financial assets	30,085
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Financing agreements: loans	453,719
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Guarantees & bonds	305,412
CAIXABANK ,S.A.	REPSOL GROUP	Corporate	Dividends and other distributed profits	119,365
CAIXABANK ,S.A.	REPSOL GROUP	Contractual	Others	1,008,807
TEMASEK HOLDINGS (PRIVATE) LIMITED	REPSOL GROUP	Commercial	Sale of goods finished or not	119,760
TEMASEK HOLDINGS (PRIVATE) LIMITED	REPSOL GROUP	Corporate	Dividends and other distributed profits	54,135

D.3 List any significant transactions for a significant amount or object between the company and/or companies in its group and the directors or executives of the company:

Name of directors or executives	Name of related party	Relationship	Nature of the transaction	Amount (thousand euros)
Company executives	Repsol Group	Contractual	Financing agreements: loans and capital contributions (lender)	99

D.4 Report any significant transactions with other companies in the group that are not eliminated in the consolidated financial statements and which do not, by virtue of their object or terms, correspond to the normal business of the Company:

In any case, inform on any inter-company transaction with companies established in countries or territories considered tax havens:

Name of group company	Brief description of the transaction	Amount (thousand euros)
Greenstone Assurance Ltd.	Guarantees and bonds given	1,125
Greenstone Assurance Ltd.	Other incomes	6

D.5 State the amount of transactions made with other related parties.

D.6 Describe the mechanisms established to detect, define and resolve possible conflicts of interest between the company and/or its group, and its directors, executives or controlling shareholders:

The Regulations of the Board of Directors require that directors abstain from deliberating and voting on resolutions or decisions in which they or someone related to them have a direct or indirect conflict of interest. Moreover, directors must take the necessary measures to avoid situations in which their direct or indirect interests conflict with the company's interests and their obligations to the Company.

Director must notify the Board of Directors through the Chairman or Secretary of any direct or indirect conflict of interest with the Company's interests involving them or anyone related to them.

Directors shall inform the Nomination Committee of any other professional obligations and remunerated activities of any kind, as well as any material change in their professional situation or changes that affect the nature or condition by virtue of which they have been appointed Directors.

Finally, directors shall tender their resignations and step down from the Board, should the latter deem fit, whenever they incur in any of the events of incompatibility or disqualification established in law, the Articles of Association or Regulations.

Articles 19 to 23 of the Regulations of the Board of Directors set out the obligations to be met by Directors in accordance with their duty of loyalty vis-à-vis non-competition, use of corporate information and assets and taking advantage of business opportunities, and the requirements established in respect of related party transactions between the Company and the Directors, significant shareholders represented on the Board or persons related to them.

Similarly, the Repsol Group Internal Conduct Regulations regarding the Securities Market, applicable to directors, top management and the executives of certain departments and divisions with access to privileged information of the company or its group and who carry out tasks related with the Securities Market, contemplates the preclusion and solving of conflicts of interest in Articles 8.3. and 8.4. and the proceeding that shall be followed in those situations that could potentially create a conflict of interest with Repsol Group, setting *abstention* as the general principle to be considered in the resolution of all kind of conflicts of interest and the duty to act in all moments with loyalty to the Repsol Group, giving preference to the interest of the Repsol Group over its own interests.

Finally, the Ethics and Conduct Code which applies to all employees of Repsol including its executives and its Directors also provides the action proceeding in case of a potential conflict of interest.

D.7 Is more than one company of the Group listed in Spain?

Yes No

Name the subsidiaries listed in Spain:

Listed subsidiaries

Indicate whether the respective areas of activity and possible business relations between them have been precisely defined publicly and those of the listed subsidiary with other companies in the group:

Yes No

Define any business relations between the parent company and listed subsidiary, and between the latter and other group companies

Describe the mechanisms established to solve any conflicts of interest between the listed subsidiary and other group companies:

Mechanisms to solve conflicts of interest

E RISK CONTROL AND MANAGEMENT SYSTEMS

E.1 Explain the scope of the company's Risk Management System, including those of tax nature.

The Repsol Group operates in a variety of countries, conditions and environments and in all phases of the energy business value chain. As a result, it is exposed to a variety of risks (strategic, operational and financial), which can affect the future performance of the organization and must be mitigated as effectively as possible.

Because of this, the Company has an organization, procedures and system that enable it to manage these risks to a reasonable extent. Risk management is therefore an integral element of the Group's decision-making processes, both within the corporate governance bodies and in business management.

Repsol has been working for years on an integrated risk management model in order to anticipate, manage and control the risks with an overall vision. The Repsol Integrated Risk Management System (IRMS) provides an accurate overview of all risks of any kind to which the Company may be exposed.

Repsol's commitment to implementing the IRMS is reflected in the Repsol Risk Management Policy, and its principles are clarified in the Integrated Risk Management Rule approved by the company's Corporate Executive Committee. This management model was inspired by ISO 31000, the international benchmark standard, and the Three Lines of Defence model.

The key pillars of the IRMS are:

- Senior Management as the leader of integrated risk management
- Integration in all management processes and activities of the company from a global perspective provided by Risk Management.
- Participation of all corporate departments and areas, converting them into units with varying levels of responsibility and specialisation (risk management units, supervision units and audit units), as well as by Risk Management, which manages and coordinates the integrated management system.
- Guarantees that all risks are managed by a unified process for identifying, assessing and dealing with them.
- Promotes continuous improvement for enhanced efficiency and responsiveness.

E.2 Name the corporate bodies responsible for preparing and implementing the Risk Management System, including tax.

Board of Directors

The full Board of Directors reserves the right to approve the Company's general policies and strategies, which includes its risk management and control policies, tax risks among them, and to oversee the internal reporting and control systems:

Audit and Control Committee of the Board of Directors

According to the Regulations of the Board of Directors of Repsol, the Audit and Control Committee regularly checks the efficiency of the internal control, internal audit and risk management systems, including tax risks, to ensure that the principal risks are identified, managed and reported adequately.

Sustainability Committee

According to the Regulations of the Board of Directors of Repsol, the Sustainability Committee reviews and evaluates the systems in place for managing and controlling non-financial risks, especially those related to the matters falling under its jurisdiction.

Corporate Executive Committee

The Corporate Executive Committee approves the governance elements required within the area of risk management, oversees their correct application and monitors the company's performance in respect of risks.

The Senior Management at Repsol views the Integrated Risk Management System as not only a tool for defining the company's strategy but also as a way of improving operations and of flexibly managing critical situations and becoming stronger in the process.

Repsol's Integrated Risk Management System is aligned with the Three Lines of Defence Model on the assignment of responsibilities in risk management and control. In this regard, Repsol is organized as follows:

Risk Management Units (1st Line of Defence). These units are responsible for direct management of risk in day-to-day operations, which encompasses the tasks of identification, analysis, evaluation and mitigation of risks.

Risk Supervision Units (2nd Line of Defence). As governance units specializing in the management of certain types of risks, they have the mission of furthering and overseeing the implementation of effective risk management practices in the Management Units and providing counselling for continuous improvement in risk management.

Risk Department: The Risk Department oversees the integrated risk management tasks and ensures that this management is performed in a global, homogeneous and comprehensive manner while effectively influencing decision-making processes. To achieve this, the Risk Department ensures that Repsol has a risk evaluation process based on a common and homogeneous methodology for identifying and appraising risks in all responsible departments, that allows risks to be characterised in a simple, understandable and reliable manner, and to quantify the frequency or probability and potential consequences of risks according to three types of impact (economic, reputation/image and on people) that could befall the department or unit in the event of such risks materialising.

Each year, and for the purpose of obtaining a consolidated Risk Map at Group level, the Risk Department coordinates the preparation of individual risk maps by each of the Business Units. This task is performed by groups of experts from the Business Units, providing an overview of the key risks according to common metrics and identifying efficient mitigation measures. For Repsol, the Risk Map is a crucial tool that identifies the relevant risks and classifies them according to their importance. **Risk Audit Units (3rd Line of Defence)**. These units are responsible for evaluating the design and functioning of the Group's risk management systems to ensure that the risks are adequately identified, measured, prioritized and controlled according to the laws and regulations in place and good practice in the industry.

E.3 Define the main risks, including those of tax nature, that could have a bearing on achievement of the company's business goals.

Repsol's transactions and income are exposed to risks as a consequence of changing competitive, economic, political, legal, regulatory, social, industrial, business and financial risks such as the ones discussed below:

Strategic and Operational Risks:

Strategic and Operational Risks:

- Uncertainty in the current economic context
- Climate change
- Fluctuations in international prices of crude and reference products and in demand owing to factors beyond Repsol's control
- Tax and regulatory framework of Repsol's activities
- Repsol is subject to extensive environmental and safety legislation and risks
- Operating risks inherent in Repsol's activities both in the oil and gas exploration and exploitation activities (Upstream), which depend on the acquisition or the discovery of reserves at a reasonable cost and the subsequent development of the new reserves of oil and gas, and in the industrial business units and the marketing of oil by-products (Downstream). Some of these risks are:
 - Attacks on assets /people
 - Wars, armed conflicts and socio-political instability
 - Accidents
 - Natural catastrophes

- Deviations in the execution of investment projects
- Changes in the supply of goods or provision of services by suppliers and contractors
- Errors and failures in productive systems or transport facilities
- Location of reserves
- Estimates of oil reserves and gas deposits
- Projects and operations developed through joint ventures and associates
- Repsol can make acquisitions, investments and disposals as part of its strategy
- The insurance cover for all operating risks to which Repsol is exposed might not be sufficient
- Exposure of operations in the natural gas sector to certain operational and market risks
- Cyclical nature of the petrochemicals business
- The strategy of the Repsol Group requires efficiency and innovation in a highly competitive market
- The Repsol Group is exposed to potential interpretative discrepancies and administrative, judicial and arbitration procedures
- The reliability and robustness of information technology are key factors in keeping our operations up and running
- Inadequate conduct or breaches of the applicable laws and regulations by our employees can damage the reputation of the Repsol Group
- Repsol is sensitive to negative public opinion that can damage our image and reputation, which can in turn impact business opportunities

Financial Risks:

- Liquidity Risk
- Credit Risk
- Market Risk
 - Exchange rate risk
 - Commodity price risk
 - Interest rate risk
 - Credit rating risk

For more information: See chapter Risk Management (section “Risk factors”) in the Repsol Consolidated Management Report 2016.

E.4 State whether the company has a risk tolerance level, including tax.

The Company has established tolerance levels which, depending on each type of risk, can be expressed on the basis of numeric indicators (e.g., for market, credit, etc. risks) or as management guidelines establishing obligations or limits on activities or behaviour (e.g., in operational risks).

E.5 What risks, including those of tax nature, have occurred during the year?

Although risks deriving from the Company's business materialised during the year, the control systems established by the company worked properly, enabling adequate handling of those risks.

For more information, see the Repsol Consolidated Management Report for 2016, which contains detailed descriptions of the year's events.

E.6 Explain the response and supervision plans for the main risks to which the company is exposed, including those of tax nature.

Repsol has an organization, procedures and system that enable it to identify, measure, evaluate, prioritize, control and reasonably manage the risks to which the group is exposed, and decide to what extent those risks are accepted, mitigated, hedged or avoided as far as possible.

The response plans are adapted to the peculiarities of each risk. The principal measures taken by the company include:

- Establishing targets, strategic lines and internal regulations (policy, rules, procedures, manuals and guidelines).
- Analyzing and measuring different variables associated mainly with financial risks (VaR, CFaR) and analysing sensitivity to risk factors.
- Defining, monitoring and continuously assessing the design and functioning of the internal control and compliance systems: Financial Reporting Internal Control System, Program for Regulatory Compliance with the formal legal obligations of legal persons belonging to the Repsol Group; Crime Prevention Model in the Group's Spanish companies.
- Taking out insurance coverage.

In this regard, part of the process of preparing the 2016 Risk Map involved identifying new lines of response and consolidation above and beyond the current practice, primarily through mitigating actions, for the risks most relevant to the company.

For some extremely critical risks, the organization is working on a methodology that will provide a comprehensive overview of the factors that impact the materialisation of a risk event and its consequences in order to prevent them from occurring and/or reduce the impact. This will make it possible to focus efforts on dealing with the risk by emphasising detection and the management of barriers and controls (preventive and contingency measures).

In addition, the company also has several independent analysis, supervision and control units and response units specializing in different areas of risk management, such as:

- Management and Control of Financial Risks
- Safety and Environment
- Corporate Security
- Corporate Responsibility
- Information Systems Risks and Continuity
- Fiscal Policies, Environment and Control of Tax Risks
- Control of Reserves
- Insurance
- Compliance

Finally, the company has an Internal Audit Unit which evaluates and enhances existing controls to make sure that the potential risks (strategic, operational and financial) that may hamper achievement of the Repsol Group goals are reasonably identified, measured and controlled.

F INTERNAL CONTROL SYSTEMS AND RISK MANAGEMENT OVER FINANCIAL REPORTING (ICFR)

Describe the mechanisms comprising the system of internal control over financial reporting (ICFR) of your company

F.1 Control environment

Report on at least the following, describing their principal features:

F.1.1. Which bodies and/or duties are responsible for: (i) the existence and maintenance of an adequate and effective ICFR system; (ii) its implementation; and (iii) its supervision.

As indicated in its Bylaws, the Board of Directors of Repsol, S.A. is responsible for the governance, management and administration of the Company's businesses and interests save insofar as is reserved for the General Shareholders' Meeting. It focuses on the general function of supervision and the consideration of especially important issues for the Company.

The Regulations of the Board of Directors define the powers reserved for the Board, such as drafting the individual and consolidated Annual Financial Statements and Directors' Report and submitting them to the General Shareholders' Meeting. The Board must draw these documents up in clear, precise terms. It must also make sure they give a true and fair view of the net worth, financial position and results of the company and the group, as stipulated in law. Approval of the risk management and control policy, including tax risks, supervision of internal reporting and control systems and approval of the financial information which Repsol, as a publicly listed company, is obliged to publish regularly, are also reserved for the Board of Directors.

The Regulations also establish the Board's responsibility for approving the company's codes of conduct and ethics, its own organization and functioning and that of the Senior Management, as well as specific duties referring to the company's activity on the securities market.

The Board of Directors has a direct relationship with the members of the Senior Management and the company's auditors, respecting their independence at all times.

Point C.1 of this Report contains information on the structure and composition of the Board of Directors.

The Board of Directors has appointed members to sit on several Committees, such as the Audit and Control Committee, whose main purpose according to the Regulations of the Board of Directors is to support the Board in its supervisory duties, through regular checking of the economic-financial reporting process, the effectiveness of its executive controls and the independence of the external auditors, as well as checking fulfilment of all applicable laws and internal regulations.

All the members of the Audit and Control Committee are independent outside directors, with accounting, auditing and/or risk management expertise and experience. The Committee Chairman also has extensive experience in business, risk and financial management and a sound knowledge of accounting procedures. The structure and functioning of this committee are described in point C.2.1 of this Report, which expressly references the procedure for appointing the Committee Chairman.

As established in the Regulations of the Board of Directors regarding internal control and reporting systems, the Audit and Control Committee is responsible, among other duties, for regularly checking the efficacy of the internal control, internal audit and risk management systems, including tax risk, ensuring that the principal risks are identified, managed and reported adequately.

Moreover, according to the aforesaid Regulations, the Audit and Control Committee is responsible for the following duties related to financial reporting process:

- Supervise the preparation and presentation of mandatory financial reporting on the Company and the Group and its integrity, compliance with legal requirements, adequate definition of the consolidated group and correct application of the accounting principles.
- Before they are presented to the Board and with the necessary requirements of checking that they are correct, reliable, sufficient and clear, analyse the Financial Statements of the Company and its consolidated Group contained in the annual, half-year and quarterly reports, and any other financial information which, as a listed company, the Company is obliged to publish regularly, obtaining all the necessary information with the level of aggregation it considers appropriate, for which it will receive the necessary support from the Group's executive management.

- Ensure that the Annual Financial Statements to be presented to the Board of Directors to be authorized for issue are certified as required by the internal or external regulations applicable from time to time.
- Check all significant changes in the accounting principles used and the presentation of the financial statements and make sure they are adequately publicized.
- Strive to ensure that the board of directors can present the company's accounts to the general meeting without limitations or qualifications in the auditor's report. In the exceptional case that qualifications exist, both the chairman of the audit committee and the auditors should give a clear account to shareholders of their scope and content.
- Examine draft Codes of Conduct and Ethics and modifications thereto, as prepared by the corresponding department of the Group, and issue its prior opinion on the proposals that are to be put to the corporate bodies.
- Take particular care in ensuring compliance with the applicable market conduct regulations and overseeing the actions of the Company's Internal Transparency Committee.
- Make sure that the internal control and recording procedures and systems are sufficient, adequate and effective in the measurement, valuation, classification and accounting of the Group's hydrocarbon reserves, so that their inclusion in the periodical financial reporting complies at all times with the sector standards and applicable legislation.
- Protect the independence and efficacy of internal auditing; analyse and approve, if appropriate, the annual planning of the Internal Audit Department and obtain information on the extent to which the audited units have implemented the corrective measures recommended by the Internal Audit Department in previous inspections. The Audit and Control Committee reports to the Board any situations that may entail a substantial risk for the Group.

F.1.2. State whether the following elements exist, especially in respect of the financial reporting process:

- **Departments and/or mechanisms responsible for: (i) designing and reviewing the organizational structure; (ii) clearly defining the lines of responsibility and authority, with an adequate distribution of tasks and duties; and (iii) ensuring that there are sufficient procedures for adequately informing the company.**

The internal regulations assign to the People and Organization Corporate Division the duties and responsibilities associated with the study, design, approval and implementation of organizational structures and sizing in the company.

According to those regulations, the organizational structure establishes the hierarchical and functional level for the normal development of the different areas of activity of the Group and determines the levels of responsibility, decision and the functions of each of the organizational units.

The organizational structure is represented by means of an organization chart and the sizing defined. Approval of a structure requires two approving roles, the line approver and the People and Organization Corporate Division, according to the levels established in the regulations.

The organizational principle that governs structure approval is based on the premise that a structure cannot be approved by the person who is directly responsible for it, but by his or her hierarchical superior.

There is also an organizational unit responsible for inputting the approved organizational changes in the computer system, according to the implementation plan defined, which makes it possible to ensure compliance with the requirements established as regards internal control.

- **Code of conduct, approval body, degree of dissemination and information, principles and values included (stating whether there is any specific mention of the operations register and preparation of financial reporting), body responsible for analyzing default and non-compliance and proposing remedial action and penalties**

Repsol has a "Code of Ethics and Conduct", approved by the Board of Directors, based on the favourable report of the Audit and Control Committee, the Sustainability Committee and the Ethics and Compliance Committee, which applies to all directors, managers and employees of the Repsol Group. The Code establishes the minimum conduct guidelines that should govern the behaviour of all employees when performing their professional duties and the penalty regime applicable in the event of failure to comply with those rules.

The Code contemplates, among others aspects, the basic principles of performance in relation to integrity and conduct, reliability of information and control of records, as well as the processing of sensitive information and intellectual property. It also specifies obligations in relation to human rights, community relations, measures against bribery, corruption, and money laundering and the commitment to carry out activities in accordance with prevailing legislation in all the areas of performance and countries.

The company also has a Welcome Manual supplied to those entering the company and that contains the basic rules that every employee should know and respect when they join, regardless of the area or business they will be working in, including a direct channel for employee consultations. The first of these rules is the "Code of Ethics and Conduct".

In addition, employees are involved in communication campaigns and attend training courses on the "Code of Ethics and Conduct", to strengthen their knowledge and compliance with its contents.

