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

Auditor’s report,
Consolidated financial statements at 31 December 2020
Consolidated management report

This version of our report is a free translation of the original, which was prepared in Spanish. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Independent auditor's report on the consolidated financial statements

To the shareholders of Repsol, S.A.:

Report on the consolidated financial statements

Opinion

We have audited the consolidated financial statements of Repsol, S.A. (the Parent company) and investees comprising the Repsol Group (the Group), which comprise the balance sheet as at December 31, 2020, and the income statement, statement of other comprehensive income, statement of changes in equity, cash flow statement and related notes, all consolidated, for the year then ended.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the equity and financial position of the Group as at December 31, 2020, as well as its financial performance and cash flows, all consolidated, for the year then ended, in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS-EU) and other provisions of the financial reporting framework applicable in Spain.

Basis for opinion

We conducted our audit in accordance with legislation governing the audit practice in Spain. Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report.

We are independent of the Group in accordance with the ethical requirements, including those relating to independence, that are relevant to our audit of the consolidated annual accounts in Spain, in accordance with legislation governing the audit practice. In this regard, we have not rendered services other than those relating to the audit of the accounts, and situations or circumstances have not arisen that, in accordance with the provisions of the aforementioned legislation, have affected our necessary independence such that it has been compromised.

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

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

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Key audit matter	How our audit addressed the key audit matter
Assessment of the recovery of the carrying amount of the Group's assets in Upstream	
The accompanying consolidated financial statements present, at December 31 2020, intangible assets (including goodwill) and property, plant and equipment in the Upstream segment amounting to €2,133 million (note 11) and €9,108 million (note 12), respectively. These assets are allocated to cash generating units (CGUs) as indicated in notes 3.6 and 20 to the accompanying consolidated financial statements. Similarly, as indicated in note 13 to the accompanying consolidated financial statements, the Group has several investments in the Upstream segment carried under the equity method with a carrying amount at year-end 2020 of €5,448 million. The Group performs an analysis of impairment of the assets indicated by CGU on an annual basis, in accordance with the criteria described in notes 3.6 and 20, and determines their recoverable amount based on the present value of the future cash flows generated by them, taking into account the business plans approved by management. In this regard, as indicated in notes 2.3,3.6, 20 and 29, in view of the commodity market situation, the consequences of the COVID-19 pandemic, the foreseeable energy transition and the approval of the 2021-2025 Strategic Plan by the Board of Directors on November 25, 2020, which develops the Group's public commitment to fighting climate change and sets out the strategy to be followed to transform the Group and accelerate the energy transition driving decarbonisation in line with the UN's Paris Summit and Sustainable Development goals, management has reviewed its expectations of crude oil and gas prices and has modified the price paths defined at year-end 2019 in order to adapt them to the new scenario when testing for impairment.	We started our analysis by gaining an understanding on both the methodology applied and the relevant controls that the Group has in place to analyse asset recovery. In addition, we considered the adequacy of the allocation of assets to CGUs and the process for identifying those requiring an assessment of impairment, in accordance with applicable legislation. Moreover, we gained an understanding of the environment (price performance, presentation of results of other companies in the industry, analyst reports, etc.) in order to assess the new strategic priorities defined by the Group's Strategic Plan 2021-2025 for consistency with the real situation in the global hydrocarbon marketplace. With the collaboration of our valuation experts, we assessed the adequacy of the valuation models employed, the assumptions and estimates used in the calculations, including both short and long-term estimates of the evolution of hydrocarbon prices, the estimation of hydrocarbon reserves by internal and external experts, production profiles, operational costs, the necessary investments to develop existing reserves and discount rates. Specifically, with respect to future hydrocarbon prices, we compared management's estimates with the information published by investment banks, consultancy firms and relevant industry organisations and agencies.

Key audit matter	How our audit addressed the key audit matter
The key assumptions employed in estimating these cash flows for the purposes of analysing impairment are detailed in notes 3.6 and 20 to the accompanying consolidated financial statements. In addition, management has carried out a sensitivity analysis (note 20.2) on the key assumptions which, in light of earlier experience, may reasonably show variations. As a result of these analyses, Group management has recognised measurement adjustments, net of reversals, in the Upstream segment for the amounts indicated in note 20.1. This matter is key because it entails management applying critical judgements and significant estimates in terms of the key assumptions used (note 3.6), which are subject to uncertainty, while significant future changes in key assumptions could have a significant impact on the Group's consolidated financial statements.	Concerning the estimation of hydrocarbon reserves, we gained an understanding of the process established by the Group in this respect, which includes the use of management experts, and assessed the results of the work and competence, capacity and objectivity of these experts, in order to satisfy ourselves that they were properly qualified to calculate an estimate of volumes. In addition, we verified the consistency of the volumes estimated by management experts with the data used in determining the recoverable value of the assets. Similarly, we assessed the modelling tool used by the Group to perform their estimates, we checked the mathematical accuracy of the calculations and models prepared by management and verified the recoverable amount calculated by the Group with the carrying amount of the assets in order to assess the existence or otherwise of impairment or reversal of impairment, as appropriate. Also, we assessed the sensitivity calculations carried out by management. We assessed the sufficiency of the information disclosed in the consolidated financial statements with respect to the assessment of the recoverable amount of these assets. Based on the procedures carried out, we consider that management's approach and conclusions and the information disclosed in the accompanying consolidated financial statements are reasonable and consistent with the evidence obtained.

Key audit matter	How our ahudit addressed the key audit matter
Assessment of the recovery of the carrying amount of deferred tax assets	
As shown in the accompanying consolidated balance sheet, at December 31, 2020, the deferred tax asset balance amounts to €3,745 million, with, available tax loss carryforwards and deductions amounting to €3,122 million, according to note 22.3 to the accompanying consolidated financial statements. When assessing whether the amount recognised in the consolidated financial statements for these assets is recoverable, Group management factors in, as mentioned in notes 3.5, 3.6 and 22.3, future tax profits forecast using the methodology defined to analyse the recovery of its assets, the evaluation of the estimates of results of each entity or tax group in accordance with the Group's strategic plan, applicable tax legislation and the limit regarding the recoverability of such assets. As a result of the above analyses, Group management has reduced the amount of deferred tax assets recognised on the balance sheet by the amount indicated in notes 20.1 and 22.3. This is a key matter due to the nature and significance of the assets recognised and because it entails the use of significant estimates (notes 3.5 and 3.6) in terms of future tax profits, affecting the assessment of the recovery of these assets.	We started our analysis by gaining an understanding on both the methodology applied and the relevant controls that the Group has in place to analyse the recovery of these assets. We also verified the consistency of the assumptions employed by management in the financial projections used to determine future tax profits with the assumptions used in testing the Group's intangible assets and property, plant and equipment for impairment. Moreover, together with our tax experts, we assessed the estimate of corporate income tax, basically in relation to the appropriateness of the tax treatment of the operations performed and the calculations of deferred tax assets with respect to applicable tax legislation. We also assessed the sufficiency of the information disclosed in the consolidated financial statements concerning the measurement and recognition of these assets. Based on the work carried out, we consider that the assumptions and estimates employed by Group management with respect to the recovery of the assets analysed are reasonable and consistent with the evidence obtained.
Assessment of the recovery of the Group's assets in Venezuela	
As indicated in note 20.3 to the accompanying consolidated financial statements, the Group's asset exposure in Venezuela at December 31, 2020, amounts to €320 million. This amount mainly includes the financing in dollars granted by the Group to the joint ventures Cardon IV, S.A. and Petroquiriquire, S.A.(note 8.1) amounting to €341 million and the trade receivables with Petróleos de Venezuela, S.A. (PDVSA) amounting to €293 million that are presented as Other non-current assets (Note 14), less provisions for liabilities and charges amounting to €423 million (note 13).	Our analysis started with understanding the processes that the Group has in place to perform the analysis of the assets' value, including the relevant controls implemented. With the collaboration of our team in Venezuela, we gained an understanding of the country's political, social and economic situation.

Key audit matter	How our audit addressed the key audit matter
As detailed in note 20.3, the country's general situation is affected by an economic recession, a regulated exchange system, high levels of inflation and the constant devaluation of local currency, an oil sector characterised by major public sector intervention and involvement, with sharply declining output in the past few years, political instability, the state of economic emergency and international disciplinary measures, among others. Except in the case of Quiriquire Gas, S.A., whose carrying amount is zero, the functional currency of investments in Venezuela is the US dollar, as indicated in note 20.3 to the accompanying consolidated financial statements. Within the context described, the Group analysed the recovery of its investments in Venezuela and the credit risk associated with its accounts receivable with PDVSA and recognised impairment of €75 million in the consolidated income statement, as detailed in note 20.3. In order to determine the expected loss on the loans to the joint ventures and the accounts receivable with PDVSA, the Group hired an independent expert to validate management's judgements. This matter requires a high level of judgement and estimation (note 20.3) that management should make in order to assess the recovery of its assets in Venezuela and so has been considered a key audit matter.	With respect to the investment in Cardón IV, S.A., we assessed the competence and objectivity of the auditor of this component and obtained and assessed the communications issued by him, including his overall findings, conclusions and opinion. Additionally, we assessed the financial information of Petroquiriquire, S.A. that have been included in the Group's consolidated financial statements using the equity method. With respect to the analysis of impairment losses on non-current assets of the above companies, we carried out audit procedures like those described previously in the key audit matter section "Assessment of the recovery of the carrying amount of the Group's non-current assets in Upstream" In addition, we assessed the reasonableness of the provisions for liabilities and charges. In order to analyse the credit risk on the loans granted to the joint ventures and the accounts receivable with PDVSA, we carried out the following audit procedures, among others: • Obtaining and assessment of the loan contracts with Cardon IV, S.A. and Petroquiriquire, S.A.and other relevant contractual information. • Together with our experts in financial instruments, we analysed the reasonableness of the expected loss model prepared by management. • We analysed the information included in the report of the independent expert, engaged by the Group to assess management's judgements on Venezuela's credit risk and assessed the competence of this expert and his objectivity to satisfy ourselves that he was properly qualified to perform that engagement.

Key audit matter	How our audit addressed the key audit matter
	Finally, we assessed the sufficiency of the information disclosed in the consolidated financial statements concerning the situation in Venezuela, the Group's presence in the country and the assumptions underpinning the measurement of these assets. Based on the work carried out, we consider that the assumptions and estimates employed by Group management with respect to the recovery of the assets analysed are reasonable and consistent with the evidence obtained
Analysis of the effects of the partial arbitration award in relation to the acquisition of Talisman Energy UK Limited (TSEUK), currently Repsol Sinopec Resources UK Limited (RSRUK) As mentioned in note 15 to the accompanying consolidated financial statements, Addax Petroleum UK Limited (Addax) and Sinopec International Petroleum Exploration and Production Corporation (Sinopec) filed a "Notice of arbitration" against Talisman Energy Inc. (currently "Repsol Oil & Gas Canada Inc. – ROGCI) and Talisman Colombia Holdco Limited (TCHL) in relation to the acquisition of 49% of the shares of TSEUK in 2012 by Addax and Sinopec. This transaction took place before the acquisition of the Talisman group by Repsol in 2015. On 29 January 2020 the Arbitration Court of Singapore issued a partial arbitration award, deciding that ROGCI and TCHL are liable vis-á-vis Sinopec and Addax for certain information and representations provided during the aforementioned acquisition process. The partial award issued addresses one of the five issued to be settled with respect to the liability phase of the established procedure. The Court has signalled that it will decide on the other issues through subsequent awards although it is currently unknown when these will be issued. Once a decision has been taken on all issues, a new procedural phase will be necessary in order to determine the amounts involved, no timeline having yet been established. Repsol Group management considers that the final award will not be issued before the first quarter of 2022, time when the amount of the indemnity to be settled will be established.	Our audit procedures relating to this matter included the following, among others: • Meetings and discussions with Group management to understand their analysis and assessment of the risks underlying the arbitration award. • Obtaining the assessment of the Group's external lawyers concerning the classification of the risks identified for the Repsol Group in the award received and their implications. • With the collaboration of our legal experts, we analysed the award documentation and assessed whether the risks identified therein by internal and external lawyers agree with its content. • Understanding and assessing the methodology applied by the Group in order to quantify the risks deriving from its analysis of the arbitration award and verifying whether the risks quantified by the Group agree with those resulting from the award received. • Checking the estimates made with the documentation included in the arbitration award and verifying the mathematical accuracy of the calculations prepared by management.

Key audit matter	How our audit addressed the key audit matter
On 28 April 2020 Repsol contested the partial award with the courts of Singapore and the appeal for annulment is expected to be resolved in the second quarter of 2021. Under these circumstances, and in view of this first partial award and the information currently available, Repsol Group management estimated the economic impacts that could finally result from the dispute as a whole and established the relevant provision as indicated in note 15. This is a key matter as it entails management applying critical judgements and significant estimates (notes 3.5 and 15.2) in the calculations made, which are subject to uncertainty, and because changes in the evolution of such arbitration could have a significant impact on the Group's consolidated financial statements	Finally, we considered the sufficiency and adequacy of the information disclosed in the consolidated financial statements concerning this matter. Based on the procedures carried out, we consider that management's approach and conclusions and the information disclosed in the accompanying consolidated financial statements are consistent with the available evidence.

Other information: Consolidated management report

Other information comprises only the consolidated management report for the 2020 financial year, the formulation of which is the responsibility of the Parent company's directors and does not form an integral part of the consolidated annual accounts.

Our audit opinion on the consolidated annual accounts does not cover the consolidated management report. Our responsibility regarding the consolidated management report, in accordance with legislation governing the audit practice, is to:

a) Verify only that the consolidated statement of non-financial information and certain information included in the Annual Corporate Governance Report, as referred to in the Auditing Act, has been provided in the manner required by applicable legislation and, if not, we are obliged to disclose that fact.

b) Evaluate and report on the consistency between the rest of the information included in the consolidated management report and the consolidated annual accounts as a result of our knowledge of the Group obtained during the audit of the aforementioned financial statements, as well as to evaluate and report on whether the content and presentation of this part of the consolidated management report is in accordance with applicable regulations. If, based on the work we have performed, we conclude that material misstatements exist, we are required to report that fact.

On the basis of the work performed, as described above, we have verified that the information mentioned in section a) above has been provided in the manner required by applicable legislation and that the rest of the information contained in the consolidated management report is consistent with that contained in the consolidated annual accounts for the 2020 financial year, and its content and presentation are in accordance with applicable regulations.

Responsibility of the directors and the audit and control committee for the consolidated financial statements

The Parent company's directors are responsible for the preparation of the accompanying consolidated financial statements, such that they fairly present the consolidated equity, financial position and financial performance of the Group, in accordance with International Financial Reporting Standards as adopted by the European Union and other provisions of the financial reporting framework applicable to the Group in Spain, 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.

In preparing the consolidated financial statements, the Parent company's directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

The Parent company's audit and control committee is responsible for overseeing the process of preparation and presentation of the consolidated financial statements.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with legislation governing the audit practice in Spain will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with legislation governing the audit practice in Spain, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit 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 Group's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Parent company's directors.

- Conclude on the appropriateness of the Parent company's directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Parent company's audit and control committee regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Parent company's audit and control committee with a statement that we have complied with relevant ethical requirements, including those relating to independence, and we communicate with the audit and control committee those matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Parent company's audit and control committee, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters.

We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Report on other legal and regulatory requirements

Single European Electronic Format

We have examined the digital files of the European single electronic format (ESEF) of Repsol, S.A. and investees comprising the Repsol Group for the 2020 financial year that comprise an XHTML file which includes the consolidated annual accounts for the financial year and XBRL files with tagging performed by the entity, which will form part of the annual financial report.

The directors of Repsol, S.A. are responsible for presenting the annual financial report for the 2020 financial year in accordance with the formatting and markup requirements established in the Delegated Regulation (EU) 2019/815 of 17 December 2018 of the European Commission (hereinafter the ESEF Regulation).

Our responsibility is to examine the digital files prepared by the Parent company's directors, in accordance with legislation governing the audit practice in Spain. This legislation requires that we plan and execute our audit procedures in order to verify whether the content of the consolidated annual accounts included in the aforementioned digital files completely agrees with that of the consolidated annual accounts that we have audited, and whether the format and markup of these accounts and of the aforementioned files has been effected, in all material respects, in accordance with the requirements established in the ESEF Regulation.

In our opinion, the digital files examined completely agree with the audited consolidated annual accounts, and these are presented and have been marked up, in all material respects, in accordance with the requirements established in the ESEF Regulation.

Report to the Parent company's audit and control committee

The opinion expressed in this report is consistent with the content of our additional report to the Parent company's audit and control committee dated February 18, 2021.

Appointment period

The General Ordinary Shareholders' Meeting held on May 19, 2017, appointed PricewaterhouseCoopers Auditores, S.L. as auditors of the Group for a period of three years, as from the year ended December 31, 2018.

Services provided

Services provided to the audited Group for services other than the audit of the accounts are disclosed in note 32.2 to the consolidated financial statements.

PricewaterhouseCoopers Auditores, S.L. (S0242)

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February 18, 2021

REPSOL Group

Consolidated financial statements

2020

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

REPSOL

Repsol, S.A. and Investees comprising the Repsol Group
Balance sheet at December 31, 2020 and 2019

		€ Million	
ASSETS	Note	**12/31/2020**	**12/31/2019**
Intangible assets	11	3,353	4,470
Property, plant and equipment	12	20,927	23,145
Investments accounted for using the equity method	13	5,897	7,237
Non-current financial assets	8	916	1,125
Deferred tax assets	22	3,745	4,050
Other non-current assets	14	880	1,381
NON-CURRENT ASSETS		**35,718**	**41,408**
Non-current assets held for sale		5	5
Inventories	16	3,379	4,597
Trade and other receivables	17	4,056	5,911
Other current assets		239	195
Other current financial assets	8	1,584	2,800
Cash and cash equivalents	8	4,321	2,979
CURRENT ASSETS		**13,584**	**16,487**
TOTAL ASSETS		**49,302**	**57,895**

		€ Million	
EQUITY AND LIABILITIES	Note	**12/31/2020**	**12/31/2019[1]**
Shareholders' equity		21,185	24,335
Other cumulative comprehensive income		(890)	593
Non-controlling interests		244	281
EQUITY	6	**20,539**	**25,209**
Non-current provisions	15	3,572	3,912
Non-current financial liabilities	7	12,123	10,929
Deferred tax liabilities and other tax items	22	2,142	2,375
Other non-current liabilities		407	385
NON-CURRENT LIABILITIES		**18,244**	**17,601**
Current provisions	15	740	865
Current financial liabilities	7	3,880	6,538
Trade and other payables	18	5,899	7,682
CURRENT LIABILITIES		**10,519**	**15,085**
TOTAL EQUITY AND LIABILITIES		**49,302**	**57,895**