Furthermore, Company managers accept to comply with the Management Personnel Statute attached to their employment contracts. This Statute refers to the principles on which their professional actions must be based, as well the Company's values and standards, with special emphasis on the "Code of Ethics and Conduct".

There is a communications channel, the "Repsol Ethics and Compliance Channel", that allows Company employees and any third party to make consultations or to communicate, among others, possible breaches of the Code of Ethics and Conduct and Crime Prevention Model, confidentially and without fear of reprisal. The channel is managed by an independent company and is available 24 hours a day, 7 days a week, by phone and online.

The Ethics and Compliance Committee oversees and monitors compliance with the Code and is responsible for resolving on the communications received through the channel.

According to the provisions of the Regulations of the Ethics and Compliance Committee, this is multidisciplinary and made up of representatives of the General Division of the Secretary's Office and Board of Directors, the People and Organisation Corporate Division, the Corporate Division of Audit and Control Division, the Legal Services Corporate Division, and the Legal and Employment Affairs Management and Occupational Health and Safety Corporate Division. The company also has an "Anti-Corruption Policy" reflecting the commitment and principles that should guide the actions of Repsol and all its employees in connection with the fight against corruption.

In addition, there are "Internal Conduct Regulations Regarding the Securities Market", approved by the Board of Directors, with the prior favourable report of the Audit and Control Committee, which responds to the requirements of European and Spanish legislation containing aspects such as the rules of conduct relating to transactions with financial securities and instruments issued by the Group that are traded on securities markets, treatment of insider information, communication of relevant information, own-share transactions, prohibitions against manipulating stock prices and the treatment and management of conflicts of interest. The Company has formally established mechanisms in those regulations to promote its communication and compliance with its provisions. For these purposes, in accordance with the provisions of the Regulations, the Audit and Control Committee will be in charge of supervising the obligations set out therein and any breach of its provisions will be considered labour violation, the severity of which will be determined in the procedure conducted in accordance with the current provisions. This shall be without prejudice that the infringement that might stem from violation of securities market laws as well as the civil or criminal liability to which the violator may be subject.

Repsol also has a mandatory "Tax Policy" for all the employees and for the Group Companies, which includes some commitments to assure the management of tax matters through the establishment of good tax practices and acting transparently, including the payment of taxes

in a responsible and efficient manner, the promotion of cooperative relations with the governments, and the strong aim of avoiding significant risks and unnecessary conflicts.

Finally, in the field of Spanish companies and under the framework of Spanish regulations on the criminal liability of legal entities, the Ethics and Compliance Committee has been appointed as the Crime Prevention Body. Likewise, a "Crime Prevention Model" has been approved together with the "Internal Investigations" procedure through which the prevention model is structured to respond to potentially illegal behaviour concerning, among others, ethical issues attributable to legal entities, in order to prevent or, at least, reduce the risk of such violations from being committed.

- **Whistleblowing channel, through which the audit committee can be informed of any financial or accounting irregularities, any breaches of the code of conduct and irregular activities within the organization, indicating whether this channel is confidential**

In accordance with the Regulations of the Board of Directors, the Audit and Control Committee is responsible for establishing a mechanism that allows employees to report confidentially and, if possible, anonymously, irregularities of potential significance, especially of a financial and accounting nature.

In this sense, the Company has an "Ethics and Compliance Channel" through which Company employees and any third party may communicate confidentially and, if possible according to the different jurisdictions, anonymously, any matters related to accounting, internal control and audit. The channel is managed by an independent company and is available 24 hours a day, 7 days a week, by phone and online.

- **Training programs and regular refresher courses for personnel involved in the preparation and review of financial reporting and ICFR system assessment, covering at least accounting standards, auditing, internal control and risk management.**

Training in Repsol is geared towards developing the professional capacities required for effective performance of the employees' work, supplemented with further training to support and foster progression in their careers. It is based on initiatives intended to structure knowledge, develop skills and foster employees' commitment to the Company's plans, culture and values throughout their careers.

To achieve this, the Company has a broad selection of training activities covering issues ranging from technical aspects, organized specifically for given groups, to other more general aspects, such as management, safety awareness.

Through collaboration between the Repsol Training Centre and each of the units of the Group, Repsol ensures the acquisition and updating of essential knowledge to perform the economic administrative, risks management and internal audit and control duties.

The training needs are planned to meet both short and medium-term requirements and the corresponding annual plan is drawn up, identifying and paying attention not only to the form of training best suited to each group but also time enabling the Company to monitor the stated objectives and the quality of training given to each employee. As part of this plan, there are actions designed to distribute the compliance and control models, in particular the Internal Control over Financial Reporting (ICFR) system, to the different people and areas affected by these models.

These needs are met by both internal resources, with training activities designed and given by its own staff with experience and references in their respective fields, and by reputed firms contracted for their quality and specialization. Other resources are also used, such as conferences, talks, discussion forums, workshops and virtual libraries.

F.2 Evaluation of financial reporting risks

Report at least on the following:

F.2.1. What are the main features of the risk identification process, including risks of error or fraud, indicating:

- **Whether the process exists and is documented.**

The Repsol Group has an integrated risk management process as indicated in point E.1 of this report. This process establishes a homogenous methodology of risk identification and assessment by all responsible divisions in the Organization. As a result of the described process, the Repsol Group Risk Map was created, which includes financial reporting risks.

The identification of the principal risks that could affect the financial reporting objectives related to the integrity, valuation and presentation of operations, rights and obligations and which could therefore have a material impact on the reliability of the financial reporting, is performed by preparing a financial reporting risks inventory, classified into the following categories:

- Definition of the general control environment
- Monitoring of regulatory changes
- Making of estimates and subjective calculations
- Identification and recording of business transactions
- Preparation of consolidated financial statements
- Financial reporting

The risk of fraud in financial reporting, which is part of the inventory of financial reporting risks in the category of “General Control Environment” is analysed precisely because of its relevance to the design, implementation and evaluation of the internal control model. This analysis is made taking account mainly of the references to consideration of fraud in risk assessment established within COSO 2013 (“Assesses Fraud Risk” Principle 8) and by the AICPA (*American Institute of Certified Public*

Accountants) in its document “Consideration of Fraud in a Financial Statement Audit”, Section 316 (Standard Auditing Statement 99). To this end, the following categories of financial reporting fraud risk have been defined:

- Management’s ability to elude internal controls.
 - Intentional error on the financial statements.
 - Inappropriate use of assets
- **Whether the process covers all financial reporting objectives (existence and occurrence; integrity; valuation; presentation, disclosure and comparability; and rights & obligations), whether it is updated and how frequently.**

The inventory of financial reporting risks covers the main risks associated with the process of preparing the financial statements and other types of risks (operating, financial, tax compliance, labour, regulatory, etc.) to the extent that can have a significant impact on financing reporting.

Each of the aforementioned risk categories consists, in turn, of one or more specific risks, which are linked to the corresponding headings of the financial statements, the respective processes and to the different companies of the Group.

Lastly, the potential impact value of each of the financial reporting risks is established, as well as the probability of this occurring. From these two factors, the severity of each of the risks is established.

The risks inventory is reviewed annually in accordance with the integrated risk management process of the Repsol Group, as indicated in section E.1 of the Annual Corporate Governance Report.

- **There is a process for identifying the scope of consolidation, taking into account, among other aspects, the possible existence of complex corporate structures or special purpose vehicles.**

There is a process in place for identifying changes in shareholding structure of Group companies. Once the changes are reported, the control structure is analysed on the basis of the applicable accounting standards and principles in order to determine which consolidation method should be used for that company.

From the scope of consolidation and in coordination with the process of identification and regular updating of the inventory of financial reporting risks, a scope model is determined, along with the companies that should be included in the scope on account of their relevance and materiality. Said identification is made on the basis of both quantitative and qualitative criteria.

The determination of companies that are part of the model takes into account those in which control is exercised directly or indirectly. For these purposes, an investor is deemed

to control an investee when it is exposed, or has rights, to variable returns from its involvement in the Group and has the ability to affect those returns through its power over the investee. Therefore, companies in which there is joint control are not included in the model, since the strategic decisions require the unanimous consent of the parties sharing control.

- **The process takes account of the effects of other types of risk (operational, technological, financial, legal, reputational, environmental, etc.) insofar as they may affect the financial statements.**

In the process of identifying and evaluating financial reporting risk, the Repsol Group considers other types of risk identified in other business units of the Group that could have a relevant impact on the attainment of the organization's operational and strategic goals, such as compliance, insofar as these may have a significant effect on the preparation of financial statements.

- **Which governing body supervises the process.**

The Board of Directors reserves the power to approve the risk management and control policies, including financial reporting and tax risks, and to supervise internal information and control systems.

In accordance with the Regulations of the Board of Directors of Repsol, the Audit and Control Committee periodically reviews the efficiency of internal control, internal audit and risk management systems, including tax risks, so as to identify, manage and properly communicate the main risks.

The Corporate Executive Committee approves the necessary elements of governance in the area of risk management. It will also supervise their proper application and monitor the Company's performance in terms of risks.

The Audit and Control Department is responsible for evaluating the design and operation of the Group's risk management systems.

F.3 Control activities

State whether the company has at least the following, indicating their main features:

- F.3.1. Procedures for review and authorization of financial information to be published in the securities markets and description of the ICFR system, naming the persons responsible, and documentation describing the flows of activities and controls (including those concerning fraud risk) of the different types of transaction that might have a material effect on the financial statements,**

including the procedure for closing accounts and specific review of significant value judgments, estimates, valuations and projections.

The Repsol Group has a system of Internal Control over Financial Reporting (ICFR) that meets the requirements of The Stock Market Act 24/1988 of 28 July, amended by the Sustainable Economy Act 2/2011 of 4 March, Ministerial Order ECC/461/2013 of 20 March which determines the contents and structure of annual corporate governance reports, Law 31/2014 of 3 December which amended the Capital Companies Act for enhanced corporate governance and Circular 7/2015 of 22 December which amended Circular 5/2013 of 12 June of the National Stock Market Commission (*Comisión Nacional del Mercado de Valores*), which establishes the annual corporate governance report models to be used by listed companies.

The ICFR model is defined from the COSO (2013) methodological framework (*Committee of Sponsoring Organizations of the Treadway Commission*) contained in its report, *Internal Control-Integrated Framework*, the object of which is to ensure that all transactions are properly accounted for according to the accounting framework, providing reasonable assurance of the prevention or detection of errors that could have a material impact on the information in the consolidated annual accounts. This financial reporting internal control model is organised around an integrated process that includes the five components developed in seventeen principles, as established in the COSO 2013 framework.

1. The existence of an adequate **control environment**.
2. The identification, analysis and **evaluation of risks**.
3. The definition and implementation of **control activities** to mitigate the identified risks.
4. **Reporting and communication** to facilitate understanding and the assumption of risk control responsibilities.
5. **Supervision of system operations** in order to evaluate design, performance quality, adaptation, implementation and effectiveness.

The system of Internal Control over Financial Reporting (ICFR) is integrated in the organization through the establishment of structure of roles and responsibilities for the different bodies and functions, which are described in procedures that have been duly approved and distributed within the Group. In addition to the indications in F.1.1 of this Report regarding the processes for checking and authorization of financial reporting by the Board of Directors and the Audit and Control Committee, below are detailed the other **governing bodies and organizational units of the Group assigned relevant roles on this matter**:

- **Chief Executive Officer (CEO and Chief Financial Officer (CFO):**

At closure of the financial period, all owners of the controls comprising the ICFR system certify that all controls associated with processes and risks, of which they are owners, are in force. These are annual certificates which, through a hierarchical process rising up through the organizational structure, conclude with a certificate issued by the Chief Executive Officer (CEO) and Chief Financial Officer (CFO).

- **Internal Transparency Committee:**

The mission of the Internal Transparency Committee is to promote and bolster the necessary policies to ensure that the information provided for shareholders, markets and regulatory authorities is true and complete, adequately reflects the Company's financial position and the results of its operations and is presented in a timely manner and in accordance with the other requirements established in the standards and general principles for markets and good governance applied by the Company. This Committee provides support and assistance to the Chairman of the Board of Directors and the Chief Executive Officer.

According to the Regulations on the Internal Transparency Committee, it is assigned the following duties, among others:

- Supervising the establishment and maintenance of procedures for compiling the information to be published by the Company according to the applicable laws and regulations or which it reports generally to the markets, and all controls and procedures established to make sure that (i) the information is promptly and accurately recorded, processed, summarized and reported, and (ii) the information is compiled and reported to the Group's management and administrative bodies, enabling them to decide in advance on the information that should be published, proposing such improvements as they may deem fit.
- Checking and assessing the accuracy, reliability, adequacy and clarity of the information contained in the documents to be presented publicly, especially any disclosures to be made to the regulating authorities and brokers on the securities markets in which the Company's shares are listed.

The Internal Transparency Committee is made up of the heads of the units responsible for the economic, tax, legal, communication, strategy, audit & control, investor relations, corporate governance, reserves control, management control & planning, people & organization and the different business areas.

- **Business Units and Corporate Areas identified as "owners of the controls":**

Within the Group, the different Business Units and Corporate Areas identified as "owners of the controls" are those responsible for ensuring the adequate design of the processes and the validity, execution and adequate functioning of the controls

associated therewith. Of these, the Units with an especially important role in the development, maintenance and functioning of the ICFR system are:

- The Unit that prepares the financial statements and economic-financial reporting. It also defines the inventory of controls and processes of the ICFR system required to guarantee the reliability of the financial information, coordinating with the Corporate Division of Audit and Control, as a result of its process of defining and assessing the Group ICFR system.
- The Unit that guarantees fulfilment of tax obligations, tax counselling, monitoring, evaluation and implementation of changes in law and regulations, identification, control, monitoring, assessment and management of tax risks, and tax information for the financial statements. Moreover, according to the Code of Good Tax Practice, Law 31/2014 which amended the Capital Companies Act for enhanced corporate governance and the Repsol's Group Tax Policy, the Board of Directors, as part of its inalienable powers in the fiscal realm, verifies that the Company's tax policies are being properly applied on a yearly basis.
- The Unit that monitors, analyses, reviews and interprets the accounting standards contained in the different regulatory frameworks applicable to the Group.
- The Units that guarantee the efficient use of financial resources, optimization of financial earnings and an adequate monitoring and control of financial, market and credit risks so as to ensure the continuity and development of business plans.
- The Unit that establishes the criteria for defining the organizational structure and sizing of the Group and sets the guidelines and criteria governing development of the internal regulatory framework and defines the Annual Training Plan.
- The Unit that ensures that the estimates of the Group's proven reserves of hydrocarbons conform to the regulations issued by the different securities markets on which the Company's shares are listed, makes the internal audits of reserves, coordinates the certificates of the external auditors of reserves and assesses the quality controls regarding information on reserves, taking any appropriate actions, within a process of continuous improvement and application of the best practices.
- The Units responsible for legal affairs in the Group, which provide legal counselling, legal defence and handling of its legal affairs in all contentious proceedings and processes, providing legal support for the Group's actions, rights and expectations with a view to giving them legal security and efficacy and minimizing possible legal risks.
- The unit that defines the guidelines, criteria and indicators of management control monitors the business activities and the approved investments and oversees compliance with the commitments assumed, proposing corrective measures as needed.

Processes, activities and controls

The ICFR system documents basically comprise the following:

- Financial reporting risk map
- Model of scopes
- Supporting documentation for processes through ICFR system
- Inventory of controls identified in the different processes
- Outcome of design tests and functioning of controls
- Certificates of validity and effectiveness issued for each financial year.

The ICFR model is supported by a set of standards and procedures and is contained in the Manual of Internal Control over Financial Reporting.

The system of Internal Control over Financial Reporting is articulated through a process which, based on the identification and evaluation of financial reporting risks, defines a scope model that includes the most important headings in the financial statements, the companies affected, the relevant and material processes involved in preparing, reviewing and subsequently distributing the financial information and the control activities intended to prevent and detect potential errors, including fraud.

In order to define the companies involved, the first step is to update the list of consolidated companies. As explained in section F.2.1 of this report, there is a process for updating the list of consolidated companies based on changes to the stockholding composition and the control structure of investee companies according to applicable accounting standards. The ICFR includes operating controls for those companies that are directly or indirectly controlled by Repsol. For all other relevant non controlled companies not included in the scope of consolidation, it also includes controls designed to protect the homogeneity, validity and reliability of the financial information submitted by the companies for inclusion in the consolidated financial statements.

For each one of the relevant processes and companies included on the consolidation list, the significant financial reporting risks are identified along with the control activities to mitigate those risks.

The following types of controls are distinguished in the ICFR system:

- **Manual:** those carried out by human actions, using computerized tools or applications.
- **Automatic:** those carried out with computerized tools or applications.

- **General computer controls:** those that reasonably guarantee the reliability, integrity, availability and confidentiality of the information contained in applications relevant to the financial reporting.

These three types of controls are characterized as:

- **Preventive:** created to prevent errors or cases of fraud that could result in an error in the Repsol Group's financial reporting.
- **Detective:** their goal is to detect existing errors or cases of fraud that could result in an error in the Repsol Group's financial reporting.

Relevant judgments, estimates, valuations forecasts

The financial reporting process sometimes requires assumptions and estimates to be made, which may affect the amount of assets and liabilities recognized, the presentation of contingent assets and liabilities and the recognized income and expenses. These estimates may be affected, among other causes, by changes in competitive, economic, political, legal, regulatory, social, industrial, business and financial conditions.

In this regard, the Group's methodology is designed to identify the areas responsible and establish homogenous criteria for estimates and value judgments in the processes considered important for the preparation of financial reporting, namely, and in accordance with that set forth in Note 3 "Estimates and judgments" of the Consolidated Financial Statements 2016 of the Repsol Group, those concerning reserves of crude and gas, business combinations, provisions for litigation, breakdowns and other contingencies, calculation of income tax and deferred tax assets and liabilities, impairment tests of the recoverable value of assets and the market valuation of financial instruments. The results of these estimates are reported to the management and governing bodies of the Group.

In addition, the aforementioned bodies are regularly informed of any business affecting its business development and which could have a material effect on the Group's financial statements.

It also periodically monitors the main variables which have or may have an impact, directly or through estimates and judgments, in quantifying assets, liabilities, income and expenses of the Group.

F.3.2. Reporting system policies and procedures for internal control (including, among others, access security, control of changes, operation, operating continuity and separation of duties) of the significant processes in the company referring to the preparation and publication of financial information

The Repsol Group has a specific body of regulations in its IT Systems area based on ISO 27001, laying down the general principles for the different processes in that area.

Considering that the Group's transaction flows are mainly made through IT Systems, an Information Systems Control Framework, consisting of a set of controls called "general computer controls", has been established which reasonably guarantee the trustworthiness, integrity, availability and confidentiality of the information contained and processed in the relevant applications for financial reporting.

The systems linked to the process of preparing financial information conform to the security standards established in the regulations and are audited to ensure proper functioning of the Information Systems Control Framework by validating its constituent general computer controls.

These general computer controls grouped into the areas of: access security, life cycle systems, process of assuring the validity of data and assurance operations, help to guarantee that several control targets are obtained within the ICFR system assessment, since they have the following features:

- Contribute towards ensuring the precision, accuracy and validity of the transactions executed in the applications, since they are integrated in the logics of those applications in order to prevent and/or detect unauthorized transactions.
- They are applied to the interfaces with other systems, in order to check that information input is complete and precise, and that output is correct.

The scope of the general computer controls covers applications relevant for financial reporting and infrastructure elements that serve these applications (e.g. technical platforms, servers, databases, data processing centres, etc.).

The Repsol Group has developed a segregation of duties model in the systems for preventing and reducing the risk of errors (intentional or otherwise), especially the fraud factor in the financial reporting process. Incompatibility matrices have been installed in the applications used by the relevant processes covered by the ICFR system, with which it is possible to monitor conflicts continuously and detect cases in which the functions are not exercised according to defined profiles.