Repsol, S.A. and Investees comprising the Repsol Group
Income statement for the years ending December 31, 2020 and 2019

	Note	2020 (€ Million)	2019 (€ Million)
Sales		32,956	49,006
Income from services rendered and other income		326	322
Changes in inventories of finished goods and work in progress		(624)	11
Other operating income		985	725
Procurements		(24,835)	(36,803)
Amortization and depreciation of non-current assets		(2,207)	(2,434)
(Provision for)/Reversal of impairment provisions		(2,159)	(5,322)
Personnel expenses		(1,845)	(1,946)
Transport and freights		(1,272)	(1,314)
Supplies		(556)	(888)
Gains/(Losses) on disposal of assets		102	147
Other operating expenses		(3,425)	(4,755)
OPERATING INCOME / (LOSS)	19	**(2,554)**	**(3,251)**
Net interest		(244)	(243)
Change in fair value of financial instruments		(148)	216
Exchange gains/(losses)		406	(27)
Impairment of financial instruments		57	6
Other financial income and expenses		(212)	(253)
FINANCIAL RESULT	21	(141)	(301)
NET INCOME FROM INVESTMENTS ACCOUNTED FOR USING THE EQUITY METHOD	13	(609)	351
NET INCOME / (LOSS) BEFORE TAX		**(3,304)**	**(3,201)**
Income tax	22	(16)	(588)
CONSOLIDATED NET INCOME / (LOSS) FOR THE PERIOD		**(3,320)**	**(3,789)**
NET INCOME / (LOSS) ATTRIBUTABLE TO NON-CONTROLLING INTERESTS		31	(27)
NET INCOME / (LOSS) ATTRIBUTABLE TO THE PARENT		**(3,289)**	**(3,816)**

	Note	Euros / share	
EARNINGS PER SHARE ATTRIBUTABLE TO THE PARENT	23		
Basic		(2.13)	(2.33)
Diluted		(2.13)	(2.33)

[(1)] Net of taxes.

Repsol, S.A. and investees comprising the Repsol Group
Statement of recognized profit or loss corresponding to the years ending December 31, 2020 and 2019

	€ Million	
	2020	**2019**
CONSOLIDATED NET INCOME / (LOSS) FOR THE PERIOD	**(3,320)**	**(3,789)**
Due to actuarial gains and losses	(9)	(5)
Investments accounted for using the equity method	(11)	(3)
Equity instruments with changes through other comprehensive income	(27)	14
Tax effect	—	1
OTHER COMPREHENSIVE INCOME / (LOSS). ITEMS NOT RECLASSIFIABLE TO NET INCOME / (LOSS)	(47)	7
Cash flow hedging:	**58**	**1**
Valuation gains / (losses)	78	(55)
Amounts transferred to the income statement	(20)	56
Translation differences:	**(1,482)**	**406**
Valuation gains / (losses)	(1,445)	431
Amounts transferred to the income statement	(37)	(25)
Tax effect	**(35)**	**12**
OTHER COMPREHENSIVE INCOME / (LOSS). ITEMS RECLASSIFIABLE TO NET INCOME	(1,459)	419
TOTAL OTHER COMPREHENSIVE INCOME / (LOSS)	**(1,506)**	**426**
TOTAL COMPREHENSIVE INCOME / (LOSS) FOR THE PERIOD	**(4,826)**	**(3,363)**
a) Attributable to the parent	(4,792)	(3,391)
b) Attributable to non-controlling interests	(34)	28

Repsol S.A. and Investees comprising the Repsol Group
Statement of changes in equity corresponding to the years ending December 31, 2020 and 2019

	Equity attributable to the parent and other equity instrument holders							
	Shareholders' equity							
€ Million	Share capital	Share premium and reserves	Treasury shares and own equity investments	Net income for the period attributable to the parent	Other equity instruments	Other cumulative comprehensive income	Non-controlling interests	Equity
Closing balance at 12/31/2018	**1,559**	**25,894**	**(350)**	**2,341**	**1,024**	**160**	**286**	**30,914**
Impact of new standards	—	(162)	—	—	—	—	—	(162)
Adjusted opening balance	**1,559**	**25,732**	**(350)**	**2,341**	**1,024**	**160**	**286**	**30,752**
Total recognized income/(expenses)	**—**	**(7)**	**—**	**(3,816)**	**—**	**432**	**28**	**(3,363)**
Transactions with partners or owners								—
Share capital increase/(reduction)	78	(78)	—	—	—	—	—	—
Dividends and shareholder remuneration	—	(330)	—	—	—	—	(7)	(337)
Transactions with treasury shares and own equity investments (net)	(71)	(932)	(820)	—	—	—	—	(1,823)
Increases/(reductions) due to changes in scope	—	21	—	—	—	4	(25)	—
Other equity variations								—
Transfers between equity-line items	—	2,341	—	(2,341)	—	—	—	—
Subordinated perpetual obligations	—	(29)	—	—	—	—	—	(29)
Other variations	—	13	—	—	—	(3)	(1)	9
Closing balance at 12/31/2019	**1,566**	**26,731**	**(1,170)**	**(3,816)**	**1,024**	**593**	**281**	**25,209**
Total recognized income/(expenses)	—	(20)	—	(3,289)	—	(1,483)	(34)	(4,826)
Transactions with partners or owners								
Share capital increase/(reduction)	101	(101)	—	—	—	—	—	—
Dividends and shareholder remuneration	—	(338)	—	—	—	—	(1)	(339)
Transactions with treasury shares and own equity investments (net)	(99)	(1,267)	1,008	—	—	—	—	(358)
Other equity variations								
Transfers between equity-line items	—	(3,816)	—	3,816	—	—	—	—
Subordinated perpetual obligations	—	(54)	—	—	907	—	—	853
Other variations	—	(3)	—	—	5	—	(2)	—
Closing balance at 12/31/2020	**1,568**	**21,132**	**(162)**	**(3,289)**	**1,936**	**(890)**	**244**	**20,539**

Repsol S.A. and Investees comprising the Repsol Group
Statement of cash flows corresponding to the years ending December 31, 2020 and 2019

	Note	2020 (€ Million)	2019 (€ Million)
Income before tax		**(3,304)**	**(3,201)**
Adjustments to income:		**5,074**	**8,632**
Amortization of non-current assets	11 and 12	2,207	2,434
Other (net)		2,867	6,198
Changes in working capital		**1,000**	**137**
Other cash flows from operating activities:		**(32)**	**(719)**
Dividends received		183	464
Income tax refunded/(paid)		100	(975)
Other proceeds from/(payments for) operating activities		(315)	(208)
CASH FLOWS FROM OPERATING ACTIVITIES	24	**2,738**	**4,849**
Payments for investments:	12 and 13	**(3,368)**	**(6,390)**
Group companies and associates		(132)	(107)
Property, plant and equipment, intangible assets and investment property		(1,886)	(3,227)
Other financial assets		(1,350)	(3,056)
Proceeds from divestments:		**3,538**	**1,895**
Group companies and associates		1,010	17
Property, plant and equipment, intangible assets and investment property		104	133
Other financial assets		2,424	1,745
Other cash flows from investing activities		**52**	**88**
CASH FLOWS FROM INVESTING ACTIVITIES	24	**222**	**(4,407)**
Proceeds from and (payments for) equity instruments:	6	**508**	**(1,844)**
Issue		1,491	—
Return and redemption		(605)	—
Acquisition		(766)	(1,911)
Disposal		388	67
Proceeds from and (payments for) financial liability instruments:	7	**(1,206)**	**412**
Issuance		10,163	13,213
Repayment and redemption		(11,369)	(12,801)
Payments on shareholder remuneration and other equity instruments	6	**(346)**	**(396)**
Other cash flows from financing activities:		**(571)**	**(461)**
Interest payments		(417)	(467)
Other proceeds from/(payments for) financing activities		(154)	6
CASH FLOWS FROM FINANCING ACTIVITIES	24	**(1,615)**	**(2,289)**
EXCHANGE RATE FLUCTUATIONS EFFECT		**(3)**	**40**
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	24	**1,342**	**(1,807)**
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**2,979**	**4,786**
CASH AND CASH EQUIVALENTS AT END OF PERIOD:	8	**4,321**	**2,979**
Cash and banks		2,234	2,370
Other financial assets		2,087	609

Repsol S.A. and Investees comprising the Repsol Group
NOTES TO THE 2019 FINANCIAL STATEMENTS

NOTES

[1] The Appendices form an integral part of the consolidated Financial Statements.

GENERAL INFORMATION

(1) About these Financial Statements

These 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, 2020, as well as the Group's earnings performance, the changes in the consolidated equity and the consolidated cash flows for the year then ended.

They are presented in accordance with the International Financial Reporting Standards (IFRSs) as issued by the International Accounting Standards Board (IASB), adopted by the European Union (EU) as of December 31, 2020, and other provisions of the applicable regulatory framework. Their preparation makes it necessary to use accounting estimates and judgments when applying the accounting standards. The areas in which most significant judgements and estimates have to be made are detailed in Note 3.