F.3.3. Internal control policies and procedures for supervising management of the activities subcontracted to third parties and any aspects of assessment, calculation or valuation outsourced to independent experts that may produce a material effect on the financial statements

The Repsol group has a procedure for identifying, establishing control criteria and supervising the activities of third party subcontractors in different business processes.

According to this procedure, the group analyses the types of activities carried out by these suppliers and their impact and draws conclusions as to whether the activities have a material impact on the financial statements from the following perspectives:

- Significant transactions for the Group's financial statements.
- Manual or automated procedures for initiating, recording, processing or reporting significant transactions from the beginning until they are included in the financial statements.
- Manual or automatic accounting records that support the collection, recognition, processing and reporting of specific transactions, information or accounts on the Group's financial statements.
- Relevant information systems for capturing significant events and conditions for inclusion in the operating results and preparation of the financial statements.
- Financial reporting process used to prepare the financial statements, including the accounting estimates and the disclosure of significant information.

Once the subcontracted activities that can have a material effect on the financial statements have been identified, the internal controls of the services rendered are supervised to ensure their adequacy. In this regard, according to the COSO 2013 methodology and ISA 402 (International Standard on Auditing), the Repsol Group has chosen the following approaches:

- Conducting independent evaluations of the supplier's internal control systems.
- Requesting independent auditors' reports from third party subcontractors to obtain relevant information on their internal control systems. Some examples of the reports include SOC (Service Organization Control) under Standard SSAE 16 of AICPA (American Institute of Certified Public Accountants) or standard ISAE 3402 (International Standards on Assurance Engagements 3402).
- Understanding on the part of the user of the service of the nature of the service and identification of mitigating controls within the financial reporting process of the Repsol Group.

The Reserves Control Unit audits the estimates of reserves made by the Group's operating units, through internal and external audits. The significant aspects identified in those audits are taken as the basis for determining the reserves, according to the Norm "System of Control of Reserves and Contingent Resources", which are presented to the Corporate Executive Committee and the Audit and Control Committee.

F.4 Information and communication

Report, indicating whether the company has at least the following, indicating their main features:

- F.4.1. A specific function designed to define and keep the accounting policies up to date (accounting policy department or division) and solve any queries or conflicts deriving from their interpretation, maintaining fluent communication with those responsible for operations in the organization, and an updated accounting policy manual distributed among the units through which the company operates**

The Group has a Unit responsible for monitoring, analyzing and reviewing the accounting principles and policies established in the regulatory framework that applies to the preparation of financial statements, analyzing and answering consultations on their interpretation and adequate application. The organizational units involved in preparing financial information are periodically informed of any new aspects of accounting techniques and regulations and the outcome of the different analyses made.

There are also accounting principles manuals, which establish the accounting standards, policies and principles applied by the Group. These manuals are revised and updated periodically and whenever there is a material change in the applicable regulations. The manuals are available on the internal communication network.

In year 2016, the Group accounting manuals were updated as a result mainly of: (i) changes in International Financial Reporting Standards adopted by the European Union and of mandatory application from 1 January 2016 and (ii) the voluntary change in accounting policy referred to in paragraph 2 "Basis of presentation" of the abbreviated consolidated interim financial statements for Q1 2016.

- F.4.2. Mechanisms for collecting and preparing financial information with homogenous formats, application and use by all units of the company or group, covering the principal financial statements and notes and the information given on the ICFR system**

The Group has integrated IT systems for both recognizing transactions in the accounts and preparing the individual and consolidated financial statements. It also has processes for centralized coding and parameterization processes which, together with the accounting principles manuals, guarantee the integrity and homogeneity of the information. Finally, there are also tools used for processing the information in order to obtain and prepare the breakdowns provided in the notes to the financial statements. The systems linked to the preparation and reporting of financial information meet the security standards established by the general computer controls defined for IT systems. (See section F.3.2. of this Report.)

F.5 Supervision of the functioning of the system

State whether the company has at least the following, indicating their main features:

F.5.1. ICFR system supervisory activities performed by the audit committee and whether the company has an internal audit department which, among other duties, assists the committee in its supervision of the internal control system, including the ICFR system. Indicate the scope of assessment of the ICFR system made in the year and the procedure through which the person responsible for making the assessment reports on its outcome, whether the company has an action plan describing possible corrective measures and whether its impact on financial reporting has been considered

According to the Regulations of the Board of Directors, the Audit and Control Committee is responsible for supervising the assessment and presentation, as well as the integrity of the financial information on the Company and the Group, checking compliance with legal provisions, adequate definition of the consolidated group and correct application of the accounting principles, and regularly checking the effectiveness of the internal control and risk management systems, ensuring that the principal risks are identified, managed and reported adequately.

The Audit and Control Committee also analyses and approves, where appropriate, the annual planning of the Internal Audit Department and other occasional or specific additional plans required as a result of changes in legislation or the needs of the Group.

The annual planning of the Internal Audit Department is structured to assess and supervise the correct functioning and adequacy of the Group's internal control and risk management systems (operational, strategic, financial and compliance).

The Audit and Control Direction reports to the Audit and Control Committee and performs the audit and control duties established in international standards in line with the best market practices, as well as the requirements of the different regulatory frameworks applicable in the countries in which the Repsol Group has businesses and activities. It has a "Quality Assurance and Enhancement Plan", assessed regularly, to assure quality in its duties, the results of which are reported to the Audit and Control Committee.

The Audit and Control Division is responsible for seeing that the design and functioning of the Internal Control and Risk Management Systems in the Group are reasonable and adequate, contributing towards their improvement and covering the following control objectives:

- Any risks that may affect the organization are adequately identified, measured, prioritized and controlled
- Transactions are efficient and effective

- Transactions are made in compliance of applicable laws, regulations and contracts and prevailing policies, rules or procedures
- The assets are adequately protected and reasonably controlled
- The most significant financial, management and operating information is prepared and reported adequately.

The Audit and Control Direction supports the supervisory work of the Board of Directors, Audit and Control Committee and Internal Transparency Committee over the Financial Reporting Internal Control System (ICFR).

The Audit and Control Department reports to the Audit and Control Committee on the conclusions of all work done, the corrective measures proposed and the degree of fulfilment of each one. This Corporate Department provides supporting any significant irregularities, anomalies or non-compliance committed by the audited units, reporting to the Board any cases that may entail a major risk for the Group.

The Audit and Control Direction reports any weakness or incident detected in the updating or assessment of the ICFR system to the owners of the controls.

After year-end, the Audit and Control Direction informs the Internal Transparency Committee, the Audit and Control Committee and the Board of Directors on the outcome of the ICFR system assessment and any defects found during the assessment.

The Corporate Audit and Control Department has assessed the effectiveness of the ICFR system corresponding to 2016, and did not find any qualifications, concluding that it is effective, based on the criteria established by COSO 2013.

F.5.2. If there is a discussion procedure through which the accounts auditor (as established in the technical audit standards), the internal audit department and other experts can inform the senior management and audit committee or company directors of any significant weaknesses in internal control detected during their checking of the annual financial statements or such others commissioned to them. State also whether it has an action plan to correct or mitigate the weaknesses observed.

As mentioned in point F.5.1 of this Report, the Audit and Control Division reports to the Audit and Control Committee on the conclusions of all work done, the corrective measures proposed and the degree of fulfilment of each one.

One of the duties of the Audit and Control Committee is to establish appropriate relations with the External Auditor to receive regular information on the audit plan and the results of its implementation, and on any other issues concerning the audit process and corresponding rules and regulations. It also verifies that the management team bears in mind the recommendations made by the External Auditor.

The Audit and Control Committee also requires the External Auditor periodically, at least once a year, to assess the quality of the internal control procedures and systems and discuss with it any significant weaknesses detected during audit, and requests the External Auditor's opinion on the effectiveness of the ICFR system.

F.6 Other relevant information

On 8 May 2015 Repsol acquired 100% of Talisman Energy Inc. (at 1 January 2016, it changed its corporate name to Repsol Oil & Gas Canada Inc., hereinafter "ROGCI"), incorporated according to the Canada Business Corporations Act and the shares of which were admitted for trading on the Toronto and New York stock exchanges.

After the transaction was closed, trading was cancelled in the ordinary shares of Talisman Energy Inc. in the Stock Markets of Toronto and New York and of the preferred shares on the Toronto Stock Exchange.

However, ROGCI, pursuant to Canadian laws and agreements with its bondholders, maintains the status of issuer ("Reporting Issuer") and therefore is still subject to current reporting obligations to the Canadian regulatory authorities.

In this sense, ROGCI maintains the validity of his SCIIF with the same stringency levels as in previous years, its effectiveness having been verified by the external auditor Ernst & Young LLP, stating that the company had maintained, in all material respects, a valid SCIIF based on the guidelines established by the Committee of Sponsoring Organisations of the Treadway Commission (COSO) in its Internal Control Integrated Framework report (2013 Framework).

In 2016 the relevant financial reporting processes and controls of ROGCI were included in the ICFR of Repsol Group.

F.7 External Auditor's report

Report on:

F.7.1. Whether the ICFR system information remitted to the markets has been checked by the external auditor, in which case the Company should include the latter's report in an annex hereto. Otherwise, state reasons.

The Group has asked the External Auditor to check the effectiveness of the system of internal control over financial reporting (ICFR) in respect of the financial information

contained in the consolidated annual financial statements of the Repsol Group as at 31 December 2016.

G EXTENT OF COMPLIANCE WITH THE CORPORATE GOVERNANCE RECOMMENDATIONS

Indicate the degree of compliance by the company with the recommendations of the Good Governance Code for listed companies.

If any recommendation is not followed or is only partly followed, include a detailed explanation of the reasons so that shareholders, investors and the market in general have sufficient information to assess the company's actions. General explanations are not acceptable.

- 1. The Articles of Association of listed companies should not limit the maximum number of votes that may be cast by an individual shareholder or impose other restrictions hampering takeover of the company via the market acquisition of its shares.**

Complies Explanation

- 2. When both the parent company and a subsidiary are listed, they should both publish a document specifying exactly:**

- a) The types of activity they are respectively engaged in and any business dealings between them, and between the listed subsidiary and other group companies;**
- b) The mechanisms in place to solve any conflicts of interest.**

Complies Partial compliance Explanation N/A

- 3. During the annual general meeting the chairman of the board should verbally inform shareholders in sufficient detail of the most relevant aspects of the company's corporate governance, supplementing the written information circulated in the annual corporate governance report. In particular:**

- a) Changes taking place since the previous annual general meeting.**
- b) The specific reasons for the company not following a given Good Governance Code recommendation, and any alternative procedures followed in its stead.**

Complies Partial compliance Explanation

The information regarding the fulfilment by Repsol of the Code recommendations are include in section G of the Annual Corporate Governance Report, which is published as a Relevant Fact and is available for the shareholders and for any interested party in the Company's web site and in the National Securities Market Commission. Also, shareholders may request the sending of the Annual Corporate Governance Report in paper format prior

to the holding of the AGM and it is also provided in the meeting. Therefore, it is not considered that a verbal report of the Chairman during the AGM on the follow-up of the recommendations provides additional information relevant to shareholders.

4. **The company should draw up and implement a policy of communication and contacts with shareholders, institutional investors and proxy advisors that complies in full with market abuse regulations and accords equitable treatment to shareholders in the same position. This policy should be disclosed on the company's website, complete with details of how it has been put into practice and the identities of the relevant interlocutors or those charged with its implementation.**

Complies Partial compliance Explanation

5. **The board of directors should not make a proposal to the general meeting for the delegation of powers to issue shares or convertible securities without pre-emptive subscription rights for an amount exceeding 20% of capital at the time of such delegation.**

When a board approves the issuance of shares or convertible securities without pre-emptive subscription rights, the company should immediately post a report on its website explaining the exclusion as envisaged in company legislation.

Complies Partial compliance Explanation

6. **Listed companies drawing up the following reports on a voluntary or compulsory basis should publish them on their website well in advance of the annual general meeting, even if their distribution is not obligatory:**

a) Report on auditor's independence.

b) Reviews of the operation of the audit committee and the nomination and remuneration committee.

c) Audit committee report on third-party transactions.

d) Report on corporate social responsibility policy.

Complies Partial compliance Explanation

7. **The company should broadcast its general meetings live on the corporate website.**

Complies Explanation

8. **The audit committee should strive to ensure that the board of directors can present the company's accounts to the general meeting without limitations or qualifications in the**

auditor's report. In the exceptional case that qualifications exist, both the chairman of the audit committee and the auditors should give a clear account to shareholders of their scope and content.

Complies Partial compliance Explanation

9. The company should disclose its conditions and procedures for admitting share ownership, the right to attend general meetings and the exercise or delegation of voting rights, and display them permanently on its website.

Such conditions and procedures should encourage shareholders to attend and exercise their rights and be applied in a non-discriminatory manner.

Complies Partial compliance Explanation

10. When an accredited shareholder exercises the right to supplement the agenda or submit new proposals prior to the general meeting, the company should:

a) Immediately circulate the supplementary items and new proposals.

b) Disclose the model of attendance card or proxy appointment or remote voting form duly modified so that new agenda items and alternative proposals can be voted on in the same terms as those submitted by the board of directors.

c) Put all these items or alternative proposals to the vote applying the same voting rules as for those submitted by the board of directors, with particular regard to presumptions or deductions about the direction of votes.

d) After the general meeting, disclose the breakdown of votes on such supplementary items or alternative proposals.

Complies Partial compliance Explanation N/A

11. In the event that a company plans to pay for attendance at the general meeting, it should first establish a general, long-term policy in this respect.

Complies Partial compliance Explanation N/A

12. The Board of Directors should perform its duties with unity of purpose and independent judgement, according the same treatment to all shareholders in the same position. It should be guided at all times by the company's best interest, understood as the creation of a profitable business that promotes its sustainable success over time, while maximising its economic value. In pursuing the corporate interest, it should not only abide by laws and regulations and conduct itself according to principles of good faith, ethics and respect for commonly accepted customs and good practices, but also strive to reconcile its own interests with the legitimate interests of its employees, suppliers, clients and other

stakeholders, as well as with the impact of its activities on the broader community and the natural environment .

Complies Partial compliance Explanation

- 13. The board of directors should have an optimal size to promote its efficient functioning and maximise participation. The recommended range is accordingly between five and fifteen members.**

Complies Explanation

Considering the capital structure and how the capital is represented on the Company's governing bodies, the General Meeting considered it to be in the company's best interest to add to the governing bodies persons of the highest professional repute from the auditing, financial-accounting, industrial and stock market sectors whose points of view can enhance the decision-making capacity of the board of directors.

To this end, the Board of Directors proposed to the General Shareholders Meeting held on 30 April 2014 that the number of board members be set at 16 (within the minimum and maximum limits of 9 and 16 established in the Bylaws).

- 14. The board of directors should approve a director selection policy that:**

a) Is concrete and verifiable;

b) Ensures that appointment or re-election proposals are based on a prior analysis of the board's needs; and

c) Favours a diversity of knowledge, experience and gender.

The results of the prior analysis of board needs should be written up in the nomination committee's explanatory report, to be published when the general meeting is convened that will ratify the appointment and re-election of each director.

The director selection policy should pursue the goal of having at least 30% of total board places occupied by women directors before the year 2020.

The nomination committee should run an annual check on compliance with the director selection policy and set out its findings in the annual corporate governance report.

Complies Partial compliance Explanation

- 15. Proprietary and independent directors should constitute an ample majority on the board of directors, while the number of executive directors should be the minimum practical bearing in mind the complexity of the corporate group and the ownership interests they control.**

Complies Partial compliance Explanation

16. The percentage of proprietary directors out of all non-executive directors should be no greater than the proportion between the ownership stake of the shareholders they represent and the remainder of the company's capital. This criterion can be relaxed:

a) In large cap companies where few or no equity stakes attain the legal threshold for significant shareholdings.

b) In companies with a plurality of shareholders represented on the board but not otherwise related.

Complies Explanation

17. Independent directors should be at least half of all board members.

However, when the company does not have a large market capitalisation, or when a large cap company has shareholders individually or concertedly controlling over 30 percent of capital, independent directors should occupy, at least, a third of board places.

Complies Explanation

18. Companies should disclose the following director particulars on their websites and keep them regularly updated:

a) Background and professional experience.

b) Directorships held in other companies, listed or otherwise, and other paid activities they engage in, of whatever nature.

c) Statement of the director class to which they belong, in the case of proprietary directors indicating the shareholder they represent or have links with.

d) Dates of their first appointment as a board member and subsequent re-elections.

e) Shares held in the company, and any options on the same.

Complies Partial compliance Explanation

19. Following verification by the nomination committee, the annual corporate governance report should disclose the reasons for the appointment of proprietary directors at the urging of shareholders controlling less than 3 percent of capital; and explain any rejection of a formal request for a board place from shareholders whose equity stake is equal to or greater than that of others applying successfully for a proprietary directorship.

Complies Partial compliance Explanation N/A

20. Proprietary directors should resign when the shareholders they represent dispose of their ownership interest in its entirety. If such shareholders reduce their stakes, thereby losing

some of their entitlement to proprietary directors, the latter's number should be reduced accordingly.

Complies Partial compliance Explanation N/A

- 21. The board of directors should not propose the removal of independent directors before the expiry of their tenure as mandated by the bylaws, except where they find just cause, based on a proposal from the nomination committee. In particular, just cause will be presumed when directors take up new posts or responsibilities that prevent them allocating sufficient time to the work of a board member, or are in breach of their fiduciary duties or come under one of the disqualifying grounds for classification as independent enumerated in the applicable legislation.**

The removal of independent directors may also be proposed when a takeover bid, merger or similar corporate transaction alters the company's capital structure, provided the changes in board membership ensue from the proportionality criterion set out in recommendation 16.

Complies Explanation

- 22. Companies should establish rules obliging directors to disclose any circumstance that might harm the organisation's name or reputation, tendering their resignation as the case may be, and, in particular, to inform the board of any criminal charges brought against them and the progress of any subsequent trial.**

The moment a director is indicted or tried for any of the offences stated in company legislation, the board of directors should open an investigation and, in light of the particular circumstances, decide whether or not he or she should be called on to resign. The board should give a reasoned account of all such determinations in the annual corporate governance report.

Complies Partial compliance Explanation

- 23. Directors should express their clear opposition when they feel a proposal submitted for the board's approval might damage the corporate interest. In particular, independents and other directors not subject to potential conflicts of interest should strenuously challenge any decision that could harm the interests of shareholders lacking board representation.**

When the board makes material or reiterated decisions about which a director has expressed serious reservations, then he or she must draw the pertinent conclusions. Directors resigning for such causes should set out their reasons in the letter referred to in the next recommendation.

The terms of this recommendation also apply to the secretary of the board, even if he or she is not a director.

Complies Partial compliance Explanation N/A

24. Directors who give up their place before their tenure expires, through resignation or otherwise, should state their reasons in a letter to be sent to all members of the board. Whether or not such resignation is disclosed as a material event, the motivating factors should be explained in the annual corporate governance report.

Complies Partial compliance Explanation N/A

25. The nomination committee should ensure that non-executive directors have sufficient time available to discharge their responsibilities effectively.

The board of directors regulations should lay down the maximum number of company boards on which directors can serve.

Complies Partial compliance Explanation

26. The board should meet with the necessary frequency to properly perform its functions, eight times a year at least, in accordance with a calendar and agendas set at the start of the year, to which each director may propose the addition of initially unscheduled items.

Complies Partial compliance Explanation

27. Director absences should be kept to a strict minimum and quantified in the annual corporate governance report. In the event of absence, directors should delegate their powers of representation with the appropriate instructions:

Complies Partial compliance Explanation

28. When directors or the secretary express concerns about some proposal or, in the case of directors, about the company's performance, and such concerns are not resolved at the meeting, they should be recorded in the minute book if the person expressing them so requests.

Complies Partial compliance Explanation N/A

29. The company should provide suitable channels for directors to obtain the advice they need to carry out their duties, extending if necessary to external assistance at the company's expense.

Complies Partial compliance Explanation

30. Regardless of the knowledge directors must possess to carry out their duties, they should also be offered refresher programmes when circumstances so advise.

Complies Partial compliance Explanation

31. The agendas of board meetings should clearly indicate on which points directors must arrive at a decision, so they can study the matter beforehand or gather together the material they need.

For reasons of urgency, the chairman may wish to present decisions or resolutions for board approval that were not on the meeting agenda. In such exceptional circumstances, their inclusion will require the express prior consent, duly minuted, of the majority of directors present.

Complies Partial compliance Explanation

32. Directors should be regularly informed of movements in share ownership and of the views of major shareholders, investors and rating agencies on the company and its group.

Complies Partial compliance Explanation

33. The chairman, as the person charged with the efficient functioning of the board of directors, in addition to the functions assigned by law and the company's bylaws, should prepare and submit to the board a schedule of meeting dates and agendas; organise and coordinate regular evaluations of the board and, where appropriate, the company's chief executive officer; exercise leadership of the board and be accountable for its proper functioning; ensure that sufficient time is given to the discussion of strategic issues, and approve and review refresher courses for each director, when circumstances so advise.

Complies Partial compliance Explanation

34. When a lead independent director has been appointed, the bylaws or board of directors regulations should grant him or her the following powers over and above those conferred by law: chair the board of directors in the absence of the chairman or vice chairmen give voice to the concerns of non-executive directors; maintain contacts with investors and shareholders to hear their views and develop a balanced understanding of their concerns, especially those to do with the company's corporate governance; and coordinate the chairman's succession plan.

Complies Partial compliance Explanation N/A

35. The board secretary should strive to ensure that the board's actions and decisions are informed by the governance recommendations of the Good Governance Code of relevance to the company.

Complies Explanation

36. The board in full should conduct an annual evaluation, adopting, where necessary, an action plan to correct weakness detected in:
- a) The quality and efficiency of the board's operation.
 - b) The performance and membership of its committees.
 - c) The diversity of board membership and competences.
 - d) The performance of the chairman of the board of directors and the company's chief executive.
 - e) The performance and contribution of individual directors, with particular attention to the chairmen of board committees.

The evaluation of board committees should start from the reports they send the board of directors, while that of the board itself should start from the report of the nomination committee.

Every three years, the board of directors should engage an external facilitator to aid in the evaluation process. This facilitator's independence should be verified by the nomination committee.

Any business dealings that the facilitator or members of its corporate group maintain with the company or members of its corporate group should be detailed in the annual corporate governance report.

The process followed and areas evaluated should be detailed in the annual corporate governance report.

Complies Partial compliance Explanation

37. When an executive committee exists, its membership mix by director class should resemble that of the board. The secretary of the board should also act as secretary to the executive committee.

Complies Partial compliance Explanation N/A

38. When an executive committee exists, its membership mix by director class should resemble that of the board. The secretary of the board should also act as secretary to the executive committee.

Complies Partial compliance Explanation N/A

39. All members of the audit committee, particularly its chairman, should be appointed with regard to their knowledge and experience in accounting, auditing and risk management matters. A majority of committee places should be held by independent directors.

Complies Partial compliance Explanation

40. Listed companies should have a unit in charge of the internal audit function, under the supervision of the audit committee, to monitor the effectiveness of reporting and control systems. This unit should report functionally to the board's non-executive chairman or the chairman of the audit committee.

Complies Partial compliance Explanation

41. The head of the unit handling the internal audit function should present an annual work programme to the audit committee, inform it directly of any incidents arising during its implementation and submit an activities report at the end of each year.

Complies Partial compliance Explanation N/A

42. The audit committee should have the following functions over and above those legally assigned:

1. With respect to internal control and reporting systems:

a) Monitor the preparation and the integrity of the financial information prepared on the company and, where appropriate, the group, checking for compliance with legal provisions, the accurate demarcation of the consolidation perimeter, and the correct application of accounting principles.

b) Monitor the independence of the unit handling the internal audit function; propose the selection, appointment, re-election and removal of the head of the internal audit service; propose the service's budget; approve its priorities and work programmes, ensuring that it focuses primarily on the main risks the company is exposed to; receive regular report-backs on its activities; and verify that senior management are acting on the findings and recommendations of its reports.

c) Establish and supervise a mechanism whereby staff can report, confidentially and, if appropriate and feasible, anonymously, any significant irregularities that they detect in the course of their duties, in particular financial or accounting irregularities.

2. With regard to the external auditor:

a) Investigate the issues giving rise to the resignation of the external auditor, should this come about.

b) Ensure that the remuneration of the external auditor does not compromise its quality or independence.

c) Ensure that the company notifies any change of external auditor to the CNMV as a material event, accompanied by a statement of any disagreements arising with the outgoing auditor and the reasons for the same.

d) Ensure that the external auditor has a yearly meeting with the board in full to inform it of the work undertaken and developments in the company's risk and accounting positions.

e) Ensure that the company and the external auditor adhere to current regulations on the provision of non-audit services, limits on the concentration of the auditor's business and other requirements concerning auditor independence.

Complies Partial compliance Explanation

43. The audit committee should be empowered to meet with any company employee or manager, even ordering their appearance without the presence of another senior officer.

Complies Partial compliance Explanation

44. The audit committee should be informed of any fundamental changes or corporate transactions the company is planning, so the committee can analyse the operation and report to the board beforehand on its economic conditions and accounting impact and, when applicable, the exchange ratio proposed.

Complies Partial compliance Explanation N/A

45. Risk control and management policy should identify at least: a) The different types of financial and non-financial risk the company is exposed to (including operational, technological, financial, legal, social, environmental, political and reputational risks), with the inclusion under financial or economic risks of contingent liabilities and other off-balance sheet risks. b) The determination of the risk level the company sees as acceptable. c) The measures in place to mitigate the impact of identified risk events should they occur. d) The internal control and reporting systems to be used to control and manage the above risks, including contingent liabilities and off-balance sheet risks.

Complies Partial compliance Explanation

46. Companies should establish a risk control and management function in the charge of one of the company's internal department or units and under the direct supervision of the audit committee or some other dedicated board committee. This function should be expressly charged with the following responsibilities: a) Ensure that risk control and management systems are functioning correctly and, specifically, that major risks the company is exposed to are correctly identified, managed and quantified. b) Participate actively in the preparation of risk strategies and in key decisions about their management. c) Ensure that risk control and management systems are mitigating risks effectively in the frame of the policy drawn up by the board of directors.

Complies Partial compliance Explanation

47. Appointees to the nomination and remuneration committee – or of the nomination committee and remuneration committee, if separately constituted – should have the right balance of knowledge, skills and experience for the functions they are called on to discharge. The majority of their members should be independent directors.

Complies Partial compliance Explanation

48. Large cap companies should operate separately constituted nomination and remuneration committees.

Complies Partial compliance Explanation

49. The nomination committee should consult with the company's chairman and chief executive, especially on matters relating to executive directors. When there are vacancies on the board, any director may approach the nomination committee to propose candidates that it might consider suitable.

Complies Partial compliance Explanation

50. The remuneration committee should operate independently and have the following functions in addition to those assigned by law:

a) Propose to the board the standard conditions for senior officer contracts.

b) Monitor compliance with the remuneration policy set by the company.

c) Periodically review the remuneration policy for directors and senior officers, including share-based remuneration systems and their application, and ensure that their individual compensation is proportionate to the amounts paid to other directors and senior officers in the company.

d) Ensure that conflicts of interest do not undermine the independence of any external advice the committee engages.

e) Verify the information on director and senior officers' pay contained in corporate documents, including the annual directors' remuneration statement.

Complies Partial compliance Explanation

51. The remuneration committee should consult with the company's chairman and chief executive, especially on matters relating to executive directors and senior officers.

Complies Partial compliance Explanation

52. The terms of reference of supervision and control committees should be set out in the board of directors regulations and aligned with those governing legally mandatory board committees as specified in the preceding sets of recommendations. They should include at least the following terms:

a) Committees should be formed exclusively by non-executive directors, with a majority of independents.

b) They should be chaired by independent directors.

c) The board should appoint the members of such committees with regard to the knowledge, skills and experience of its directors and each committee's terms of reference; discuss their proposals and reports; and provide report-backs on their activities and work at the first board plenary following each committee meeting.

d) They may engage external advice, when they feel it necessary for the discharge of their functions.

e) Meeting proceedings should be minuted and a copy made available to all board members.

Complies Partial compliance Explanation N/A

53. The task of supervising compliance with corporate governance rules, internal codes of conduct and corporate social responsibility policy should be assigned to one board committee or split between several, which could be the audit committee, the nomination committee, the corporate social responsibility committee, where one exists, or a dedicated committee established ad hoc by the board under its powers of self-organisation, with at the least the following functions:

a) Monitor compliance with the company's internal codes of conduct and corporate governance rules.

b) Oversee the communication and relations strategy with shareholders and investors, including small and medium-sized shareholders.

c) Periodically evaluate the effectiveness of the company's corporate governance system, to confirm that it is fulfilling its mission to promote the corporate interest and catering, as appropriate, to the legitimate interests of remaining stakeholders.

d) Review the company's corporate social responsibility policy, ensuring that it is geared to value creation.

e) Monitor corporate social responsibility strategy and practices and assess compliance in their respect.

f) Monitor and evaluate the company's interaction with its stakeholder groups.

g) Evaluate all aspects of the non-financial risks the company is exposed to, including operational, technological, legal, social, environmental, political and reputational risks.

h) Coordinate non-financial and diversity reporting processes in accordance with applicable legislation and international benchmarks.

Complies Partial compliance Explanation

54. The corporate social responsibility policy should state the principles or commitments the company will voluntarily adhere to in its dealings with stakeholder groups, specifying at least:

a) The goals of its corporate social responsibility policy and the support instruments to be deployed.

b) The corporate strategy with regard to sustainability, the environment and social issues.

c) Concrete practices in matters relative to: shareholders, employees, clients, suppliers, social welfare issues, the environment, diversity, fiscal responsibility, respect for human rights and the prevention of illegal conducts.

d) The methods or systems for monitoring the results of the practices referred to above, and identifying and managing related risks.

e) The mechanisms for supervising non-financial risk, ethics and business conduct.

f) Channels for stakeholder communication, participation and dialogue.

g) Responsible communication practices that prevent the manipulation of information and protect the company's honour and integrity.

Complies Partial compliance Explanation

55. The company should report on corporate social responsibility developments in its directors' report or in a separate document, using an internationally accepted methodology.

Complies Partial compliance Explanation

56. Director remuneration should be sufficient to attract individuals with the desired profile and compensate the commitment, abilities and responsibility that the post demands, but not so high as to compromise the independent judgement of non-executive directors.

Complies Explanation

57. Variable remuneration linked to the company and the director's performance, the award of shares, options or any other right to acquire shares or to be remunerated on the basis of share price movements, and membership of long-term savings schemes such as pension plans should be confined to executive directors.

The company may consider the share-based remuneration of non-executive directors provided they retain such shares until the end of their mandate. This condition, however, will not apply to shares that the director must dispose of to defray costs related to their acquisition.

Complies Partial compliance Explanation

58. In the case of variable awards, remuneration policies should include limits and technical safeguards to ensure they reflect the professional performance of the beneficiaries and not simply the general progress of the markets or the company's sector, or circumstances of that kind.

In particular, variable remuneration items should meet the following conditions:

a) Be subject to predetermined and measurable performance criteria that factor the risk assumed to obtain a given outcome.

b) Promote the long-term sustainability of the company and include non-financial criteria that are relevant for the company's long-term value, such as compliance with its internal rules and procedures and its risk control and management policies.

c) Be focused on achieving a balance between the delivery of short, medium and long-term objectives, such that performance-related pay rewards ongoing achievement, maintained over sufficient time to appreciate its contribution to long-term value creation. This will ensure that performance measurement is not based solely on one-off, occasional or extraordinary events.

Complies Partial compliance Explanation N/A

59. A major part of variable remuneration components should be deferred for a long enough period to ensure that predetermined performance criteria have effectively been met.

Complies Partial compliance Explanation N/A

60. Remuneration linked to company earnings should bear in mind any qualifications stated in the external auditor's report that reduce their amount.

Complies Partial compliance Explanation N/A

61. A major part of executive directors' variable remuneration should be linked to the award of shares or financial instruments whose value is linked to the share price.

Complies Partial compliance Explanation N/A

The Company is analysing different forms to implement a remuneration system that contemplates the payment of a portion of the variable remuneration of the Executive Directors in shares

- 62. Following the award of shares, share options or other rights on shares derived from the remuneration system, directors should not be allowed to transfer a number of shares equivalent to twice their annual fixed remuneration, or to exercise the share options or other rights on shares for at least three years after their award.**

The above condition will not apply to any shares that the director must dispose of to defray costs related to their acquisition.

Complies Partial compliance Explanation N/A

The Company is analysing different forms to implement a Stock Holding Policy for Executive Directors.

- 63. Contractual arrangements should include provisions that permit the company to reclaim variable components of remuneration when payment was out of step with the director's actual performance or based on data subsequently found to be misstated.**

Complies Partial compliance Explanation N/A

- 64. Termination payments should not exceed a fixed amount equivalent to two years of the director's total annual remuneration and should not be paid until the company confirms that he or she has met the predetermined performance criteria.**

Complies Partial compliance Explanation N/A

H OTHER INFORMATION OF INTEREST

- 1. If you consider there to be any important aspect regarding the corporate governance practices applied by your company or other companies in the group that have not been mentioned in this report, but which should be included to obtain more complete, reasoned information on the corporate governance practices and structure in the company or group, describe them below and give a brief explanation.**

It is noted that the data contained in this report relate to the fiscal year ended 31 December, 2016, except in those cases where a different date of reference is explicitly stated.

1. Note to A.1.

On 10 January 2017 the Chief Executive Officer of Repsol, exercising the powers delegated to him by the Board of Directors on 30 April 2015 (in turn exercising the powers delegated in the resolution passed to increase the capital under item six on the agenda for the Annual General Meeting held on 20 May 2016),

resolved to complete and declare closed the capital increase made by Repsol, bringing the company's capital to 1,496,404,851 euros, divided into 1,496,404,851 shares and 1,496,404,851 voting rights.

2. Note to A.2.

The details set out in this section, as of December 31, 2016, are obtained from the last information supplied by Sociedad de Gestión de los Sistemas de Registro, Compensación y Liquidación de Valores, Sociedad Anónima Unipersonal (IBERCLEAR), and from the information sent by shareholders to the Company and to the Comisión Nacional del Mercado de Valores (CNMV).

Notwithstanding the foregoing, according to the latest information available from the Company at the time of preparation of the annual accounts, the shareholders of the Company are as follows:

Name of shareholder	Interest / total voting rights (%)
Fundación Bancaria Caixa d'Estalvis i Pensions de Barcelona	9.84
Sacyr, S.A.	8.20
Temasek Holdings (Private) Limited	4.69
Blackrock, Inc	3.04

- (1) Fundació Bancaria Caixa d'Estalvis i Pensions de Barcelona holds its stake through Caixabank, S.A.
- (2) Sacyr, S.A. holds its stake through Sacyr Participaciones Mobiliarias, S.L.
- (3) Temasek holds its stake through its subsidiary Chembra Investment PTE, Ltd.
- (4) Blackrock holds its stake through various funds and accounts managed by investment managers it controls.

3. Note on section A.8

The 0.006% treasury stock percentage indicated as of December 31, 2016 has been calculated considering the shares issued on the free-of-charge capital increase that, within the framework of the shareholders' pay-out programme "Repsol Flexible Dividend", was recorded on the Madrid Commercial Registry on January 17, 2017 and that for accounting effects has been recorded on the financial statements of the Group as of December 31, 2016. As a result of said capital increase and in relation to the referred calculation, the Group received the proportional amount of new shares corresponding to the shares held as treasury stock before said capital increase.

4. Note on section C.1.16

The item "Total remuneration senior management" includes:

- Fixed remuneration and remuneration in kind of the senior management during 2016.

- The annual and multi-annual variable remuneration Variable Incentive Program for the Medium-Term 2013-2016 and other items accrued by members of senior management during 2016
- Share Acquisition Plan by Beneficiaries of Multiannual Remuneration Programmes : On May 31, 2016 the consolidation period of the 3rd Cycle of the Scheme was completed. As a result and pursuant to the provisions in Note 28 of the Consolidated Annual Report, senior management rights 7,126 delivering gross shares valued at a price of 11,88 euros per share. These amounts are included within the concept of pay in kind.

The cumulative rights corresponding to pension commitments contracted with the current members of the senior management total 13,107 thousand euros, of which 1,065 thousand euros were contributed in 2016.

The amount indicated in this section does not include the amounts paid to executives who caused leave in the Company and as a compensation for termination of contract and compensation for non-competition agreement amounting to 13,838 million euros.

5. Note on section C.1.37.

Additionally, the fees charged in 2016 by EY for audit work and other services rendered by the subgroup of Repsol Oil&Gas Canada Inc. (ROGCI) as a controlled company at the end of 2016:

EY	ROGCI
Non-auditing work (thousands)	376
Ratio of non-auditing work to total invoiced by the auditing firm (percentage %)	11%

6. Note on section D.2

The information on operations identified in the category titled “Leases” refers to those in which the Group is lessee, net of those in which it is lessor.

The transactions identified as “Other” with “La Caixa” group refer primarily to current investments and deposits.

The transactions identified as “Other” with Sacyr, S.A. refer primarily to purchase commitments in effect at 31 December 2016..

7. Note on section D.4.

For related party transactions with group companies established in tax havens or territories considered tax havens, the transactions carried out by Repsol with such companies are reported, broken down by the amounts corresponding to the individual companies, without considering eliminations for consolidation.

We have considered those transactions with Group companies whose business or tax domicile is established within any of the territories on the list of tax havens contained in RD 1080/1991, excluding those with which there is double taxation treaty in place with Spain that includes a clause for sharing tax information in which it is explicitly stated that they are not considered tax havens.

- 2. This section may be used to include any other information, clarification or qualification relating to the previous sections of the report, provided it is relevant and not repetitive.**

In particular, state whether the company is subject to any laws other than the laws of Spain on corporate governance and, if this is the case, include whatever information the company may be obliged to supply that differs from the information included in this report.

- 3. The company may also state whether it has voluntarily applied any international, sector-based or other codes of ethical principles or good practices. If so, it should name the code in question and the date of its accession. In particular, the company should state whether it has signed onto the Code of Best Tax Practices of 20 June 2010.**

Repsol signed the Code of Best Tax Practices (Codigo de Buenas Practicas Tributarias) on 23 September 2010 promoted by the Forum of Large Enterprises and the Spanish Tax Administration Agency (AEAT) and the Company complies with the provisions thereof.

This annual corporate governance report was approved by the Company's Board of Directors on 22nd February 2017.

Indicate whether any board members have voted against or abstained with respect to the approval of this report.

Yes No

Name of director who did not vote in favour of approved this report	Reasons (against, abstention, non-attendance)	Explain the reasons

Repsol, S.A.

Auditors' Report on the System of
Internal Control over Financial Reporting

*Translation of a report originally issued in
Spanish. In the event of a discrepancy, the
Spanish-language version prevails.*

Translation of a report originally issued in Spanish. In the event of a discrepancy, the Spanish-language version prevails.