These Financial Statements include information relating to climate change, prepared following the recommendations of the Task Force on Climate-related Financial Disclosure (TCFD), which Repsol has voluntarily joined (see Note 29), in line with its commitment to the objectives of the Paris Climate Summit and Sustainable Development Goals of the United Nations.

The preparation of the consolidated Financial Statements is the responsibility of the directors of Repsol, S.A., the parent company of the Group. They were authorized for issue by the Board of Directors of Repsol, S.A. at its meeting held on February 17, 2021 and they will be submitted for approval at the Annual General Meeting; it is expected that they will be approved without any modifications. The 2019 consolidated Financial Statements were approved at Repsol's Annual General Meeting held on May 8, 2020.

The Group's Management Report, which includes financial and non-financial information and, in particular, sustainability information, is published together with the consolidated Financial Statements. This integrated Management Report can be found on the Repsol website[1].

(2) About Repsol

2.1) Repsol Group

Repsol is a group of companies with a presence worldwide (hereinafter *"Repsol"*, *"Company"*, *"Repsol Group"* or *"Group"*) that, with a vision of being a multi-energy efficient, sustainable and competitive company, performs activities in the hydrocarbon sector throughout its entire value chain (exploration, development and production of crude oil and natural gas, refining, production, transportation and sale of a wide range of oil and petrochemical products, oil derivatives and natural gas), as well as activities for the generation and sale of electricity[2]. The Group comprises more than 300 companies, subsidiaries, joint arrangements and associates incorporated in more than 40 countries (mainly in Spain, Canada, the United States, and the Netherlands) that, from time to time, carry out activities abroad through branches, permanent establishments, etc. The Group's main companies and the summarized corporate organization chart are presented in section 4.4 of the 2020 Management Report. For detailed information, see Appendix IA to these Financial Statements.

The Group operates in several business segments, the definition of which was revised in the period: Exploration and Production, Industrial, and Commercial and Renewables (see Note 4), the main metrics of which are summarized below:

	Income from ordinary activities (1)		Operating Income		Adjusted net income		Capital employed	
€Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Upstream	3,047	5,270	351	1,969	195	1,050	12,608	17,205
Industrial	15,556	22,915	369	1,189	297	913	9,755	10,717
Commercial and Renewables	16,359	23,847	650	738	485	541	4,061	3,361
Corporate	1	1	(235)	(235)	(377)	(462)	893	2,009
TOTAL	**34,963**	**52,033**	**1,135**	**3,661**	**600**	**2,042**	**27,317**	**33,292**

Note: Figures calculated in accordance with the Group's reporting model described in Note 4 and Appendix II.
(1) See Note 19.1 and Appendix II.

[1] In addition, Repsol has published "Information on oil and gas exploration and production activities" and the "Report on payments to governments on oil and gas exploration and production activities". All these reports are available on the Repsol website.
[2] For further information, see section 4.1 Value chain and business segments of the 2020 Management Report.

With regard to the changes in the composition of the Group in 2020, the acquisition of new assets related to the energy transition is worthy of note, including renewable electricity generation projects in Chile (agreement with the Ibereólica Group to carry out a portfolio of renewable energy projects in Chile, both wind and solar power projects in varying stages of completion, which total 2.6 GW). Accordingly, in November 2019, the 63% interest of its partner, Equinor, in the non-conventional production asset of Eagle Ford was acquired for $352 million.

In 2020, Repsol's corporate structure was adjusted in order to bring it into line with the new definition and objectives of the business segments established in the 2021-2025 Strategic Plan. The Group's subsidiaries operating in each of the businesses have been grouped together under sub-holding entities (Customer, Industrial, Low-Carbon Generation and Upstream), which will enable more flexible and differentiated management and financing of the various businesses and facilitate the construction and transformation of the businesses in accordance with the objectives of the Strategic Plan against the backdrop of the energy transition. This reorganization did not have any significant impact on the Group's financial statements.

For further information on changes in the Group's composition, see Appendix IA and IB.

2.2) Parent company

The parent company of the Group is Repsol, S.A. It is registered at the Madrid Companies Register on 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.

Repsol, S.A. is a private-law entity, incorporated in accordance with Spanish law, which is subject to the Spanish Companies Act (*Ley de Sociedades de Capital*), and all other legislation related to listed companies.

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

The shares of Repsol, S.A. are represented by book entries and listed on the continuous market of the Spanish stock exchanges (Madrid, Barcelona, Bilbao and Valencia). The Company also has an ADS (American Depositary Shares) Program, which is quoted on the OTCQX market (a platform in the US over-the-counter markets that differentiates those issuers with better market information policies and solid business activities).

2.3) Main new developments in the year[3]

COVID-19 and 2020 Resilience Plan

On March 11, 2020, the World Health Organization raised to the status of global pandemic the public health emergency caused by SARS-CoV-2 virus (commonly known as coronavirus, while COVID-19 denotes the disease caused by the virus). The rapid spread of COVID-19, on an international scale, has triggered an unprecedented healthcare, social and economic crisis that continues to evolve.

The economic impact of the pandemic, combined with pre-existing complications on the supply and demand side, has resulted in an exceptionally challenging pricing environment for oil and gas. At the beginning of the year, most analysts expected to see an oil market with a tighter balance between supply and demand than in 2019. However, the pandemic has triggered an abrupt drop in the global consumption of oil, gas and other energy products following the mobility restrictions deployed around the world to contain the spread of the disease and its impact on the economy. In early March 2020, OPEC+ members failed to reach an agreement to make further cuts in oil production to counteract the decline in demand. In these circumstances, there came about the largest collapse in decades in crude oil and gas prices, which fell as low as $20/bbl Brent and $1.7/MBtu Henry Hub. However, economic activity gradually recovered throughout the second quarter - in different countries and to different degrees. Coupled with the agreements finally reached by producing countries to limit oil output, this rebalanced supply and demand in the market and aided a recovery of oil prices. For further information on the performance of crude oil and gas prices and their expected future development, see sections 5 and 9 of the 2020 Management Report.

Even amid these difficult circumstances, Repsol has sustained the safe operation of its businesses, most of which are officially considered essential or strategic activities in the countries where we are present.

The overall decline in business volume and the deterioration of economic conditions as a result of the pandemic have affected the activities and results of the Company's businesses, as explained in detail in sections 2 and 6.1. of the 2020 Management Report.

[3] For a complete description of the main events during the period, see section 1 *Highlights of 2020* in the 2020 Consolidated Management Report.

In March, the Board of Directors of Repsol assessed the context and the foreseeable evolution of the economic situation, particularly the global impact of COVID-19, the downturn in oil and gas market prices and their impact on the Company's businesses and activities. The Board adopted the "2020 Resilience Plan", taking into account a very demanding macroeconomic environment for the rest of the year, which led to reductions of more than €350 million in Opex and more than €1 billion in Capex, compared with the metrics in our initial budget.

The Company's financial goal was to preserve a robust balance sheet and investment grade credit rating and not increase net debt in 2020 compared to year-end 2019, and to maintain the shareholder remuneration commitment for 2020 under the previous Strategic Plan.

For further information on the 2020 Resilience Plan, see section 2 of the 2020 Management Report.

Against this backdrop of uncertainty and marked by the emergence from the COVID-19 crisis, the oil and gas price expectations used to calculate the recoverable amount of the assets were revised downward. This had an impact on their carrying amount of €-2,774 million after tax in the Exploration and Production segment (see Note 20), with no significant impact on the Industrial or the Commercial and Renewables segments.

It is difficult to predict to what extent and for how long the impact of the pandemic will affect Repsol's businesses in the future. The lower global demand for crude oil, gas and oil products as a result of the reduction in economic activity and, in particular, the restrictions to mobility, may have a negative impact on prices, production levels and sales volumes; the deterioration of global financial conditions may affect the cost of capital, liquidity or solvency of our customers and partners in joint operations, and so on. The pandemic's evolution, the availability and effectiveness of vaccines, the control measures that health authorities may take and the financial and fiscal policies that may be adopted to mitigate the economic and social impact of the crisis might influence both the scope and the length of both the crisis and its subsequent recovery.

2021-2025 Strategic Plan

In November, Repsol presented its Strategic Plan for the 2021-2025 period (the Plan), which will set the Company's transformation in the coming years and will involve accelerating the energy transition, prioritizing profitable growth and maximum value for shareholders, with a significant increase in cash generation and financial discipline.

The Plan commits to the decarbonization of the asset portfolio and a new operating model, establishing a demanding roadmap, with more ambitious intermediate targets for emissions reduction than the December 2019 commitment, in order to continue to successfully advance towards the goal of net zero emissions by 2050.

Repsol will develop its organization by rolling out four business areas (Upstream, Industrial, Customer and Low-emission generation), with planned investments in low carbon initiatives amounting to €5,500 million (30% of the total) in the period.

Shareholder remuneration will combine a cash payment with share repurchases. The remuneration of €0.60 per share will increase to €0,75 per share in the Plan period (including share repurchases, it will reach at least €1 per share in 2025). Considering the price scenarios included in the Strategic Plan, cash will be generated to cover investments, compensate shareholders and end the Plan with a level of debt similar to that of 2020.

For more information, see section 3 "New Strategic Plan" of the 2020 Management Report.