INDEPENDENT REPORT ON THE SYSTEM OF INTERNAL CONTROL OVER FINANCIAL REPORTING (ICFR)

To the shareholders of Repsol, S.A.,

Scope of the Work

We have conducted the reasonable assurance review of the information relating to the System of Internal Control over Financial Reporting (ICFR) of Repsol, S.A. and Subsidiaries (the Repsol Group) for the year ended 31 December 2016.

The objective of this system is to contribute to the faithful representation of the transactions performed and to the provision of reasonable assurance in relation to the prevention or detection of any errors that might have a material effect on the consolidated financial statements.

The aforementioned system is based on the rules and policies defined by the Board of Directors of Talisman Energy in accordance with the guidelines established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its Internal Control-Integrated Framework (2013) report.

A system of internal control over financial reporting is a process designed to provide reasonable assurance on the reliability of financial information in accordance with the accounting principles and standards applicable to it. A system of internal control over financial reporting includes policies and procedures that: (i) enable the records reflecting the transactions performed to be kept accurately and with a reasonable level of detail; (ii) guarantee that these transactions are performed only in accordance with the authorisations established; (iii) provide reasonable assurance that transactions are recognised appropriately to enable the preparation of the financial information in accordance with the accounting principles and standards applicable to it; and (iv) provide reasonable assurance in relation to the prevention or timely detection of unauthorised acquisition, use or sale of the company's assets that could have a material effect on the financial information. In view of the limitations inherent to any system of internal control over financial reporting, certain errors, irregularities or fraud might not be detected. Also, the projection to future periods of an evaluation of internal control is subject to risks, including the risk that internal control may be rendered inadequate as a result of future changes in the applicable conditions or that there may be a reduction in the future of the degree of compliance with the policies or procedures established.

Directors' Responsibility

The Board of Directors of Repsol, S.A. is responsible for maintaining the System of Internal Control over the Financial Information included in the consolidated financial statements and for evaluating its effectiveness.

Our Responsibility

Our responsibility is to issue a report on the independent reasonable assurance review of the effectiveness of the System of Internal Control over Financial Reporting (ICFR) based on the work performed by us.

Our work includes an evaluation of the effectiveness of the system of ICFR in relation to the financial information contained in the consolidated financial statements of the Repsol Group as at 31 December 2016

prepared in accordance with International Financial Reporting Standards as adopted by the European Union and the other provisions of the regulatory financial reporting framework applicable to the Repsol Group.

Our work was performed in accordance with the requirements established in Standard ISAE 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC) for the issuance of reasonable assurance reports.

This standard requires the planning and performance of procedures and the obtainment of sufficient evidence to reduce engagement risk to an acceptably low level in the circumstances of the engagement, and the issuance of a positive conclusion.

Independence

Our work was performed in accordance with the independence standards required by the Code of Ethics of the International Ethics Standards Board for Accountants (IESBA), which are based on the fundamental principles of integrity, objectivity, professional competence, due care, confidentiality and professional behaviour.

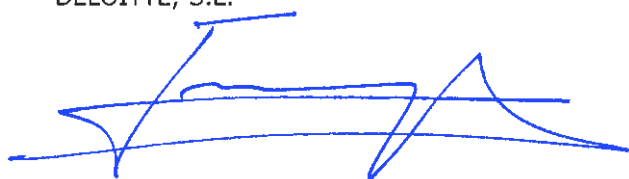
In accordance with International Standard on Quality Control (ISQC) 1, Deloitte has in place a global system of quality control which includes documented policies and procedures in relation to compliance with ethical requirements, professional standards and applicable legislation.

Conclusion

In our opinion, as at 31 December 2016, the Repsol Group maintained, in all material respects, an effective System of Internal Control over the Financial Information contained in its consolidated financial statements, and this internal control system is based on the rules and policies defined by the Board of Directors of Repsol, S.A. in accordance with the guidelines established by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its report "Internal Control-Integrated Framework (2013)". Furthermore, the disclosures contained in the information relating to the system of ICFR which is included in Note F of the Repsol Group's Annual Corporate Governance Report as at 31 December 2016 are in compliance, in all material respects, with the requirements established by the Corporate Enterprises Act, the Order ECC/461/2013, of 20 March and Circular 7/2015, of 22 December, as amended by the Spanish Securities Market Commission Circular 5/2013, of 12 June.

As described in the accompanying Note F of the Annual Corporate Governance Report, the system of ICFR does not include controls on companies integrated in the consolidated financial statements in which control is not exercised directly or indirectly since the strategic decisions regarding operational and financial activities require the unanimous consent of the parties sharing control. Nevertheless, Repsol Group includes controls designed to protect the homogeneity, validity and reliability of the financial information submitted by the companies for inclusion in the consolidated financial statements. Consequently, our work did not include an examination of the effectiveness of the system of internal control over the generation of the financial information of the aforementioned companies included in the consolidated financial statements of the Repsol Group.

DELOITTE, S.L.

A handwritten signature in blue ink, consisting of several overlapping horizontal and diagonal strokes, positioned above the printed name and date.

Jorge Izquierdo Mazón
22 February 2017

**CONSOLIDATED REPORT ON PAYMENTS TO
GOVERNMENTS ON OIL AND GAS
EXPLORATION AND PRODUCTION
ACTIVITIES**

For the financial year 2016



REPSOL, S.A.

Translation of a report originally issued in Spanish. In the event of a discrepancy, the Spanish language version prevails

(1) PRESENTATION

Spanish¹ and European² regulations require that large undertakings and public interest entities which are active in the extractive industry prepare and publish an annual report (the ‘Report’) on payments made to the Governments as a result of their extractive operations.

This Report on Payments to Governments of Repsol, S.A. complies with said regulations. This Report discloses the payments made to Governments in 2016 by Repsol, S.A. and its controlled³ companies (hereinafter ‘Repsol’) as a result of its Extractive Operations, according to the definitions given below.

This Report was approved by the Board of Directors of Repsol S.A. at a meeting held on February 22, 2016.

For more information on taxes paid, we refer to the Taxation section of the Consolidated Management Report and to the Responsible Tax Policy section of our corporate website.

(2) BASIS FOR THE ELABORATION OF THE INFORMATION

2.1) Definitions

Extractive Operations

The Report includes payments to Governments made by Repsol, S.A. and its controlled companies whose activities consist, in whole or in part, of the exploration, prospection, discovery, development and extraction of minerals, oil, natural gas deposits or other materials (Extractive Operations).

Accordingly, the payments made by companies over which Repsol, S.A. has ‘joint control’ or ‘significant influence’ (as such terms are defined by the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) adopted by the European Union) have not been included in this Report.

Government

‘Government’ means any national, regional or local authority of a country, including a department, agency or undertaking controlled by that authority.

Project

‘Project’ means the operational activities that are governed by a single contract, license, lease, concession or similar legal agreements and form the basis for payment liabilities with a government. Nonetheless, if multiple such agreements are substantially interconnected, this shall be considered a project.

¹ Tenth Additional Provision of Law 22/2015, of July 20, on Audit of Accounts.

² Chapter 10 of Directive 2013/34 / EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC.

³ Controlled companies are those which Repsol, S.A. directly or indirectly, controls and fully consolidates in the Consolidated Financial Statements of the Repsol Group.

Payments

The payments included in the report are classified as follows:

- *Production Entitlements*

Production entitlements are the share of production allocated to the Government of the country where extractive operations are carried out in the reporting period derived from projects operated by the Group. This includes the government's share as a sovereign entity or through its participation as an equity or interest holder in projects within its sovereign jurisdiction.

Production entitlements arising from activities carried out by state oil companies outside of their respective home countries are excluded.

- *Signature, discovery and production bonuses*

Payments related to signature, discovery and production bonuses. These are usually paid upon the signing of an agreement or contract, or when a commercial discovery is declared, or production has commenced or reached a milestone.

- *Licence fees, rental fees, entry fees and other considerations for licences and/or concessions*

Payments related to licence fees, rental fees, entry fees and other considerations for licenses or concessions. These are fees and other sums paid as consideration for acquiring a licence in order to gain access to an area where extractive activities are being performed.

- *Taxes*

Includes taxes levied on the income, profits or taxes levied on production. Excludes taxes levied on consumption such as value added taxes, personal income taxes or sales taxes. Payments are reported net of refunds.

- *Other*

This heading includes dividends, royalties and payments for infrastructure improvements, grouped together for presentation purposes in this Report. All individual payments in this column are identified by their proper payment category.

2.2) Bases of presentation

This Report includes payments made directly by Repsol to Governments, regardless of whether these payments are made as an operator or not.

When Repsol makes payments directly to a Government as an operator, the Report presents the payments in full, even where Repsol is proportionally reimbursed by its non-operating project partners through a partner billing process.

On the other hand, when Repsol is not the project operator and payments are made directly by the operator of the project, this amount is not included in this Report even if Repsol pays its proportionate share to the operating partner.

The payments are presented in this Report by Project when the payments have been attributed to a specific project. However, payments made by Repsol in relation to obligations imposed at the company level are presented as the entity that made such payment.

This Report is presented in millions of Euros to one decimal place.

Payments are reported on a cash basis. In-kind payments are converted to an equivalent cash value based on the most appropriate and relevant valuation method for each payment, which can be at cost or market value or such other value as stated in the contract. In-kind payments are reported in both volume and the equivalent cash value.

Payments made in currencies other than the Euro are converted for the purposes of this Report, using the average exchange rate for the period.

**(3) REPORT ON PAYMENTS TO GOVERNMENTS.
INFORMATION BY COUNTRY**

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other ⁽¹⁾	TOTAL
Africa	-	-	-	2,2	-	2,2
Algeria	-	-	-	1,8	-	1,8
Gabon	-	-	-	0,4	-	0,4
Asia	232,4	482,9	9,5	-	-	724,8
Indonesia	129,5	-	-	-	-	129,5
Malaysia	52,1	335,5	8,9	-	-	396,5
Vietnam	50,8	147,4	0,6	-	-	198,8
Europe	(70,1)	-	-	5,8	-	(64,3)
Spain	(3,1)	-	-	0,4	-	(2,7)
Norway	(67,0)	-	-	3,9	-	(63,1)
Portugal	-	-	-	1,5	-	1,5
Latin America	58,6	478,9	2,5	3,5	-	543,5
Bolivia	34,8	420,1	-	2,5	-	457,4
Colombia	(5,6)	-	-	-	-	(5,6)
Ecuador	14,5	58,8	-	1,0	-	74,3
Mexico	-	-	2,5	-	-	2,5
Peru	(12,6)	-	-	-	-	(12,6)
Trinidad and Tobago	27,5	-	-	-	-	27,5
North America	35,2	-	0,5	21,5	0,3	57,5
Canada	6,6	-	-	6,7	-	13,3
USA	28,6	-	0,5	14,8	0,3	44,2
Oceania	-	-	-	0,1	-	0,1
Papua New Guinea	-	-	-	0,1	-	0,1
	256,1	961,8	12,5	33,1	0,3	1.263,8

(1) No dividends and royalties have been paid to governments during the year. The amount of 0.3 million euros included in this heading corresponds to payments for infrastructure improvements.

**(4) REPORT ON PAYMENTS TO GOVERNMENTS.
INFORMATION PER PROJECT AND PER GOVERNMENT**

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other	TOTAL
Algeria						
Payments per Project						
Bougezoul	-	-	-	1,1	-	1,1
Illizi	-	-	-	0,7	-	0,7
Total	-	-	-	1,8	-	1,8
Payments per Government						
DGE (Ministere des Finances)	-	-	-	1,8	-	1,8
Total	-	-	-	1,8	-	1,8
Bolivia						
Payments per Project / Entity						
Margarita (Caipipendi)/Huacaya	-	405,0	-	1,2	-	406,2
Surubi Noroeste (Mamore)	-	5,3	-	0,1	-	5,4
Monteagudo	-	0,8	-	-	-	0,8
Paloma, Surubi y Surubi (Bloque Bajo)	-	8,8	-	0,2	-	9,0
Cambeiti	-	0,2	-	-	-	0,2
Tuichi	-	-	-	0,8	-	0,8
Repsol E&P Bolivia, S.A.	34,8	-	-	0,2	-	35,0
Total	34,8	420,1	-	2,5	-	457,4
Payments per Government						
Ministerio de Hidrocarburos y Energía	-	420,1	-	-	-	420,1
Tributos Fiscales	34,8	-	-	-	-	34,8
Yacimientos Petrolíferos Fiscales Bolivianos (YPFB)	-	-	-	2,5	-	2,5
Total	34,8	420,1	-	2,5	-	457,4
Canada						
Payments per Project / Entity						
Chauvin Alberta/Chauvin Saskatchewan	2,9	-	-	1,3	-	4,2
Duvernay	0,4	-	-	0,5	-	0,9
EL1114	-	-	-	1,5	-	1,5
Greater Edson	4,6	-	-	2,6	-	7,2
Groundbirch	-	-	-	0,1	-	0,1
Repsol Oil & Gas Canada, Inc.	(1,3)	-	-	0,7	-	(0,6)
Total	6,6	-	-	6,7	-	13,3
Payments per Government						
City of Calgary	-	-	-	0,4	-	0,4
Clearwater county	-	-	-	0,2	-	0,2
Yellowhead County	-	-	-	0,1	-	0,1
Government of Alberta	6,3	-	-	4,2	-	10,5
Government of British Columbia.	0,1	-	-	0,2	-	0,3
Government of Saskatchewan.	0,2	-	-	0,1	-	0,3
Receiver General	-	-	-	1,5	-	1,5
Total	6,6	-	-	6,7	-	13,3

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other ⁽¹⁾	TOTAL
Colombia						
Payments per Entity						
Repsol Exploración Colombia, S.A.	(6,2)	-	-	-	-	(6,2)
Talisman (Colombia) Oil & Gas, Ltd.	0,6	-	-	-	-	0,6
Total	(5,6)	-	-	-	-	(5,6)
Payments per Government						
Administración de Impuestos y Aduanas Nacionales	(5,6)	-	-	-	-	(5,6)
Total	(5,6)	-	-	-	-	(5,6)
Ecuador						
Payments per Project / Entity						
Bloque 16	11,9	49,4	-	0,8	-	62,1
Tivacuno	2,4	9,4	-	0,2	-	12,0
Repsol Ecuador, S.A.	0,2	-	-	-	-	0,2
Total	14,5	58,8	-	1,0	-	74,3
Payments per Government						
Servicio de Rentas Internas	14,5	-	-	-	-	14,5
Agencia de Regularizacion y Control	-	-	-	0,3	-	0,3
Ministerio de Hidrocarburos	-	-	-	0,1	-	0,1
Ministerio del Ambiente	-	-	-	0,4	-	0,4
Secretaria de Hidrocarburos	-	58,8	-	0,2	-	59,0
Total	14,5	58,8	-	1,0	-	74,3
United States						
Payments per Project / Entity						
Alaska North Slope	-	-	-	0,4	-	0,4
Alaska Beafourt Sea	-	-	-	0,8	-	0,8
Buckskin	-	-	-	0,2	-	0,2
Eagle Ford	6,8	-	-	-	-	6,8
GOM	-	-	0,5	4,0	-	4,5
Leon	-	-	-	0,4	-	0,4
Marcellus	4,9	-	-	9,0	0,3	14,2
Shenzi	17,2	-	-	-	-	17,2
Repsol E&P USA, Inc.	(0,3)	-	-	-	-	(0,3)
Total	28,6	-	0,5	14,8	0,3	44,2
Payments per Government						
Bureau of Ocean Energy Management	17,3	-	0,5	5,8	-	23,6
City of Runge	0,2	-	-	-	-	0,2
Commissioner of the General Land	0,3	-	-	-	-	0,3
Commonwealth of Pennsylvania	4,7	-	-	8,5	-	13,2
Department of Natural Resources	-	-	-	0,1	-	0,1
Pa Department of Transportation	-	-	-	-	0,3	0,3
Runge Independent School District	0,1	-	-	-	-	0,1
State Comptroller	6,1	-	-	-	-	6,1
State of Alaska	(0,2)	-	-	-	-	(0,2)
Susquehanna River Basin Commission	-	-	-	0,3	-	0,3
Troy Area School District	0,1	-	-	-	-	0,1
United States Geological Survey	-	-	-	0,1	-	0,1
Total	28,6	-	0,5	14,8	0,3	44,2

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other	TOTAL
Spain						
Payments per Entity						
Repsol Investigaciones Petrolíferas, S.A	(3,1)	-	-	0,4	-	(2,7)
Total	(3,1)	-	-	0,4	-	(2,7)
Payments per Government						
Agencia Estatal de Administración Tributaria (AEAT)	(3,2)	-	-	0,3	-	(2,9)
Autoridad Portuaria Tarragona	-	-	-	0,1	-	0,1
Tesoro Público	0,1	-	-	-	-	0,1
Total	(3,1)	-	-	0,4	-	(2,7)
Gabon						
Payments per Project / Entity						
Luna Muetse	-	-	-	0,3	-	0,3
Repsol Libreville, S.A. avec A.G.	-	-	-	0,1	-	0,1
Total	-	-	-	0,4	-	0,4
Payments per Government						
Direction General des Hydrocarbures	-	-	-	0,4	-	0,4
Total	-	-	-	0,4	-	0,4
Indonesia						
Payments per Project						
Corridor	109,7	-	-	-	-	109,7
Jambi Merang	8,7	-	-	-	-	8,7
Ogan Komering	0,9	-	-	-	-	0,9
Tangguh	10,2	-	-	-	-	10,2
Total	129,5	-	-	-	-	129,5
Payments per Government						
Directorate General Tax	129,5	-	-	-	-	129,5
SKKMIGAS	-	-	-	-	-	-
Total	129,5	-	-	-	-	129,5
Malaysia						
Payments per Project / Entity						
PM3-CAA	31,5 ⁽¹⁾	251,6 ⁽⁵⁾	2,2	-	-	285,3
PM305	3,4 ⁽²⁾	14,4 ⁽⁶⁾	3,3	-	-	21,1
PM314	0,5 ⁽³⁾	1,9 ⁽⁷⁾	0,2	-	-	2,6
SB1 Kinabalu Oil	16,8 ⁽⁴⁾	67,6 ⁽⁸⁾	3,2	-	-	87,6
Repsol Oil & Gas Malaysia, Ltd.	(0,1)	-	-	-	-	(0,1)
Total	52,1	335,5	8,9	-	-	396,5
Payments per Government						
Inland Revenue Board	(0,2)	-	-	-	-	(0,2)
PETRONAS	52,3	335,5	8,9	-	-	396,7
Total	52,1	335,5	8,9	-	-	396,5

⁽¹⁾ Includes payments in kind for 1,2 million barrels of oil equivalent

⁽²⁾ Includes payments in kind for 0,1 million barrels of oil equivalent

⁽³⁾ Includes payments in kind for 0,1 million barrels of oil equivalent

⁽⁴⁾ Includes payments in kind for 0,3 million barrels of oil equivalent

⁽⁵⁾ Includes payments in kind for 10,3 million barrels of oil equivalent

⁽⁶⁾ Includes payments in kind for 0,4 million barrels of oil equivalent

⁽⁷⁾ Includes payments in kind for 0,1 million barrels of oil equivalent

⁽⁸⁾ Includes payments in kind for 1,6 million barrels of oil equivalent

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other	TOTAL
Mexico						
Payments per Entity						
Repsol Exploración México, S.A. de C.V.	-	-	2,5	-	-	2,5
Total	-	-	2,5	-	-	2,5
Payments per Government						
Servicio de Administración Tributaria	-	-	2,5	-	-	2,5
Total	-	-	2,5	-	-	2,5
Norway						
Payments per Entity						
Repsol Norge, AS	(67,0)	-	-	3,9	-	(63,1)
Total	(67,0)	-	-	3,9	-	(63,1)
Payments per Government						
Oljedirektoratet	-	-	-	3,9	-	3,9
Skatteetaten	(67,0)	-	-	-	-	(67,0)
Total	(67,0)	-	-	3,9	-	(63,1)
Papua Nueva Guinea						
Payments per Project						
PDL 10	-	-	-	0,1	-	0,1
Total	-	-	-	0,1	-	0,1
Payments per Government						
Department of Petroleum & Energy	-	-	-	0,1	-	0,1
Total	-	-	-	0,1	-	0,1
Peru						
Payments per Project / Entity						
Lote 56	(7,8)	-	-	-	-	(7,8)
Lote 57	6,4	-	-	-	-	6,4
Lote 76	(0,2)	-	-	-	-	(0,2)
Lote 88	(11,5)	-	-	-	-	(11,5)
Repsol Exploración Perú, S.A.	0,5	-	-	-	-	0,5
Total	(12,6)	-	-	-	-	(12,6)
Payments per Government						
SUNAT	(19,3)	-	-	-	-	(19,3)
Organismo de Evaluación y Fiscalización Ambiental	0,1	-	-	-	-	0,1
Perupetro S.A.	6,6	-	-	-	-	6,6
Total	(12,6)	-	-	-	-	(12,6)
Portugal						
Payments per Project						
Ameijoa	-	-	-	0,3	-	0,3
Camarao	-	-	-	0,2	-	0,2
Caranguejo	-	-	-	0,1	-	0,1
Lagosta	-	-	-	0,1	-	0,1
Lagostim	-	-	-	0,2	-	0,2
Mexilhao	-	-	-	0,2	-	0,2
Ostra	-	-	-	0,3	-	0,3
Sapateira	-	-	-	0,1	-	0,1
Total	-	-	-	1,5	-	1,5
Payments per Government						
Entidade Nacional para o Mercado de Combustíveis	-	-	-	1,5	-	1,5
Total	-	-	-	1,5	-	1,5

Amounts in millions of euros

	Taxes	Production Entitlement	Signature, discovery and production bonuses	Licence fees, rental fees, entry fees and other considerations for licences and/or concessions	Other	TOTAL
Trinidad and Tobago						
Payments per Project						
TSP	27,5	-	-	-	-	27,5
Total	27,5	-	-	-	-	27,5
Payments per Government						
Board of Inland Revenue	0,9	-	-	-	-	0,9
Ministry of Energy	26,6	-	-	-	-	26,6
Total	27,5	-	-	-	-	27,5
Vietnam						
Payments per Project						
Block 15-2/01 PC	18,4	-	-	-	-	18,4
Block 07/03 (CRD)	-	-	0,3	-	-	0,3
Block 133-134 BCC	-	-	0,1	-	-	0,1
Block 135-136	-	-	0,1	-	-	0,1
Block 46 Cai Nuoc	2,2	13,6 ⁽²⁾	-	-	-	15,8
PM3-CAA	30,2 ⁽¹⁾	133,8 ⁽³⁾	-	-	-	164,0
Vung May 156-159	-	-	0,1	-	-	0,1
Total	50,8	147,4	0,6	-	-	198,8
Payments per Government						
Vietnam Tax Authority	18,4	-	-	-	-	18,4
Vietnam Oil and Gas Group	32,4	147,4	0,6	-	-	180,4
Total	50,8	147,4	0,6	-	-	198,8

⁽¹⁾ Includes payments in kind for 1,2 million barrels of oil equivalent

⁽²⁾ Includes payments in kind for 0,8 million barrels of oil equivalent

⁽³⁾ Includes payments in kind for 5 million barrels of oil equivalent

**INFORMATION ON OIL AND GAS
EXPLORATION AND PRODUCTION
ACTIVITIES
2016**



REPSOL, S.A. and Investees comprising the Repsol Group

INFORMATION ON OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITIES

(Unaudited information)

This document contains information on the Repsol Group's oil and gas exploration and production activities. This information is published on an annual basis and is prepared in accordance with the criteria contained in Topic 932 of the "Financial Accounting Standards Boards" (FASB), which contains the principles that are generally applied in the oil and gas industry.

This information includes:

- **Accumulated investment** (Capitalized cost), which shows capitalized historical costs.
- **Investments of the year** (Cost incurred), which represent the amounts capitalized during the year.
- **Results of oil and gas exploration and production activities**, including revenue and expenses directly associated to this activity.
- **Net proven reserves**, which represent the volume of proven developed and undeveloped reserves of oil and gas.
- **Future net cash flows**, which represents an estimate of standardized measure of discounted future net cash flows relating to proven oil and gas reserves.
- **Changes in Future net cash flows**, which reflects the changes in standardized measure of discounted future net cash flows relating to proven oil and gas reserves with respect to those presented for the previous year.
- **Information on acreage and exploration and development activities.**

The financial information included in this document is consistent with that stated in the Group financial statements and management report (accessible at www.repsol.com), but there might be some differences due to the fact that the information included in the current document is presented in accordance with US GAAP (Topic 932 FASB) and the Group's official financial information is presented accordingly to International Financial Reporting Standards endorsed by the European Union (IFRS-UE).

Repsol Group estimates its proven reserves according to the standards established by the SPE-PRMS system.

The information here contained refers to the last three years (2014, 2015 and 2016). From 2016 on, the Group capitalizes the costs of geology and geophysics (G&G), net of tax benefits, in the exploratory phase; to facilitate the comparability of the information, data corresponding to previous years have been re-stated applying the same accounting standard (see Note 2.1 "Comparative information" of the Group's Consolidated Financial Statements 2016).

Capitalised costs

Capitalised costs represent the historical costs capitalised related to oil and gas exploration and production activities, including auxiliary equipment and facilities, and the related accumulated depreciation and accumulated impairment losses.

Millions of euros

At December 31st 2014	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Capitalised costs of proved oil and gas properties	7,519	360	61	953	2,954	1,760	1,431	-	-
Capitalised costs of unproved oil and gas properties	3,420	150	-	82	2,410	155	470	150	3
	10,939	510	61	1,035	5,364	1,915	1,901	150	3
Auxiliary equipment and facilities	1,542	290	11	-	769	179	293	-	-
Total capitalised costs	12,481	800	72	1,035	6,133	2,094	2,194	150	3
Accumulated depreciation and impairment losses	(5,281)	(560)	(13)	(135)	(2,413)	(1,156)	(1,004)	-	-
Net amount (1)	7,200	240	59	900	3,720	938	1,190	150	3
Equity-accounted investees									
Capitalised costs of proved oil and gas properties	5,358	-	823	-	-	4,363	-	172	-
Capitalised costs of unproved oil and gas properties	896	-	-	-	-	821	24	51	-
	6,254	-	823	-	-	5,184	24	223	-
Auxiliary equipment and facilities	1,699	-	670	-	-	1,029	-	-	-
Total capitalised costs	7,953	-	1,493	-	-	6,213	24	223	-
Accumulated depreciation and impairment losses	(3,355)	-	(374)	-	-	(2,926)	-	(55)	-
Net amount (1)	4,598	-	1,119	-	-	3,287	24	168	-
Total Net amounts (2)	11,798	240	1,178	900	3,720	4,225	1,214	318	3

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

Millions of euros

At December 31st
2015

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Capitalised costs									
of proved oil and gas properties	16,311	713	74	1,026	6,296	3,486	1,900	2,816	-
Capitalised costs									
of unproved oil and gas properties	10,102	156	-	71	4,250	2,847	373	1,963	442
	<u>26,413</u>	<u>869</u>	<u>74</u>	<u>1,097</u>	<u>10,546</u>	<u>6,333</u>	<u>2,273</u>	<u>4,779</u>	<u>442</u>
Auxiliary equipment and facilities	1,972	330	18	22	1,021	189	390	2	-
Total capitalised costs	<u>28,385</u>	<u>1,199</u>	<u>92</u>	<u>1,119</u>	<u>11,567</u>	<u>6,522</u>	<u>2,663</u>	<u>4,781</u>	<u>442</u>
Accumulated depreciation and impairment losses	(9,665)	(768)	(72)	(192)	(4,129)	(2,192)	(1,440)	(753)	(119)
Net amount	<u>18,720</u>	<u>431</u>	<u>20</u>	<u>927</u>	<u>7,438</u>	<u>4,330</u>	<u>1,223</u>	<u>4,028</u>	<u>323</u>
Equity-accounted investees									
Capitalised costs									
of proved oil and gas properties	7,524	-	1,243	-	-	6,102	-	179	-
Capitalised costs									
of unproved oil and gas properties	1,081	-	-	-	-	1,044	-	37	-
	<u>8,605</u>	<u>-</u>	<u>1,243</u>	<u>-</u>	<u>-</u>	<u>7,146</u>	<u>-</u>	<u>216</u>	<u>-</u>
Auxiliary equipment and facilities	2,362	-	1,139	-	-	1,223	-	-	-
Total capitalised costs	<u>10,967</u>	<u>-</u>	<u>2,382</u>	<u>-</u>	<u>-</u>	<u>8,369</u>	<u>-</u>	<u>216</u>	<u>-</u>
Accumulated depreciation and impairment losses	(4,535)	-	(568)	-	-	(3,900)	-	(67)	-
Net amount	<u>6,432</u>	<u>-</u>	<u>1,814</u>	<u>-</u>	<u>-</u>	<u>4,469</u>	<u>-</u>	<u>149</u>	<u>-</u>
Total Net amounts (2)	<u>25,152</u>	<u>431</u>	<u>1,834</u>	<u>927</u>	<u>7,438</u>	<u>8,799</u>	<u>1,223</u>	<u>4,177</u>	<u>323</u>

Translation of a report originally issued in Spanish.
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Millions of euros

At December 31st
2016

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Capitalised costs of proved oil and gas properties	17,527	812	77	1,112	6,748	3,592	2,261	2,925	-
Capitalised costs of unproved oil and gas properties	9,223	184	-	48	4,377	2,162	320	1,911	221
	26,750	996	77	1,160	11,125	5,754	2,581	4,836	221
Auxiliary equipment and facilities	1,890	340	22	19	1,074	32	399	4	-
Total capitalised costs	28,640	1,336	99	1,179	12,199	5,786	2,980	4,840	221
Accumulated depreciation and impairment losses	(10,643)	(921)	(95)	(248)	(4,862)	(1,939)	(1,627)	(951)	-
Net amount	17,997	415	4	931	7,337	3,847	1,353	3,889	221
Equity-accounted investees									
Capitalised costs of proved oil and gas properties	9,579	912	1,400	-	-	7,034	-	233	-
Capitalised costs of unproved oil and gas properties	1,664	-	67	-	-	1,543	-	54	-
	11,243	912	1,467	-	-	8,577	-	287	-
Auxiliary equipment and facilities	2,934	-	1,172	-	-	1,761	-	1	-
Total capitalised costs	14,177	912	2,639	-	-	10,338	-	288	-
Accumulated depreciation and impairment losses	(6,032)	(324)	(924)	-	-	(4,682)	-	(102)	-
Net amount	8,145	588	1,715	-	-	5,656	-	186	-
Total Net amounts	26,142	1,003	1,719	931	7,337	9,503	1,353	4,075	221

(1) Does not include capitalised costs regarding non-current assets held for sale in 2014 amounting to €293.

(2) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Total figures for 2015 and 2014 have accordingly increased by 84 million euros and 331 million euros, respectively.

Cost incurred

The costs incurred represent amounts capitalised during the year relating to acquisitions of properties and for exploration, development and production activities.

Millions of euros

At December 31st
2014

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Acquisition of proved properties	34	-	-	-	34	-	-	-	-
Acquisition of unproved properties	20	-	-	-	20	-	-	-	-
Exploration costs	1,288	213	-	68	373	170	309	147	8
Development costs	567	30	15	(34)	305	189	62	-	-
Costs Incurred	1,909	243	15	34	732	359	371	147	8
Equity-accounted investees									
Acquisition of proved properties	-	-	-	-	-	-	-	-	-
Acquisition of unproved properties	-	-	-	-	-	-	-	-	-
Exploration costs	95	-	-	-	-	93	1	1	-
Development costs	980	-	366	-	-	592	-	22	-
Costs Incurred	1,075	-	366	-	-	685	1	23	-
Total Costs Incurred (1)	2,984	243	381	34	732	1,044	372	170	8

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Millions of euros

At December 31st
2015 (2)

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Acquisition of proved properties	6,666	354	-	-	2,191	1,217	203	2,625	76
Acquisition of unproved properties	7,213	102	-	-	2,217	2,631	165	1,765	333
Exploration costs	1,287	179	-	34	552	111	261	133	17
Development costs	760	65	2	(41)	367	185	100	84	(2)
Costs Incurred	15,926	700	2	(7)	5,327	4,144	729	4,607	424
Equity-accounted investees									
Acquisition of proved properties	358	-	-	-	-	358	-	-	-
Acquisition of unproved properties	91	-	-	-	-	91	-	-	-
Exploration costs	118	12	-	-	-	104	1	1	-
Development costs	1,481	200	535	-	-	728	-	18	-
Costs Incurred	2,048	212	535	-	-	1,281	1	19	-
Total Costs Incurred (1)	17,974	912	537	(7)	5,327	5,425	730	4,626	424

Millions of euros

At December 31st
2016

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Acquisition of proved properties	54	-	-	-	2	52	-	-	-
Acquisition of unproved properties	-	-	-	-	-	-	-	-	-
Exploration costs	556	90	-	13	100	57	72	168	56
Development costs	1,085	20	2	56	274	256	225	257	(5)
Costs Incurred	1,695	110	2	69	376	365	297	425	51
Equity-accounted investees									
Acquisition of proved properties	-	-	-	-	-	-	-	-	-
Acquisition of unproved properties	-	-	-	-	-	-	-	-	-
Exploration costs	79	1	-	-	-	78	-	-	-
Development costs	1,091	145	107	-	-	822	-	17	-
Costs Incurred	1,170	146	107	-	-	900	-	17	-
Total Costs Incurred	2,865	256	109	69	376	1,265	297	442	51

- (1) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Total figures for 2015 and 2014 have accordingly increased by 78 million euros and 58 million euros, respectively.
- (2) At December 31, 2015, this heading mainly includes the addition of exploration, development and producing assets related to the acquisition of Talisman Energy Inc. amounting to €14,178 million, of which €13,729 million correspond to fully-consolidated companies and €449 million to investees.

Results of oil and gas exploration and production activities

The following table shows the revenues and expenses associated directly with the Group's oil and gas exploration and production activities. It does not include any allocation of the finance costs or general expenses, except for the accretion expense, and, therefore, is not necessarily indicative of the contribution to consolidated net profit of the oil and gas activities.

Millions of euros

At December 31st
2014

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Income									
Sales to non-Group companies	662	-	10	260	90	277	25	-	-
Sales between business segments and to Group Companies	1,356	148	-	39	675	323	171	-	-
Total income	2,018	148	10	299	765	600	196	-	-
Production costs (1)	(524)	(27)	(34)	(128)	(20)	(226)	(89)	-	-
Exploration expenses (2)	(785)	(204)	-	(3)	(174)	(116)	(198)	(89)	(1)
Other operating expenses	244	(7)	-	(1)	(1)	(5)	258	-	-
Depreciation and amortisation charge (3)	(1,187)	(60)	(2)	(65)	(723)	(231)	(105)	(1)	-
Profit (Loss) before taxes and charges	(234)	(150)	(26)	102	(153)	22	62	(90)	(1)
Taxes and charges	(14)	56	6	(35)	53	(1)	(119)	32	(6)
Results of oil and gas production activities	(248)	(94)	(20)	67	(100)	21	(57)	(58)	(7)
Equity-accounted investees									
Income									
Sales to non-Group companies..	1,705	-	409	-	-	1,136	-	160	-
Sales between business segments and to Group Companies	229	-	-	-	-	229	-	-	-
Total income..	1,934	-	409	-	-	1,365	-	160	-
Production costs (1)	(683)	-	(189)	-	-	(410)	-	(84)	-
Exploration expenses (2)	(85)	-	-	-	-	(85)	-	-	-
Other operating expenses	(7)	-	(2)	-	-	(4)	-	(1)	-
Depreciation and amortisation charge (3)	(414)	-	(43)	-	-	(327)	-	(44)	-
Profit (Loss) before taxes and charges .	745	-	175	-	-	539	-	31	-
Taxes and charges	(325)	-	(44)	-	-	(277)	-	(4)	-
Results of oil and gas production activities	420	-	131	-	-	262	-	27	-
Total results of oil and gas production activities (4)	172	(94)	111	67	(100)	283	(57)	(31)	(7)

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Millions of euros

At December 31st
2015

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Income									
Sales to non-Group companies	2,043	169	12	178	387	606	36	637	18
Sales between business segments and to Group Companies	698	63	-	30	383	130	92	-	-
Total income	2,741	232	12	208	770	736	128	637	18
Production costs (1)	(1,316)	(180)	(63)	(147)	(184)	(353)	(81)	(292)	(16)
Exploration expenses (2)	(1,805)	(350)	-	(46)	(590)	(96)	(602)	(118)	(3)
Other operating expenses	(76)	(26)	-	-	(6)	(20)	(17)	(5)	(2)
Depreciation and amortisation charge (3)	(4,056)	(370)	(66)	(42)	(1,417)	(1,004)	(292)	(865)	-
Profit (Loss) before taxes and charges	(4,512)	(694)	(117)	(27)	(1,427)	(737)	(864)	(643)	(3)
Taxes and charges	1,359	278	12	6	455	176	267	164	1
Results of oil and gas production activities	(3,153)	(416)	(105)	(21)	(972)	(561)	(597)	(479)	(2)
Equity-accounted investees									
Income									
Sales to non-Group companies..	1,716	253	363	-	-	962	-	138	-
Sales between business segments and to Group Companies	294	-	-	-	-	294	-	-	-
Total income..	2,010	253	363	-	-	1,256	-	138	-
Production costs (1)	(1,457)	(249)	(386)	-	-	(741)	-	(81)	-
Exploration expenses (2)	(7)	(1)	-	-	-	22	(28)	-	-
Other operating expenses	(15)	-	(3)	-	-	(12)	-	-	-
Depreciation and amortisation charge (3)	(1,073)	(2)	(452)	-	-	(598)	-	(21)	-
Profit (Loss) before taxes and charges .	(542)	1	(478)	-	-	(73)	(28)	36	-
Taxes and charges	(56)	-	50	-	-	(107)	8	(7)	-
Results of oil and gas production activities	(598)	1	(428)	-	-	(180)	(20)	29	-
Total results of oil and gas production activities (4)	(3,751)	(415)	(533)	(21)	(972)	(741)	(617)	(450)	(2)

Millions of euros

At December 31st
2016

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Income									
Sales to non-Group companies	2,445	366	11	210	464	538	20	828	8
Sales between business segments and to Group Companies	460	29	-	12	271	42	106	-	-
Total income	2,905	395	11	222	735	580	126	828	8
Production costs (1)	(1,414)	(202)	(22)	(126)	(293)	(325)	(74)	(356)	(16)
Exploration expenses (2)	(541)	(133)	-	(60)	(103)	(10)	(140)	(6)	(89)
Other operating expenses	(100)	107	(113)	(1)	(7)	(76)	(19)	14	(5)
Depreciation and amortisation charge (3)	(1,548)	(137)	42	(50)	(604)	(354)	(159)	(286)	-
Profit (Loss) before taxes and charges	(698)	30	(82)	(15)	(272)	(185)	(266)	194	(102)
Taxes and charges	(41)	(151)	(137)	4	264	28	86	(139)	4
Results of oil and gas production activities	(739)	(121)	(219)	(11)	(8)	(157)	(180)	55	(98)
Equity-accounted investees									
Income									
Sales to non-Group companies..	1,686	322	480	-	-	752	-	132	-
Sales between business segments and to Group Companies	345	-	-	-	-	345	-	-	-
Total income..	2,031	322	480	-	-	1,097	-	132	-
Production costs (1)	(1,176)	(339)	(255)	-	-	(499)	-	(83)	-
Exploration expenses (2)	(36)	(2)	-	-	-	(34)	-	-	-
Other operating expenses	(9)	27	(25)	-	-	(10)	-	(1)	-
Depreciation and amortisation charge (3)	(821)	(9)	(326)	-	-	(470)	-	(16)	-
Profit (Loss) before taxes and charges .	(11)	(1)	(126)	-	-	84	-	32	-
Taxes and charges	(88)	-	(188)	-	-	108	-	(8)	-
Results of oil and gas production activities	(99)	(1)	(314)	-	-	192	-	24	-
Total results of oil and gas production activities	(838)	(122)	(533)	(11)	(8)	35	(180)	79	(98)

(1) Production costs include local taxes, production taxes and other similar payments amounting to €361, €347 and €375 million in 2016, 2015 and 2014, respectively. It also includes transport and other costs totalling €345, €893 and €318 million in 2016, 2015 and 2014, respectively.