Other events in the period:

- During the year, the Group strengthened its **financial and liquidity position** by issuing three senior bonds for a total amount of €2,350 million in April and October (see Note 7.2), issuing perpetual subordinated bonds for an amount of €1,500 million in June (see Note 6.4), and contracting an additional amount of €1,605 million in unused committed structural credit facilities (see Note 10.2). In addition, bonds with a nominal amount of €1,800 million were cancelled at maturity and €594 million of the perpetual subordinated bond issued in 2015 were repurchased (see Note 6.4). Furthermore, during the year Standard & Poor's, Moody's and Fitch confirmed Repsol's **investment grade rating**. For further information, see section 6.3. of the 2020 Management Report.

- In fulfilling the commitment made under the Resilience Plan, Repsol has offered **shareholder remuneration** equal to €0.916/share in the form of a scrip dividend through the "Repsol Flexible Dividend" program. In addition, a capital reduction was carried out through the redemption of treasury shares aimed at offsetting the dilutive effect of the bonus share issues executed in 2020 under the framework of this program. For further information, see Note 6.3.

– The Company has continued to **move forward with its commitment to be net zero emissions by 2050** and to lead the energy transition. In this regard, the most representative milestones are two innovative industrial decarbonization projects in Petronor (new synthetic fuel plants with net zero emissions from renewable hydrogen and gas generation from urban waste) and another in Cartagena with the construction of the first advanced biofuel plant in Spain. In addition, it has continued to pursue renewable projects with the commencement of work on the solar power plants in Ciudad Real and Badajoz, the acquisition and connection to the grid of renewable assets for the wind power projects located in Aragon, and the closing of the agreement with the Ibereólica Renovables Group in Chile. For more information, see section 7.3.4 of the 2020 Management Report.

(3) Criteria for the preparation of these Financial Statements

3.1) General principles

The consolidated Financial Statements 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), adopted by the European Union (EU) as of December 31, 2020, and other provisions of the applicable regulatory framework.

Repsol prepares its consolidated financial statements including the investments in all its subsidiaries, joint arrangements and associates, whose accounting standards have been unified with those of the parent in order to present consolidated financial statements by applying uniform accounting policies.

The consolidated Financial Statements are presented in millions of euros, which is also the functional currency of the parent company.

3.2) Comparative information

The new developments in the accounting standards applied by the Group as of January 1, 2020[4] did not have a significant impact given their nature and scope.

Restatement of earnings per share

In accordance with accounting standards, earnings per share at December 31, 2020 have been restated with respect to the information published in the consolidated financial statements for 2019, as the average number of outstanding shares considered in the calculation should take account of the new number of shares issued after the capital increase carried out as part of the "*Repsol Flexible Dividend*" shareholder remuneration program described in Note 6.3.

[4] The following standards were applied as of January 1, 2020 without any significant impact on the Group's financial statements: i) Amendments to IAS 1 and IAS 8 - *Definition of material*; ii) Amendments to References to the Conceptual Framework for Financial Reporting; and iii) Amendments to IFRS 3 - *Definition of a business*. The Amendments to IFRS 16 - COVID-19-*Related Rent Concessions* were applied as of June 1, 2020. The Amendments to IFRS 9, IAS 39 and IFRS 7 - *Interest rate benchmark reform (Phase 1)*, which were mandatory as of January 1, 2020, were applied early in 2019.

3.3) New standards issued for mandatory application in future years

The standards and amendments to standards issued by the IASB that will be mandatory in future reporting periods are listed below:

Standards and amendments to standards	Date of first application
Adopted by the European Union	
Amendments to IFRS 4 - *Deferral of effective date of IFRS 9*	January 1, 2021
Amendments to IAS 39, IFRS 4, IFRS 7, IFRS 9 and IFRS 16 - *Interest rate benchmark reform (Phase 2)*	January 1, 2021
Pending adoption by the European Union	
Amendments to IFRS 3 - *Amendments to References to the Conceptual Framework for Financial Reporting*	January 1, 2022
Amendments to IAS 16 - *Proceeds before intended use*	January 1, 2022
Amendments to IAS 37 - *Onerous contracts: Cost of fulfilling a contract*	January 1, 2022
Annual improvements to IFRSs: 2018-2020	January 1, 2022
IFRS 17 - *Insurance contracts*	January 1, 2023
Amendments to IAS 1 - *Classification of liabilities as current or non-current*	January 1, 2023
Amendments to IFRS 17 - *Insurance contracts*	January 1, 2023
Amendments to IAS 1 - *Disclosure of Accounting Policies*	January 1, 2023
Amendments to IAS 8 - *Definition of Accounting Estimates*	January 1, 2023
Amendments to IFRS 10 and IAS 28 - *Sale or contribution of assets between an investor and its associate or joint venture*	Undefined

The Group is currently assessing the potential impacts the application of these standards may have on the consolidated financial statements, without any material impacts having been identified to date.

3.4) Basis of consolidation and accounting policies

Repsol classifies investments as subsidiaries, joint arrangements and associates based on the control exercised over them:

i. subsidiaries: those over which Repsol exercises direct or indirect control and are fully consolidated;

ii. joint ventures: those in which strategic operational and financial decisions require the unanimous consent of the parties sharing control (joint control) and are classified as i) joint operations arranged through a Joint Operating Agreement (JOA) or similar vehicle and whose interests are held by the Group through its ownership interest in subsidiaries that are fully consolidated, or ii) joint ventures (JVs) that are accounted for using the equity method.

   In the Oil & Gas industry, hydrocarbon exploration and production activities are usually carried out through collaboration or association with companies that qualify as joint arrangements that are set up through JOAs that are included in the financial statements of the partners on the basis of the interest in the assets, liabilities, income and expenses arising from the agreement or as joint ventures that are included in the financial statements of the partners using the equity method; and

iii. associates: interests over which it has significant influence, which do not require consent from Repsol in making strategic operational and financial decisions but over which it has the power to participate, and that are accounted for using the equity method.

The items included in these consolidated Financial Statements relating to the Group companies are measured using their functional currency, which is the currency of the main economic environment in which they operate; when this differs from the presentation currency, the conversion is carried out as stated below: i) the assets and liabilities in each of the balance sheets presented are translated applying the closing exchange rate on the balance sheet date, ii) income and expense items are translated applying the average cumulative exchange rate for the financial year in which the transactions were performed (however, the transaction-date exchange rate is used to translate significant transactions), and iii) any exchange differences arising as a result of the foregoing are recognized under "*Equity - Translation differences*".

Transactions in currencies other than the functional currency of a Group company 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 recognized under “*Financial result - Exchange gains/(losses)*”.

Lastly, it should be noted that the significant accounting policies and options are highlighted, in text boxes, throughout the notes to these Financial Statements, except for those specific to hydrocarbon exploration and production activities, which are described in section 3.7 of this note.

3.5) Accounting estimates and judgements

The preparation of financial statements in accordance with applicable accounting principles makes it necessary to make judgements and estimates that affect the recognition and valuation of assets and liabilities, income and expenses for the period, and the breakdown of the contingent assets and liabilities. The actual results could differ significantly depending on the estimates made.

The accounting policies and areas that require the highest degree of judgement and estimates in the preparation of these financial statements are: (i) crude oil and natural gas reserves (see Note 3.7); (ii) recoverable amount of assets (see Note 3.6 and Note 20); (iii) provisions for litigation, decommissioning and other contingencies (see Note 15); (iv) income tax, tax credits and contingencies, and deferred tax assets (see Note 22); (v) market value of derivative financial instruments (see Notes 7.6 and 9); (vi) expected loss on financial instruments (see Notes 10 and 20.3); and (vii) assessment of investments in Venezuela (see Notes 13 and 20.3).

3.6) Calculating the recoverable amount of the assets

Calculating the recoverable amount

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 after tax expected to derive from the operation of these assets.

The cash flow projections are based on the best available estimates of the income, expenses and investments of the different cash-generating units (CGUs)[5], whereby they use sector forecasts, prior results and the outlook for the performance of the business and development of the market:

- Macroeconomic variables are those used in the preparation of the budgets. The macroeconomic framework for the countries in which the Group operates takes into consideration variables such as inflation, GDP, exchange rate, etc. and is 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, natural gas, electricity and CO_2 price paths used for the impairment test are our own estimates, although they are consistent or in line with the view of prices established by the various international benchmark agencies, including the International Energy Agency (IEA). The paths are developed on the basis of available macroeconomic, financial and market information and the forecasts provided by analysts and they consider scenarios for the energy transition and decarbonization of the economy that are consistent with the commitments assumed to achieve the objectives of the Paris Climate Summit.

  In particular, crude oil and gas prices are calculated by analyzing key market variables and their foreseeable trend, including our own forecasts of the balance of supply and demand of energy and prices. The longer-term vision is also explained by monitoring other variables such as: the decline, the current CAPEX, the financial sustainability of companies in the sector to certain price environments, and the dynamics in OPEC countries in terms of fiscal sustainability. Econometric models of prices are made with all these elements, which are compared with both public and private external forecasts.

  i. To estimate near-term price trends, forecast reports produced by a selection of investment banks, macro consultants (Platts Analytics, IHS, Wood Mckenzie, Energy Aspects and Oxford Economics) and international benchmark agencies (the International Energy Agency (IEA) and the US Energy Information Administration (EIA)) are taken into account.

  ii. The sources that present a sufficiently detailed analysis of long-term forecasts are the benchmark agencies (International Energy Agency (IEA) and the US Energy Information Administration (EIA)), which also carry out detailed studies of supply, demand and price forecasts under different scenarios.