(2) Operating expenses include charges for the impairment of exploration assets of €74, €588 and €167 million in 2016, 2015 and 2014, respectively. This same heading also includes provisions for onerous drilling platform contracts in the amount of €109 and €174 million in 2016 and 2015, respectively.

(3) The depreciation and provisions heading includes charges for the impairment of producing and development assets and provisions for onerous contracts totalling €267, €2,933 and €539 million in 2016, 2015 and 2014, respectively. The amount for 2014 has been restated to include such provisions.

(4) The tables for 2015 and 2014 have been restated as a result of a change in the Group's accounting principles. Results for 2015 have accordingly decreased by 179 million euros, while results for 2014 have increased by 13 million euros.

Estimated proved net developed and undeveloped oil and gas reserves

The tables below reflect the net developed and undeveloped proved reserves of crude oil, condensates, LPG and natural gas, including the volume of reserves equivalent to the financial income obtained under certain production-sharing contracts in force as of December 31, 2016, 2015 and 2014, and the variations therein.

In determining net reserves, we exclude from our reported reserves royalties due to others, whether payable in cash or in kind, where the royalty owner has a direct interest in the underlying production and is able to make lifting and sales arrangements independently. By contrast, to the extent that royalty payments required to be made to a third party, whether payable in cash or in kind, are a financial obligation, or are substantially equivalent to a production or severance tax, the related reserves are not excluded from our reported reserves despite the fact that such payments are referred to as “royalties” under local rules. We follow the same methodology in reporting our production amounts.

Until 2014, Repsol had been voluntarily applying the oil and gas reserves reporting and disclosure guidance and framework established by the Securities Exchange Commission (SEC) and the criteria established by the Society of Petroleum Engineers’ Petroleum Resource Management System (SPE-PRMS) to estimate its probable and possible reserves. As from year-end 2015, in the wake of the acquisition of the Talisman group (which estimates its reserves using the Canadian Oil and Gas Evaluation Handbook "COGE Handbook", pursuant to the Canadian Administrator's National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities) and in order to facilitate its integration and enable consistent reserve and resource management, the Repsol Group has decided to use the SPE-PRMS criteria for proved reserve reporting purposes. In accordance with these rules, proved oil and gas reserves are those quantities of oil and gas, which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable – from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulations – prior to the time at which contracts providing the right to operate expire, regardless of whether deterministic or probabilistic methods are used for the estimation. The project to extract the hydrocarbons must have commenced or the operator must be reasonable certain that it will commence the project within a reasonable time.

All of Repsol’s oil and gas reserves have been estimated by the company’s petroleum engineers.

To control the quality of reserves booked, Repsol has established a process that is integrated into Repsol’s internal control system. The process to manage reserves booking is centrally controlled by the Reserve Control Direction which is independent from the upstream activities and it is overseen by the Audit and Control Committee. Furthermore, the volumes booked are submitted to third party engineers for a reserves audit on a periodic basis (at least 95% of the reserves are externally audited on a three years cycle).

For those areas submitted to third party audit, Repsol’s proved reserves figures have to be within 7% of the third party reserves audit figures for Repsol to declare that the reserves information meets the third party reserves audit standards. In the event that the difference is greater than 7% tolerance, Repsol reestimates its proved reserves to achieve this tolerance level or discloses the third party reserves audit figures. In 2016, Repsol commissioned an external audit for various areas of South America and North America.

Proved developed and undeveloped reserves of crude oil, condensate GPL:

Millions of barrels

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Reserves at December 31st, 2013 (1)	275	4	-	78	38	44	113	-	-
Revisions of previous estimates	20	1	-	-	18	3	(2)	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	13	-	-	11	-	2	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(31)	(2)	-	(4)	(10)	(9)	(6)	-	-
Reserves at December 31st, 2014 (1)	278	3	-	84	45	40	105	-	-
Revisions of previous estimates	20	7	-	-	4	10	(1)	4	(2)
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	17	-	-	-	10	6	-	-	-
Purchases of minerals in place	138	8	-	-	48	53	8	17	3
Sales of minerals in place	(13)	-	-	-	(13)	-	-	-	-
Production (1)	(44)	(4)	-	(4)	(13)	(14)	(3)	(5)	-
Reserves at December 31st, 2015 (1)	396	13	-	80	82	96	110	16	-
Revisions of previous estimates	28	9	-	4	1	3	1	10	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	27	-	-	17	6	4	-	-	-
Purchases of minerals in place	1	-	-	-	-	1	-	-	-
Sales of minerals in place	(20)	-	-	-	-	(19)	-	(1)	-
Production (1)	(51)	(8)	-	(5)	(12)	(16)	(3)	(7)	-
Reserves at December 31st, 2016 (1)	380	14	-	96	77	68	107	18	-

Millions of barrels

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Equity-accounted investees									
Reserves at December 31st, 2013 (1)	146	-	44	-	-	76	-	26	-
Revisions of previous estimates	22	-	3	-	-	10	-	8	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	13	-	-	-	-	13	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(18)	-	(5)	-	-	(9)	-	(4)	-
Reserves at December 31st, 2014 (1)	163	-	42	-	-	90	-	30	-
Revisions of previous estimates	8	(9)	4	-	-	9	-	3	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	52	44	-	-	-	9	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(31)	(5)	(5)	-	-	(17)	-	(4)	-
Reserves at December 31st, 2015 (1)	192	30	42	-	-	91	-	29	-
Revisions of previous estimates	30	18	11	-	-	(3)	-	4	-
Improved recovery	19	-	-	-	-	19	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(38)	(8)	(5)	-	-	(21)	-	(4)	-
Reserves at December 31st, 2016 (1)	204	40	48	-	-	87	-	29	-
Total Fully-consolidated entities and Equity-accounted in	584	54	48	96	77	155	107	47	0

Proved developed reserves of crude oil, condensate GPL:

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
At December 31st, 2013	238	3	33	39	13	62	68	19	-
Fully-consolidated entities	162	3	-	39	13	38	68	-	-
Equity-accounted investees	76	-	33	-	-	24	-	19	-
At December 31st, 2014	265	3	31	52	25	65	65	24	-
Fully-consolidated entities	181	3	-	52	25	36	65	-	-
Equity-accounted investees	84	-	31	-	-	29	-	24	-
At December 31st, 2015	418	36	32	50	52	137	71	40	-
Fully-consolidated entities	283	13	-	50	52	82	71	15	-
Equity-accounted investees	135	23	32	-	-	55	-	25	-
At December 31st, 2016	407	50	33	48	46	123	68	40	-
Fully-consolidated entities	250	13	-	48	46	59	68	17	-
Equity-accounted investees	157	37	33	-	-	64	-	23	-

Note: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 45, 45, 46 and 44 million barrels of oil equivalent, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 4, 4, 4 and 4 million barrels of oil equivalent, respectively, in connection with such payments.

Developed and undeveloped proved reserves of natural Gas:

Thousand Millions of Standard Cubic Feet

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Fully-consolidated entities									
Reserves at December 31st, 2013 (1)	2,043	-	88	1,433	44	329	148	-	-
Revisions of previous estimates	(9)	-	-	-	52	(38)	(24)	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	174	-	-	173	-	1	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(120)	(1)	(6)	(53)	(14)	(36)	(11)	-	-
Reserves at December 31st, 2014 (1)	2,088	-	82	1,553	83	256	113	-	-
Revisions of previous estimates	120	3	(29)	48	(51)	121	5	23	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	278	-	-	-	194	85	-	-	-
Purchases of minerals in place	2,985	16	-	-	1,691	419	-	858	-
Sales of minerals in place	(49)	-	-	-	(49)	-	-	-	-
Production (1)	(383)	(6)	(6)	(52)	(134)	(86)	(16)	(82)	-
Reserves at December 31st, 2015 (1)	5,039	14	47	1,549	1,733	794	103	799	-
Revisions of previous estimates	247	24	2	106	(28)	(7)	11	140	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	545	-	-	310	111	95	-	30	-
Purchases of minerals in place	15	-	-	-	10	4	-	-	-
Sales of minerals in place	(198)	-	-	-	-	(6)	-	(192)	-
Production (1)	(533)	(16)	(5)	(68)	(180)	(124)	(16)	(124)	-
Reserves at December 31st, 2016 (1)	5,116	21	44	1,897	1,646	757	98	653	-

Thousand Millions of Standard Cubic Feet

	<u>Total</u>	<u>Europe</u>	<u>Venezuela</u>	<u>Peru</u>	<u>United States</u>	<u>Rest of America</u>	<u>Africa</u>	<u>Asia</u>	<u>Oceania</u>
Equity-accounted investees									
Reserves at December 31st, 2013 (1)	4,095	-	2,216	-	-	1,806	-	73	-
Revisions of previous estimates	315	-	4	-	-	315	-	(4)	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	(2)	-	-	-	-	(2)	-	-	-
Production (1)	(332)	-	(42)	-	-	(276)	-	(14)	-
Reserves at December 31st, 2014 (1)	4,076	-	2,177	-	-	1,844	-	55	-
Revisions of previous estimates	1,173	5	952	-	-	216	-	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	75	25	-	-	-	51	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(338)	(1)	(63)	-	-	(260)	-	(15)	-
Reserves at December 31st, 2015 (1)	4,986	28	3,067	-	-	1,851	-	40	-
Revisions of previous estimates	369	(1)	86	-	-	253	-	32	-
Improved recovery	7	-	-	-	-	7	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(385)	(1)	(124)	-	-	(247)	-	(14)	-
Reserves at December 31st, 2016 (1)	4,977	26	3,029	-	-	1,864	-	58	-
Total reserves ad Decemeber 31st, 2016	10,093	47	3,073	1,897	1,646	2,621	98	711	-

Translation of a report originally issued in Spanish.
In the event of a discrepancy, the Spanish language version prevails.

Proved developed reserves of natural gas:

Thousand Millions of Standard Cubic Feet

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
At December 31st, 2013	1,998	0	241	691	24	980	41	22	-
Fully-consolidated entities	997	0	43	691	24	199	41	-	-
Equity-accounted investees	1,001	-	198	-	-	781	-	22	-
At December 31st, 2014	2,251	-	195	926	49	1,016	65	-	-
Fully-consolidated entities	1,262	-	37	926	49	218	32	-	-
Equity-accounted investees	989	-	158	-	-	798	33	-	-
At December 31st, 2015	5,697	15	1,308	926	1,120	1,622	33	673	-
Fully-consolidated entities	3,475	14	47	926	1,120	681	33	654	-
Equity-accounted investees	2,222	1	1,261	-	-	941	-	19	-
At December 31st, 2016	6,054	21	2,014	933	1,112	1,403	18	554	-
Fully-consolidated entities	3,249	19	44	933	1,112	596	18	528	-
Equity-accounted investees	2,805	2	1,971	-	-	807	-	26	-

Notes: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 1,273 1,264, 1,144 and 1,052 billion cubic feet of gas, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 64, 47, 32 and 40 billion cubic feet of gas, respectively, in connection with such payments.

Proved developed and undeveloped reserves of crude oil, condensate, natural gas liquids and natural gas:

Millions of Barrels of Oil Equivalent

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Reserves at December 31st, 2013 (1)	639	4	16	333	45	103	139	-	-
Revisions of previous estimates	19	1	-	-	27	(3)	(6)	-	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	44	-	-	42	-	3	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(52)	(2)	(1)	(14)	(13)	(15)	(8)	-	-
Reserves at December 31st, 2014 (1)	650	3	15	361	60	86	125	-	-
Revisions of previous estimates	42	7	(5)	9	(5)	31	-	8	(2)
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	66	-	-	-	45	21	-	-	-
Purchases of minerals in place	669	11	-	-	350	128	8	170	3
Sales of minerals in place	(22)	-	-	-	(22)	-	-	-	-
Production (1)	(112)	(6)	(1)	(13)	(37)	(30)	(5)	(20)	-
Reserves at December 31st, 2015 (1)	1,293	16	8	356	390	237	128	158	-
Revisions of previous estimates	72	13	-	23	(4)	2	3	35	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	124	-	-	72	25	21	-	6	-
Purchases of minerals in place	4	-	-	-	2	1	-	-	-
Sales of minerals in place	(55)	-	-	-	-	(20)	-	(35)	-
Production (1)	(146)	(11)	(1)	(17)	(44)	(38)	(6)	(29)	-
Reserves at December 31st, 2016 (1)	1,291	17	8	434	370	203	125	135	-

Translation of a report originally issued in Spanish.
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Millions of Barrels of Oil Equivalent

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Equity-accounted investees									
Reserves at December 31st, 2013 (1)	875	-	438	-	-	398	-	39	-
Revisions of previous estimates	78	-	4	-	-	67	-	7	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	13	-	-	-	-	13	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(77)	-	(12)	-	-	(58)	-	(6)	-
Reserves at December 31st, 2014 (1)	889	-	430	-	-	419	-	40	-
Revisions of previous estimates	216	(8)	174	-	-	47	-	3	-
Improved recovery	-	-	-	-	-	-	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	66	48	-	-	-	18	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(92)	(5)	(16)	-	-	(63)	-	(7)	-
Reserves at December 31st, 2015 (1)	1,080	35	588	-	-	420	-	36	-
Revisions of previous estimates	96	18	27	-	-	42	-	9	-
Improved recovery	21	-	-	-	-	21	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Purchases of minerals in place	-	-	-	-	-	-	-	-	-
Sales of minerals in place	-	-	-	-	-	-	-	-	-
Production (1)	(106)	(8)	(27)	-	-	(65)	-	(7)	-
Reserves at December 31st, 2016 (1)	1,090	45	588	-	-	419	-	39	-
Total Fully-consolidated entities and Equity-accounted in	2,382	62	595	434	370	622	125	174	-

Proved developed reserves of crude oil, condensate, natural gas liquids and natural gas

Millions of Barrels of Oil Equivalent

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
At December 31st, 2013	594	3	76	162	18	237	75	22	-
Fully-consolidated entities	340	3	8	162	18	74	75	-	-
Equity-accounted investees	254	-	68	-	-	163	-	22	-
At December 31st, 2014	666	3	66	217	33	245	102	-	-
Fully-consolidated entities	405	3	7	217	33	74	71	-	-
Equity-accounted investees	261	-	59	-	-	171	31	-	-
At December 31st, 2015	1,430	38	264	214	251	426	77	160	-
Fully-consolidated entities	901	15	8	214	251	204	77	132	-
Equity-accounted investees	529	23	256	-	-	222	-	28	-
At December 31st, 2016	1,485	53	392	214	244	373	71	139	-
Fully-consolidated entities	829	16	8	214	244	165	71	111	-
Equity-accounted investees	656	37	384	-	-	208	-	28	-

Notes: The aggregated changes in reserves and total reserves at December 31 may differ from the individual values shown because the calculations use more precise figures than those shown in the table.

(1) Total net proved developed and undeveloped reserves at December 31, 2016, 2015, 2014 and 2013 include an estimated volume of approximately 272, 271, 250 and 231 million barrels of oil equivalent, respectively, corresponding to royalty payments which, as described above, constitute a financial obligation or are substantially equivalent to a production or equivalent tax. Net production in 2016, 2015, 2014 and 2013 includes an estimated volume of 15, 12, 10 and 11 million barrels of oil equivalent, respectively, in connection with such payments.

Information on acreage and exploration activities

The following tables disclose details of Repsol's acreage and exploration and development activities by geographical region:

(km ²)	Developed and undeveloped acreage											
	2016				2015				2014			
	Developed ⁽¹⁾		Undeveloped ⁽²⁾		Developed ⁽¹⁾		Undeveloped ⁽²⁾		Developed ⁽¹⁾		Undeveloped ⁽²⁾	
	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾	Gross ⁽³⁾	Net ⁽⁴⁾
Europe	1,892	686	60,186	28,888	1,428	525	68,862	32,409	22	17	64,744	28,735
Norway	303	107	9,842	4,539	324	92	10,676	4,608	-	-	11,776	3,834
United Kingdom	1,567	561	699	236	1,082	416	2,148	684	-	-	-	-
Rest of Europe	22	17	49,645	24,113	22	17	56,038	27,117	22	17	52,968	24,901
Latin America	3,131	715	132,471	57,207	2,974	698	142,580	61,725	1,945	534	115,292	48,896
Brazil	838	80	2,448	363	549	36	2,736	407	121	11	3,164	432
Colombia	509	112	74,956	28,036	651	134	73,357	27,460	68	5	33,078	12,866
Peru	225	41	21,748	13,346	200	28	21,772	13,359	197	26	27,743	11,966
Trinidad & Tobago	152	45	6,238	2,109	180	66	7,973	3,327	181	66	7,972	3,327
Venezuela	803	192	2,187	661	789	189	2,200	664	783	187	2,207	666
Rest of Latin America	604	245	24,895	12,691	605	245	34,542	16,508	595	239	41,128	19,639
North America	5,606	2,184	35,745	20,473	5,435	2,358	44,054	24,540	1,907	172	29,439	9,140
Canada	2,586	1,570	27,171	16,651	2,518	1,747	27,730	17,400	-	-	12,438	2,599
United States	3,020	614	8,574	3,822	2,917	611	16,324	7,140	1,907	172	17,001	6,541
Africa	2,566	713	87,592	56,825	2,670	673	97,921	59,966	803	204	93,713	56,053
Asia and Oceania	1,402	564	160,302	113,633	1,759	724	144,956	91,872	220	108	67,590	45,454
Indonesia	661	242	20,613	16,737	1,010	390	27,940	23,818	-	-	42,512	29,252
Malaysia	414	193	4,984	2,952	414	199	8,456	4,162	-	-	-	-
Russia	222	109	4,692	4,135	221	108	10,771	9,670	220	108	10,477	9,529
Rest of Asia and Oceania	104	20	130,012	89,808	114	27	97,789	54,222	-	-	14,601	6,673
Total	14,598	4,862	476,297	277,027	14,266	4,978	498,373	270,512	4,898	1,035	370,777	188,278

⁽¹⁾ Developed acreage is the number of acres that are allocated or assignable to productive wells. The figures shown reflect operating acreage.

⁽²⁾ Undeveloped acreage is acreage on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of oil and gas, regardless of whether or not the acreage contains proved reserves.. Also includes exploration surface area.

⁽³⁾ Gross acreage is the total acres in which Repsol owns an interest.

⁽⁴⁾ Net acreage is the total of the fractional interest in the gross acreage position.