  In 2020, in view of the situation in the commodity markets and in particular the social and economic consequences of the COVID-19 pandemic and the foreseeable development of the energy transition, the Group reviewed its expectations of future oil and gas prices, modifying the price paths defined at the end of 2019 to bring them into line with the new scenario. Note 20.1 specifies the assumptions regarding future prices used to perform the annual impairment test, which have led to valuation adjustments to significant assets.

- The most relevant CO_2 price path for the Group in the impairment test corresponds to the prices of emission allowances under the current EU ETS mechanism. Specific assumptions have been used for other countries with CO_2

[5] Cash-generating unit: the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets..

emission allowances or taxes. Those expressed in the annual information published refer to the prices of emission allowances under in the current EU ETS mechanism.

Discount rates

Future cash flows are discounted to their present value at a specific rate for each CGU, determined based on the currency of its cash flows and the risks associated with them. The discount rate used by Repsol is the weighted average cost of capital employed after tax for each country and business. This rate seeks to reflect current market assessments with regard to the time value of money and the specific risks of the business. Therefore, the discount rate used takes into account the risk-free rate, the country risk, the currency in which the cash flows are generated, and the market, credit and business risk. For the sake of consistency, estimated future cash flows do not reflect the risks that have already been considered in the discount rate or vice versa. The discount rate used considers the average leverage of the sector over the last five years, as a reasonable approximation of the optimal capital structure, using comparable oil companies as a reference and their main components are as follows:

- The risk-free interest rate for cash flows in US dollars is the US 10-year government bond and for cash flows in euros it is the German 10-year sovereign bond;
- With regard to country risk, the following are used: (i) market quotations, such as the spread of sovereign bonds in euros or US dollars over debt issued by Germany (euros) or the US (USD), respectively, (ii) country risk estimates contained in the EMBI (Emerging Markets Bond Index) published by JP Morgan, and (iii) country risk estimates published by three external providers - Country Risk Rating (IHS Global Insight), International Country Risk Guide (PRS Group) and Business Monitor (Fitch Group) - all adjusted for specific risks of the business and/or asset;
- A different credit risk premium is used depending on the currency (EUR and USD); and
- Business risk premiums are specifically calculated on the basis of 5-year historical series from comparable companies, for the Upstream, Refining & Marketing, Chemical, Gas & Power, LPG and Renewables businesses.

Note 20.1 shows the discount rates used in the 2020 impairment test.

Hydrocarbon exploration and production assets

Valuations of the production assets of Exploration and Production (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 general principles applied to determine the variables that most affect the cash flows of this business are described below:

- Hydrocarbon sale prices. The main 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.
- Reserves, resources 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 (see "*Estimate of crude oil and gas reserves and resource*s" in the section below).
- Operating expenses and investments. These are calculated for the first year on the basis of the Group's annual budget and thereafter in accordance with the asset development programs.

Assets of the Industrial, and Commercial and Renewables businesses

Cash flows are estimated on the basis of the outlook for their key variables (demand for oil products, unit contribution margins, fixed investment costs required to maintain the level of activity), in accordance with the expectations reflected in the annual budget and in the strategic plans for each business, in line with the new scenario of energy transition and decarbonization of the economy. Cash inflows and outflows corresponding to future restructuring exercises or transformation investments to enhance the assets' performance are not considered. The main particular features of the most significant businesses are described as follows:

- With regard to Refining in Spain, projections were made up to 2040. Demand for oil products is estimated to fall significantly both globally (by about 30% from 2017 to 2040) and in Europe (by about 60% over the same period). In this scenario, less investments will be made in the refining sector, which will partly offset the effect of the drop in demand.
- Five-year projections are made in the Chemicals business, extrapolating for subsequent years the flow corresponding to the fifth year without applying a growth rate. Chemical products play an important role in facilitating the energy

transition and decarbonization, as they are present throughout the value chain of almost all industries. The use of chemical products and solutions can help address several of the challenges associated with the energy transition, and many low-carbon technologies depend on innovations in chemistry to be more efficient, affordable and scalable (e.g., materials for solar panels, vehicle weight reduction, insulation, food preservation, energy savings and efficiency).

- The cash flows for the Wholesale and Trading Gas businesses in North America are projected according to the term of the regasification and gas transportation contracts and were estimated in accordance with the following assumptions:

  i. Gas and LNG prices. The international benchmark prices used are: HH, Algonquin, JKM (Japan Korea Marker) and NBP (National Balancing Point), adjusted in accordance with references in the corresponding market if the prices do not reflect market circumstances.

  ii. Gas and LNG sales 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 in accordance with the annual budget and strategic plan. Margins factor in historical data, the price forecasts detailed in the previous point and the outlook for margins going forward.

- With regard to the Mobility business, projections were made up to 2030 and then a rate of decline is applied. The reduction in demand for fossil fuels will be slower in Spain (especially up until 2030) than that projected in the IEA's sustainable development scenarios for Europe (35% in 2030 and 60% in 2040), due to the characteristics of the vehicle fleet, differences in per capita income and the importance of heavy traffic (which represents more than 30% of demand), which is difficult to replace in the short term. As of 2030, the transition is expected to accelerate to match the levels expected in Europe.

- Projections have been made for electricity generation assets in accordance with the expected useful life of the plants.

Associates and joint ventures

The recoverability of the Group's investments in associates or joint ventures is assessed by comparing their recoverable amount with their carrying amount (see Note 13). The recoverable amount of an investment in an associate or joint venture is assessed individually, unless the associate or joint venture does not generate cash inflows that are largely independent of those from the Group's other assets or cash-generating unit.

In view of the foregoing, changes in the key assumptions used in calculating the recoverable amount of the assets may have a significant effect on the Group's results.

3.7) Policies, judgements and estimates relating to hydrocarbon exploration and production activities

Expenses and investments

Repsol recognizes hydrocarbon 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:

The costs of acquiring (including bonds, legal costs, etc.) new interests in areas with reserves, including those acquired in business combinations, are capitalized under *"Investments in areas with reserves"* in property, plant and equipment.

The costs of acquiring exploration permits and the geological and geophysical (G&G) costs incurred during the exploration phase are capitalized under "*Exploration permits*" in intangible assets. They are not amortized during the exploration and evaluation phase and they are tested for impairment at least once a year and, in any case, when there is an indication that they may have become impaired, in accordance with the indicators of IFRS 6 *Exploration for and evaluation of mineral resources*. Once the exploration and evaluation phase is over, if no economically viable reserves are found, the amounts capitalized are recognized as an expense in the income statement.

Exploratory drilling costs are capitalized under *"Investments in exploration"* in property, plant and equipment until it is determined whether reserves justifying their commercial development have been found. If no economically viable reserves are found, the capitalized drilling costs are recognized in the income statement. In the event that reserves are found, but remain under evaluation for their classification as proved, their recognition depends on the following:

a. If additional investments are required prior to the start of production, they continue to be capitalized 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 made, 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 met, they are treated as impaired, and are expensed in the income statement.

b. In all other cases, if there is no commitment to carry out significant activities to evaluate the reserves or develop the project within a reasonable period after well drilling has been completed, they are recognized as an expense in the income statement.

The costs incurred in exploratory drilling work that have yielded a commercially exploitable reserve are reclassified at their carrying amount to *"Investments in areas with reserves"* under property, plant and equipment.

Exploration costs other than G&G costs, excluding the costs of drilling exploration wells and exploration licenses, are recognized as an expense in the income statement when incurred.

Development expenditure incurred in lifting hydrocarbon, its processing or storing is capitalized under "Investments in areas with reserves" in property, plant and equipment.

Future field abandonment and decommissioning costs are capitalized at their present value when they are initially recognized under *"Investments in areas with reserves"* against the line item for decommissioning provisions (see Note 15).

The investments capitalized are depreciated according to the unit of production method and in accordance with the following criteria:

a. Investments in the acquisition of proved and probable reserves and investments in common facilities are depreciated on the basis of the production for the year as a proportion of those reserves.

b. The costs incurred in surveys for the development and extraction of hydrocarbon reserves are depreciated on the basis of the relationship between the production for the year and the total of the most probable proved reserves.

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

Estimate of crude oil and gas reserves and resources

The estimate of oil and gas reserves and resources is a key component of the Company's decision-making process. Oil and gas reserve volumes are used to calculate depreciation and amortization charges, and to assess the recoverability of the investments in assets of the Upstream segment (see Note 3.6). Changes in volumes of reserves and resources could have a significant impact on the Group's results.

The reserves are classified as follows:

a. Proved reserves: Proved reserves are those quantities of crude oil, natural gas and natural gas liquids that, with the information available to date, are estimated to be recoverable with reasonable certainty. There should be at least a 90% probability that the amounts recovered will equal or exceed the 1P estimate.

b. Probable reserves: Probable reserves are those additional reserves that, together with proved reserves, make up scenario 2P. There should be at least a 50% probability that the amounts recovered will equal or exceed the 2P estimate. This scenario reflects the best estimate of the reserves.

c. Developed reserves: Proved or probable quantities that are expected to be recovered from existing wells and facilities.

d. Undeveloped reserves: Proved or probable quantities that are expected to be recovered through future investments.

e. Contingent resources: Those quantities of oil and natural gas that are estimated, at a given date, to be potentially recoverable from accumulations known from the application of development projects, but which are not currently considered commercially recoverable due to one or more contingencies.

Independent engineering firms periodically audit registered volumes (at least 95% of the reserves are audited externally in a three-year cycle). For information on the Group's reserves, see "*Information on oil and gas exploration and production activities*".

To estimate oil and gas reserves and resources, Repsol uses the criteria established by the "*SPE/WPC/AAPG/SPEE/SEG/SPWLA/EAGE Petroleum Resources Management System*", commonly referred to by its acronym SPE-PRMS (SPE standing for Society of Petroleum Engineers).

SEGMENT REPORTING

(4) Business information [6]

4.1) Definition of business 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 Group´s business segments is based on the different activities performed by the Group, 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 (Executive Committee) analyzes the main operating and financial aggregates in order to make decisions about resource allocation and to assess how the Company is performing. In 2020, Repsol revised the definitions of its operating and reporting segments to align them with its renewed strategic vision of business evolution and with the commitment to be CO_2-neutral by 2050. Specifically, the Company will boost its commercial businesses with a new multi-energy offering, a customer-focused strategy and the development of new low-emission electricity generation businesses. Therefore, a new business segment has been defined under the name "*Commercial and Renewables*". As a result, Repsol's reporting segments are now defined as follows:

– Exploration and Production (Upstream/E&P): activities for the exploration, development and production of crude oil and natural gas reserves.

– Industrial: (i) refining activities, (ii) petrochemicals, (iii) trading and transportation of crude oil and oil products, and (iv) sale, transportation and regasification of natural gas and liquefied natural gas (LNG).

– Commercial and Renewables: (i) low carbon power generation and renewable sources, (ii) sale of gas and power, (iii) mobility and sale of oil products, and (iv) liquefied petroleum gas (LPG).

On the other hand, "*Corporate and other*" includes (i) corporate overhead expenses and, specifically, those expenses related to managing the Group that have not been invoiced to the business divisions as a service, (ii) the financial result, and (iii) intersegment consolidation adjustments.

Financial reporting is presented under this new scheme, and financial reporting for the same period in 2019 has been restated to enable comparative analysis.

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

4.2) Presentation model of the results by segments

In presenting the results and other financial aggregates of its operating segments, Repsol includes the results of its joint ventures[7], in accordance with the Group's interest, considering its operational and economic metrics in the same manner and with the same level of 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, uses a measure of segment profit known as adjusted net income, which corresponds to net income from continuing operations at replacement cost (*"Current Cost of Supply"* or CCS), net of taxes and non-controlling interests, without including certain income and expenses that are presented separately (*"Special Items"*). The financial result is assigned to the adjusted net income of *Corporate and other*.

The Current Cost of Supply (CCS),commonly used in this industry to present the results of the Industrial and the Commercial and Renewables businesses that 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 the monitoring of businesses independently of the impact of price variations on their inventories. Under income at CCS, the cost of volumes sold during the reporting period is calculated using the procurement and production costs incurred during that same period. Therefore, adjusted net income does not include the so-called inventory effect. This inventory effect is presented separately, net of tax and non-controlling interests, and corresponds to the difference between income at CCS and that obtained using

[6] Some of metrics presented in this Note are classified as Alternative Performance Measures (APMs) in accordance with ESMA guidelines (for further information, see Appendix I of the Consolidated Management Report or www.repsol.com.) All of the figures shown throughout this Note have been reconciled with the EU-IFRS financial statements in Appendix II.
[7] See Note 13 and Appendix I, where the Group's main joint ventures are identified.

the weighted average cost approach, which is the method used by the Group 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. This heading includes gains/losses on divestments, restructuring charges, asset impairment losses, and provisions for contingencies and charges and other relevant income/expenses that do not form part of the ordinary management of the businesses. These results are presented separately, net of the tax effect and non-controlling interests.

4.3) Financial information by business segment

The main financial information by business segment is included in this note and Appendix II. Additional information on the performance of these segments can be found in the Management Report attached to these financial statements, which is published together with these financial statements.

Results

	€ Million	
SEGMENTS	**2020**	**2019**
Exploration and Production	195	1,050
Industrial	297	913
Commercial and Renewables	485	541
Corporate and other	(377)	(462)
ADJUSTED NET INCOME	**600**	**2,042**
Inventory effect	(978)	(35)
Special items	(2,911)	(5,823)
NET INCOME	**(3,289)**	**(3,816)**

Other figures

	Operating income		Cash flow from operations		Free cash flow		Operating investment[(1)]		Capital employed	
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Exploration and Production	351	1,969	1,736	3,140	1,231	765	948	2,429	12,608	17,205
Industrial	369	1,189	783	1,776	209	894	565	885	9,755	10,717
Commercial and Renewables	650	738	703	1,001	1	525	739	491	4,061	3,361
Corporate and other	(235)	(235)	(25)	(80)	538	(124)	56	56	893	2,009
TOTAL	**1,135**	**3,661**	**3,197**	**5,837**	**1,979**	**2,060**	**2,308**	**3,861**	**27,317**	**33,292**

[(1)] Includes investments accrued during the period.

The reconciliation of these figures with the EU-IFRS Financial Statements is included in Appendix II and Appendix I to the 2020 consolidated Management Report.

CAPITAL STRUCTURE, DEBT AND FINANCIAL RESOURCES

(5) Financial structure

Repsol has adopted a policy of financial prudence with the aim of maintaining its investment-grade credit rating. For more information, see section 6.3 of the 2020 Management Report

The determination of the target financial structure takes into account a leverage ratio that ensures the Group's financial strength, defined as the relationship between net debt[8] (including, where appropriate, lease liabilities) and capital employed[9]. Both metrics are calculated, for these purposes, in accordance with the Group's reporting model described in Note 4 and the reconciliation of these figures to those established in EU-IFRSs and used for the preparation of these consolidated Financial Statements can be found in the Management Report (www.repsol.com). The calculations of these ratios at December 31, 2020 and 2019, are as follows:

	With leases		Without leases	
€ Million	**2020**	**2019**	**2020**	**2019**
Equity	**20,539**	**25,209**	**20,723**	**25,336**
Net financial debt	**6,778**	**8,083**	**3,042**	**4,220**
Capital employed [(1)]	**27,317**	**33,292**	**23,765**	**29,556**
Leverage ratio	**24.8 %**	**24.3 %**	**12.8 %**	**14.3 %**

(1) Alternative Performance Measure. For further information, see Appendix I of the consolidated Management Report.

For further information, see section 6.3. of the Consolidated Management Report

(6) Equity

	€ Million	
	2020	**2019**
Shareholders' equity:	**21,185**	**24,335**
Share capital	1,568	1,566
Share premium and Reserves:	21,132	26,731
Share premium	4,078	6,278
Legal reserve [(1)]	312	312
Retained earnings and other reserves [(2)]	16,844	20,248
Dividends and remuneration on account	(102)	(107)
Treasury shares and own equity investments	(162)	(1,170)
Net income for the period attributable to the parent	(3,289)	(3,816)
Other equity instruments	1,936	1,024
Other cumulative comprehensive income	**(890)**	**593**
Equity instruments with changes through other comprehensive income	(3)	24
Hedging transactions	(62)	(109)
Translation differences	(825)	678
Non-controlling interests	**244**	**281**
TOTAL EQUITY	**20,539**	**25,209**

(1) Under the Spanish Companies Act, 10% of profit for each year of the parent company 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.

(2) This heading includes the transfer from income for the year attributable to the parent for 2019. Includes a reserve for retired capital amounting to €239 million, which is equivalent to the nominal value of the shares retired in the capital reductions in 2020, 2019 and 2018 under the "*Repsol Flexible Dividend*" program (see Note 6.3).

6.1) Share capital

The subscribed share capital at December 31, 2020 and 2019 registered with the Companies Register was represented by 1,527,396,053 fully subscribed and paid up shares of €1 par value each, in book entry form, and all listed on the Spanish stock exchanges.

[8] The formula considers net and not gross debt to factor in the effect of financial investments.
[9] Corresponds to the sum of net financial debt and equity.

Following the bonus share issue concluded in January 2021 (see Note 6.3), the share capital of Repsol, S.A. is currently represented by 1,567,890,563 shares, each with a par value of €1. Under accounting regulations, because the above-mentioned capital increase was registered with the Companies Register before the Board of Directors authorized the financial statements for issue, this bonus share issue has been recognized in the Group's financial statements at December 31, 2020.[10]

According to the latest information available, Repsol's significant shareholders are:

Significant shareholders	% of voting rights attributed to shares: Direct	% of voting rights attributed to shares: Indirect	% of voting rights through financial instruments	% of total voting rights
Sacyr, S.A.[(1)]	—	7.826	—	7.826
JP Morgan Chase & Co [(2)]	—	0.585	6.27	6.855
BlackRock, Inc. [(3)]	—	4.762	0.236	4.998
Amundi Asset Management, S.A. [(4)]	—	4.500	—	4.500

(1) Sacyr, S.A. holds its interest through Sacyr Securities, S.A.U., Sacyr Investments, S.A.U. and Sacyr Investments II, S.A.U.
(2) JP Morgan Chase & Co holds its interest through a number of controlled entities. The information is based on the statement submitted by this company to the CNMV on March 19, 2020 based on the share capital amount of 1,566,046,878 shares.
(3) BlackRock, Inc. holds its interest through a number of controlled entities. The information is based on the statement submitted by this company to the CNMV on December 10, 2019 based on the share capital amount of 1,527,396,053 shares.
(4) Amundi Asset Management, S.A. holds its interest through a number of controlled entities.