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	Acreage											
	Gross area (km ²) ⁽¹⁾						Net area (km ²) ⁽¹⁾					
	Development			Exploration			Development			Exploration		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Europe	2,845	2,882	399	59,233	67,408	64,367	1,230	1,312	332	28,344	31,622	28,420
Norway	876	853	-	9,269	10,147	11,776	343	411	-	4,304	4,289	3,834
United Kingdom	1,570	1,630	-	695	1,600	-	555	569	-	242	531	-
Rest of Europe	399	399	399	49,269	55,661	52,591	332	332	332	23,798	26,802	24,586
Latin America	16,883	18,119	17,547	118,719	127,435	99,690	4,736	5,884	5,759	53,186	56,539	43,671
Brazil	1,185	1,185	1,185	2,100	2,100	2,100	147	147	147	296	296	296
Colombia	2,196	1,647	1,075	73,270	72,360	32,071	375	276	151	27,773	27,318	12,720
Peru	2,020	2,020	2,020	19,952	19,952	25,920	202	202	202	13,185	13,185	11,790
Trinidad & Tobago	3,804	5,579	5,579	2,585	2,574	2,574	1,121	2,363	2,363	1,034	1,030	1,030
Venezuela	2,990	2,990	2,990	-	-	-	853	853	853	-	-	-
Rest of Latin America	4,688	4,698	4,698	20,812	30,449	37,025	2,038	2,043	2,043	10,899	14,710	17,835
North America	10,881	16,205	10,168	30,470	33,284	21,178	5,316	6,442	919	17,342	20,456	8,393
Canada	5,549	5,934	-	24,208	24,314	12,438	3,813	4,375	-	14,408	14,772	2,599
United States	5,332	10,271	10,168	6,262	8,970	8,740	1,503	2,067	919	2,934	5,684	5,794
Africa	12,725	12,846	12,059	77,434	87,745	82,457	2,744	2,709	2,564	54,794	57,930	53,693
Asia and Oceania	11,280	10,328	2,082	150,423	136,387	65,728	4,638	4,319	1,022	109,560	88,277	44,540
Indonesia	4,279	4,837	-	16,996	24,113	42,512	1,589	1,809	-	15,391	22,399	29,252
Malaysia	2,393	2,311	-	3,005	6,559	-	1,041	1,014	-	2,104	3,347	-
Russia	1,312	1,411	2,082	3,602	9,581	8,615	642	691	1,022	3,602	9,088	8,615
Rest of Asia and Oceania	3,297	1,769	-	126,820	96,134	14,601	1,365	805	-	88,463	53,443	6,673
Total	54,614	60,380	42,255	436,280	452,259	333,420	18,664	20,666	10,596	263,226	254,824	178,717

⁽¹⁾ Gross acreage surface area is the area in which Repsol owns an interest. Net acreage surface area is the sum of the gross surface areas of each acreage, in respect of Repsol's respective interests.

The following tables show Repsol's completed exploratory wells by geographical region:

	Exploration wells, ⁽¹⁾ completed and in progress														
	Positive			Negative			Under assessment			Total			In progress		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Europe	-	-	-	-	6	1	1	-	1	1	6	2	1	1	3
Norway	-	-	-	-	4	1	-	-	1	-	4	2	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rest of Europe	-	-	-	-	2	-	1	-	-	1	2	-	1	1	3
Latin America	-	-	1	2	2	3	-	1	2	2	3	6	1	1	2
Brazil	-	-	1	-	-	1	-	1	-	-	1	2	-	-	1
Colombia	-	-	-	2	-	1	-	-	1	2	-	2	-	1	-
Peru	-	-	-	-	2	-	-	-	-	-	2	-	1	-	1
Trinidad & Tobago	-	-	-	-	-	1	-	-	1	-	-	2	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rest of Latin America	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
North America	-	1	1	-	2	1	-	-	1	-	3	3	-	-	2
Canada	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1
United States	-	1	1	-	1	1	-	-	1	-	2	3	-	-	1
Africa	-	2	-	1	3	7	1	-	2	2	5	9	-	-	2
Asia and Oceania	-	1	2	6	-	2	2	1	-	8	2	4	-	2	1
Indonesia	-	-	-	1	-	-	2	-	-	3	-	-	-	2	-
Malaysia	-	-	-	3	-	-	-	1	-	3	1	-	-	-	-
Russia	-	1	2	-	-	-	-	-	-	-	1	2	-	-	1
Rest of Asia and Oceania	-	-	-	2	-	2	-	-	-	2	-	2	-	-	-
Total	-	4	4	9	13	14	4	2	6	13	19	24	2	4	10

⁽¹⁾ Excluding appraisal wells. In 2016, 6 appraisal wells were completed – 3 positive, 2 negative, 1 under assessment – and 2 appraisal drilling projects were in progress. Also excluding the Piscuri 4000 well in Romania, which at year-end had been suspended. The Mashira-6X well was declared negative, although it was still in progress at December 31, 2016.

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Completed development wells

	Positive			Negative			Under assessment			Total		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
	Europe	3	4	-	-	-	-	-	-	-	3	4
Norway	1	3	-	-	-	-	-	-	-	1	3	-
United Kingdom	2	1	-	-	-	-	-	-	-	2	1	-
Rest of Europe	-	-	-	-	-	-	-	-	-	-	-	-
Latin America	52	62	78	2	3	5	7	5	8	61	70	91
Brazil	4	10	9	-	-	-	-	1	-	4	11	9
Colombia	3	20	26	-	-	-	1	-	1	4	20	27
Peru	3	-	1	-	-	-	1	-	-	4	-	1
Trinidad & Tobago	8	3	5	-	-	-	5	2	2	13	5	7
Venezuela	25	22	28	-	2	3	-	-	5	25	24	36
Rest of Latin America	9	7	9	2	1	2	-	2	-	11	10	11
North America	150	282	471	-	1	1	-	16	1	150	299	473
Canada	31	30	-	-	-	-	-	6	-	31	36	-
United States	119	252	471	-	1	1	-	10	1	119	263	473
Africa	8	2	8	1	1	-	1	-	-	10	3	8
Asia and Oceania	46	43	34	-	3	3	-	-	-	46	46	37
Indonesia	1	1	-	-	-	-	-	-	-	1	1	-
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-
Russia	45	42	34	-	2	3	-	-	-	45	44	37
Rest of Asia and Oceania	-	-	-	-	1	-	-	-	-	-	1	-
Total	259	393	591	3	8	9	8	21	9	270	422	609

Standardized measure of discounted future net cash flows and changes therein relating to proved oil and gas reserves

Projected net cash flows were estimated in accordance with the criteria established by the “SPE/WPC/AAPG/SPEE Petroleum Resources Management System, commonly referred to by its acronym, SPE-PRMS (SPE standing for the Society of Petroleum Engineers)”. Oil and gas prices and other financial assumptions regarding the outlook for costs reflect the Company's best estimates for the purposes of valuing its assets. These assumptions are applied to estimated future production in respect of its proved oil and gas reserves as of the most recent reporting date, less estimated future development and production costs (based on current costs) in respect of these same proved reserves, all of which assuming that prevailing economic conditions are sustained.

Future production costs were estimated on based on the cost structure at the end of the year and are projected on the basis of the above-mentioned assumptions. Future development costs were calculated on the basis of technical studies conducted by Repsol and by the operators holding joint title with Repsol. The taxes projected for each of the future years were determined under the contractual and tax regime prevailing at the end of the year. The rate used to discount the future net revenues was 10%.

The present value of the future net cash flows estimated on the basis of the aforementioned assumptions is not intended to be interpreted, and should not be interpreted, as the fair value of the Group's oil and gas reserves. An estimation of the fair value of these reserves should also include the future exploitation of reserves not yet classified as proved reserves and costs and a discount rate which represents the time value of money at the calculation date and the uncertainties inherent to estimating the reserves.

The following table shows the present value of the future net revenues relating to proved oil and gas reserves, calculated on the basis of the aforementioned assumptions.

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Millions of euros

At December 31st

2014	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Future cash inflows	24,601	265	198	7,437	3,708	3,555	9,438	-	-
Future production costs	(7,358)	(127)	(75)	(3,769)	(593)	(1,784)	(1,010)	-	-
Future development and abandonment costs	(2,706)	(207)	(25)	(973)	(661)	(369)	(471)	-	-
Future income tax expenses	(6,529)	22	(9)	(799)	(563)	(268)	(4,912)	-	-
Future net cash flows after taxes	8,008	(47)	89	1,896	1,891	1,134	3,045	-	-
10% annual discount for estimated timing of cash flows	(3,002)	117	(42)	(1,123)	(522)	(264)	(1,168)	-	-
Standardized measure of discounted future net cash flows	5,006	70	47	773	1,369	870	1,877	-	-
Equity-accounted investees									
Future cash inflows	24,360	-	10,364	-	-	12,160	-	1,836	-
Future production costs	(9,922)	-	(3,983)	-	-	(4,978)	-	(961)	-
Future development and abandonment costs	(3,732)	-	(1,009)	-	-	(2,634)	-	(89)	-
Future income tax expenses	(3,087)	-	(1,750)	-	-	(1,161)	-	(176)	-
Future net cash flows after taxes	7,619	-	3,622	-	-	3,387	-	610	-
10% annual discount for estimated timing of cash flows	(3,291)	-	(2,147)	-	-	(865)	-	(279)	-
Standardized measure of discounted future net cash flows	4,328	-	1,475	-	-	2,522	-	331	-
Total Standardized measure of discounted future net cash flows	9,334	70	1,522	773	1,369	3,392	1,877	331	-

Millions of euros

At December 31st

2015	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Future cash inflows	47,888	792	123	8,255	14,679	8,570	8,521	6,948	-
Future production costs	(17,649)	(648)	(32)	(3,731)	(6,047)	(4,405)	(1,131)	(1,655)	-
Future development and abandonment costs	(8,115)	(1,477)	(1)	(969)	(2,017)	(2,744)	(404)	(467)	(36)
Future income tax expenses	(6,433)	1,622	(28)	(1,136)	(448)	(242)	(4,197)	(2,005)	1
Future net cash flows after taxes	15,691	289	62	2,419	6,167	1,179	2,789	2,821	(35)
10% annual discount for estimated timing of cash flows	(6,996)	(429)	(24)	(1,545)	(3,151)	287	(1,176)	(962)	4
Standardized measure of discounted future net cash flows	8,695	(140)	38	874	3,016	1,466	1,613	1,859	(31)
Equity-accounted investees									
Future cash inflows	29,182	2,149	16,313	-	-	9,153	-	1,567	-
Future production costs	(12,127)	(2,293)	(5,315)	-	-	(3,642)	-	(877)	-
Future development and abandonment costs	(7,488)	(4,249)	(951)	-	-	(2,187)	-	(101)	-
Future income tax expenses	(3,740)	997	(3,904)	-	-	(690)	-	(143)	-
Future net cash flows after taxes	5,827	(3,396)	6,143	-	-	2,634	-	446	-
10% annual discount for estimated timing of cash flows	(2,642)	1,786	(3,656)	-	-	(570)	-	(202)	-
Standardized measure of discounted future net cash flows	3,185	(1,610)	2,487	-	-	2,064	-	244	-
Total Standardized measure of discounted future net cash flows	11,880	(1,750)	2,525	874	3,016	3,530	1,613	2,103	(31)

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Millions of euros

At December 31st
2016

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Future cash inflows	48,018	1,014	120	11,673	12,744	7,195	8,969	6,303	-
Future production costs	(11,034)	(602)	(34)	(5,048)	(1,845)	(877)	(1,086)	(1,542)	-
Future development and abandonment costs	(7,938)	(1,650)	(6)	(607)	(1,141)	(2,987)	(682)	(865)	-
Future income tax expenses	(7,722)	1,536	(27)	(2,011)	(951)	(227)	(4,441)	(1,601)	-
Future net cash flows after taxes	21,324	298	53	4,007	8,807	3,104	2,760	2,295	-
10% annual discount for estimated timing of cash flows	(11,361)	(477)	(25)	(2,677)	(5,335)	(1,178)	(1,044)	(625)	-
Standardized measure of discounted future net cash flows	9,963	(179)	28	1,330	3,472	1,926	1,716	1,670	-
Equity-accounted investees									
Future cash inflows	33,358	3,166	17,310	-	-	11,167	-	1,715	-
Future production costs	(13,832)	(2,967)	(5,826)	-	-	(4,129)	-	(910)	-
Future development and abandonment costs	(8,139)	(4,480)	(1,041)	-	-	(2,495)	-	(123)	-
Future income tax expenses	(4,376)	1,020	(4,160)	-	-	(1,123)	-	(113)	-
Future net cash flows after taxes	7,011	(3,261)	6,283	-	-	3,420	-	569	-
10% annual discount for estimated timing of cash flows	(2,784)	1,874	(3,675)	-	-	(728)	-	(255)	-
Standardized measure of discounted future net cash flows	4,227	(1,387)	2,608	-	-	2,692	-	314	-
Total Standardized measure of discounted future net cash flows	14,190	(1,566)	2,636	1,330	3,472	4,618	1,716	1,984	-

Changes in Standardized measure of discounted future net cash flows relating to proved oil and gas reserves

The detail of the changes in the standardized measure of discounted future net cash flows for 2013, 2014 and 2015 is as follows:

Millions of euros

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Fully-consolidated entities									
Balance at December 31st, 2013	4,852	93	27	845	1,268	872	1,747	-	-
Changes due to sale or transfer prices of future production costs	(774)	4	(1)	11	(303)	(197)	(288)	-	-
Changes in future development costs	(165)	34	-	(133)	(8)	12	(70)	-	-
Oil and gas sales and transfers in the period	(2,248)	(77)	(2)	(162)	(625)	(356)	(1,026)	-	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves	112	-	-	65	-	47	-	-	-
Net changes due to purchases/sales of assets	-	-	-	-	-	-	-	-	-
Net changes due to revisions in quantity estimates	857	11	(4)	(147)	682	58	257	-	-
Previously estimated development costs incurred in the year	490	13	16	15	193	111	142	-	-
Effect of discounting to a different date and exchange rate effect	1,035	12	9	175	264	188	387	-	-
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	847	(20)	2	104	(102)	135	728	-	-
Net change	154	(23)	20	(72)	101	(2)	130	-	-
Balance at December 31st, 2014	5,006	70	47	773	1,369	870	1,877	-	-
Changes due to sale or transfer prices of future production costs	(4,465)	(67)	4	(65)	(942)	(847)	(2,251)	(286)	(11)
Changes in future development costs	210	(7)	7	113	78	(33)	52	-	-
Oil and gas sales and transfers in the period	(2,032)	(82)	(4)	(129)	(852)	(485)	(91)	(405)	16
Net changes due to extensions, discoveries and improvements in the recovery of reserves	460	-	-	-	324	136	-	-	-
Net changes due to purchases/sales of assets	5,204	163	-	-	1,729	920	190	2,239	(37)
Net changes due to revisions in quantity estimates	340	12	(33)	(31)	231	288	(174)	47	-
Previously estimated development costs incurred in the year	1,270	104	17	62	474	336	153	122	2
Effect of discounting to a different date and exchange rate effect	1,084	6	11	170	296	180	386	35	-
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	1,618	(339)	(11)	(19)	309	101	1,471	107	(1)
Net change	3,689	(210)	(9)	101	1,647	596	(264)	1,859	(31)
Balance at December 31st, 2015	8,695	(140)	38	874	3,016	1,466	1,613	1,859	(31)
Changes due to sale or transfer prices of future production costs	(352)	71	(6)	69	(255)	(261)	(83)	113	-
Changes in future development costs	(477)	(162)	(2)	161	(105)	(50)	(192)	(140)	13
Oil and gas sales and transfers in the period	(1,273)	(41)	(12)	(50)	(436)	(246)	(36)	(465)	13
Net changes due to extensions, discoveries and improvements in the recovery of reserves	642	-	-	311	198	120	-	13	-
Net changes due to purchases/sales of assets	(195)	5	-	-	21	23	-	(244)	-
Net changes due to revisions in quantity estimates	871	108	1	(90)	61	525	85	181	-
Previously estimated development costs incurred in the year	620	47	1	64	216	121	63	97	11
Effect of discounting to a different date and exchange rate effect	1,119	(18)	3	137	399	200	220	184	(6)
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	313	(49)	5	(146)	357	28	46	72	-
Net change	1,268	(39)	(10)	456	456	460	103	(189)	31
Balance at December 31st, 2016	9,963	(179)	28	1,330	3,472	1,926	1,716	1,670	-

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Millions of euros

	Total	Europe	Venezuela	Peru	United States	Rest of America	Africa	Asia	Oceania
Equity-accounted investees									
Balance at December 31st, 2013	3,493	-	1,234	-	-	2,063	-	196	-
Changes due to sale or transfer prices of future production costs	(529)	-	(148)	-	-	(403)	-	22	-
Changes in future development costs	(445)	-	(138)	-	-	(329)	-	22	-
Oil and gas sales and transfers in the period	(1,185)	-	(239)	-	-	(877)	-	(69)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves	143	-	-	-	-	143	-	-	-
Net changes due to purchases/sales of assets	(4)	-	-	-	-	(4)	-	-	-
Net changes due to revisions in quantity estimates	1,091	-	78	-	-	935	-	78	-
Previously estimated development costs incurred in the year	604	-	265	-	-	291	-	48	-
Effect of discounting to a different date and exchange rate effect	846	-	314	-	-	477	-	55	-
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	314	-	109	-	-	226	-	(21)	-
Net change	835	-	241	-	-	459	-	135	-
Balance at December 31st, 2014	4,328	-	1,475	-	-	2,522	-	331	-
Changes due to sale or transfer prices of future production costs	(2,120)	(236)	120	-	-	(1,843)	-	(161)	-
Changes in future development costs	304	-	111	-	-	201	-	(8)	-
Oil and gas sales and transfers in the period	(1,662)	25	(282)	-	-	(1,317)	-	(88)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves	-	-	-	-	-	-	-	-	-
Net changes due to purchases/sales of assets	(1,355)	(1,624)	-	-	-	269	-	-	-
Net changes due to revisions in quantity estimates	1,748	98	1,111	-	-	492	-	47	-
Previously estimated development costs incurred in the year	1,235	196	318	-	-	701	-	20	-
Effect of discounting to a different date and exchange rate effect	914	(29)	358	-	-	517	-	68	-
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	(208)	(40)	(724)	-	-	521	-	35	-
Net change	(1,144)	(1,610)	1,012	-	-	(459)	-	(87)	-
Balance at December 31st, 2015	3,185	(1,610)	2,487	-	-	2,064	-	244	-
Changes due to sale or transfer prices of future production costs	236	184	(84)	-	-	104	-	32	-
Changes in future development costs	(617)	(141)	(182)	-	-	(275)	-	(19)	-
Oil and gas sales and transfers in the period	(992)	85	(355)	-	-	(681)	-	(41)	-
Net changes due to extensions, discoveries and improvements in the recovery of reserves	579	-	-	-	-	579	-	-	-
Net changes due to purchases/sales of assets	-	-	-	-	-	-	-	-	-
Net changes due to revisions in quantity estimates	510	(8)	152	-	-	335	-	31	-
Previously estimated development costs incurred in the year	1,031	292	231	-	-	493	-	15	-
Effect of discounting to a different date and exchange rate effect	481	(160)	328	-	-	281	-	32	-
Other non-specific changes	-	-	-	-	-	-	-	-	-
Changes in income tax	(186)	(29)	31	-	-	(208)	-	20	-
Net change	1,042	223	121	-	-	628	-	70	-
Balance at December 31st, 2016	4,227	(1,387)	2,608	-	-	2,692	-	314	-
TOTAL	14,190	(1,566)	2,636	1,330	3,472	4,618	1,716	1,984	-