At December 31, 2020 the following Group companies' shares were publicly listed:

Company	Traded	Listed	Stock exchanges [(1)]	Closing	Quarter average	Currency
Repsol, S.A.	1,527,396,053	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	8.250	7.201	Euros
			OTCQX	10.010	8.585	Dollars
Refinería La Pampilla, S.A.	8,319,175,714	100%	Lima stock exchange	0.069	0.065	Peruvian soles

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

6.2) Treasury shares and own equity investments

The main transactions undertaken by the Repsol Group involving treasury shares[11] were as follows:

€ Million	2020 No. of shares	2020 Amount	2020 % capital	2019 No. of shares	2019 Amount	2019 % capital
Opening balance	**80,768,905**	**1,170**	**5.16 %**	**24,157,554**	**350**	**1.55 %**
Market purchases [(1)]	96,294,772	850	6.14 %	176,384,235	2,561	11.26 %
Market sales [(1)]	(58,847,189)	(637)	3.75 %	(48,948,699)	(717)	3.13 %
Capital reduction [(2)]	(98,982,965)	(1,221)	(6.31)%	(71,394,987)	(1,024)	4.56 %
Repsol Flexible Dividend [(3)]	367,595	—	0.02 %	570,802	—	0.04 %
Balance at year end	**19,601,118**	**162**	**1.25 %**	**80,768,905**	**1,170**	**5.16 %**

(1) In 2020 "*Market purchases*" included purchases made under the Share Repurchase Program for their redemption (see next section), from September 4 and 23, through which 23,632,965 shares have been acquired. Also in 2020 and 2019 "*Market purchases*" and "*Market sales*" included the shares acquired and delivered within the framework of the Share Acquisition Plan and Share Purchase Plans for the beneficiaries of the multi-year variable remuneration programs (1,547,189 shares were delivered in 2020 in accordance with the provisions of each of the plans (see Note 27.4)) and other transactions within the framework of the discretionary treasury share transactions described in the Repsol Group's Internal Code of Conduct in the securities market area. Also includes book entries to recognize/derecognize treasury shares resulting from derivatives transactions.
(2) Includes 1,400,000 treasury shares acquired before March 25, 2020 (date of the call notice for the 2020 Annual General Meeting) and 73,950,000 treasury shares from the settlement of the derivatives on treasury shares also arranged prior to March 25, 2020.
(3) New shares received in the share capital increases carried out within the framework of the "*Repsol Flexible Dividend*" program corresponding to treasury shares.

At December 31, 2020, the balance of treasury shares did not include derivatives on treasury shares. At December 31, 2019, this included derivatives on a total notional amount of 70 million shares settled in 2020.

10 At December 31, 2020, a capital reduction was recognized under "*Dividends and remuneration on account*" in the balance sheet, as well as a payment obligation under "*Trade and other payables*" to the shareholders who had accepted the irrevocable commitment to purchase the bonus share issue closed in January 2021, corresponding to the sale of rights to Repsol for an amount of €102 million.

11 The shareholders at the Annual General Meeting held on May 11, 2018, authorized the Board of Directors for a period of 5 years to carry out the acquisition of Repsol shares, directly or through subsidiaries, up to a maximum number of shares such that the sum of those already held by Repsol and any of its subsidiaries does not exceed 10% of the Company's share 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.

At December 31, 2020, there were also treasury share options, which are reported in Note 9.

6.3) Dividends and shareholder remuneration

In 2020 and 2019, the Company's shareholders were also remunerated by means of the *"Repsol Flexible Dividend"* program, the figures of which are included in the following chart:

	No. of bonus issue rights sold to Repsol	Purchase commitment price (€/right)	Disbursement in cash (€ Million)	New shares issued	Remuneration in shares (€ Million)
December 2018/January 2019	425,542,521	0.411	175	31,481,529	453
June/July 2019	441,300,729	0.505	223	39,913,458	564
December 2019/January 2020	252,017,771	0.424	107	38,647,825	541
June/July 2020 (1)	480,011,345	0.492	236	60,335,140	534

(1) To replace what would have been the final dividend for 2019.

In addition, to offset the dilutive effect of the capital increases through the bonus share issue formalized in 2020 within the framework of the "Repsol Flexible Dividend" program, in October 2020, a capital reduction was carried out through the redemption of 98,982,965 treasury shares (representing approximately 6.09% of share capital at the date of the aforementioned capital reduction) approved by the shareholders at the Annual General Meeting on May 8, 2020. The acquisition cost of the shares redeemed amounted to €1,221 million.

In addition, in January 2021, under the *"Repsol Flexible Dividend"* program, replacing what would have been the interim dividend from 2020, Repsol paid out €102 million in cash(€0.288 per right before withholdings) to those shareholders opting to sell their bonus share rights[12] back to the Company, and delivered 40,494,510 shares, worth €338 million, to those opting to take their dividend in the form of new shares from the Parent. At the date of authorization for issue of these Financial Statements, the Board of Directors agreed to implement a treasury share repurchase program for a maximum of 40,494,510 shares, representing approximately 2.58% of the current share capital, for the sole purpose of acquiring the shares that will be redeemed if the capital reduction proposed at the next Annual General Meeting is approved.

For further information, see sections 3 and 6.4 of the consolidated Management Report.

At the date of authorization for issue of these Financial Statements, the Company's Board of Directors agreed to propose at the next Annual General Meeting the distribution of cash dividends in the amount of €0.60 gross per share. It was put forward that of this amount €0.30 gross per share will be charged against 2020 profit and paid as from July 7, 2021 and €0.30[13] per share will be charged to unrestricted reserves, which will be distributed, if applicable, from January 1, 2022 and no later than January 31, 2022, on a date to be specified by the Board of Directors. These proposals replace the "*Repsol Flexible Dividend*" remuneration program that Repsol has been using in recent years.

6.4) Other equity instruments

- On June 2, 2020, Repsol International Finance, B.V. ("RIF"), a wholly-owned subsidiary of the Repsol Group, finalized the terms of the issuance of two series of perpetual subordinated bonds secured by Repsol, S.A. for a total amount of €1.500 million. The bonds were placed with qualified investors and are listed on the Luxembourg Stock Exchange. Their main characteristics are as follows:

	Series 1	Series 2
ISIN	XS2185997884	XS2186001314
Amount	€750 million	€750 million
First option to redeem(1)	03/11/2026	09/11/2028
Interest (payable annually)	3.750% until June 11, 2026, and on that date a 5-year swap rate applies plus an additional spread according to the terms and conditions of the bonds.	4.247% until December 11, 2028, and on that date a 5-year swap rate applies plus an additional spread according to the terms and conditions of the bonds.

(1) There are also options to redeem at the request of the issuer in certain cases specified in the terms and conditions.

- On March 25, 2015, Repsol International Finance, B.V. issued a perpetual subordinated bond secured by Repsol, S.A., with a value of €1,000 million, with no defined maturity date, and redeemable at the request of the issuer from year six or under certain circumstances stipulated in the bond terms and conditions.

12 Repsol has waived its bonus issue rights acquired under the purchase commitment and, therefore, its rights to the corresponding new shares. The balance sheet at December 31, 2020 includes a reduction under "*Share premium*" and a payment obligation to those shareholders who accepted Repsol's binding purchase commitment.

13 The €0.30 gross per share will be reduced by the gross amount per share that, prior to the agreed date, the Company may have agreed to distribute, and communicated to the market, as an interim dividend corresponding to the profits for the current year that have been obtained since the end of 2020.

This bond was placed with qualified investors and listed on the Luxembourg Stock Exchange, accruing a fixed annual coupon of 3.875% payable to the bondholders annually from the issuance date until March 25, 2021, and, thereafter, a fixed annual coupon equal to the 6-year swap rate applicable plus a spread.

On June 2, 2020 (together with the issue of perpetual subordinated bonds described above), Repsol, S.A. and RIF announced the launch of an repurchase offer in cash for this bond. The price of the repurchase offer was 101.2% of the nominal amount, plus the accrued coupon. Bondholders accepted the offer for a total nominal amount of €594 million, which resulted in RIF acquiring and subsequently redeeming 59.37% of the issue. In total, RIF paid those accepting the repurchase offer a total of €606 million in cash, and the repurchased and canceled bonds were removed from the balance sheet. With regard to the offer to repurchase the outstanding amount, announced on February 3, 2020, see Note 31.

In accordance with the terms and conditions of the issues, the issuer can defer the coupon payments without triggering an event of default. Coupons so deferred will be cumulative and must be paid in certain cases described in the related terms and conditions of the issues (the prospectuses on the issues are available on the Repsol website).

This bonds are recognized under "*Equity*" in the balance sheet, since it is considered that they do not meet the accounting conditions required to be treated as a financial liability. The finance expense, net of taxes, associated with the coupon on the subordinated bonds has been recognized under *"Retained earnings and other reserves"* amounting to €54 million (€29 million in 2019).

6.5) Non-controlling interests

The equity attributable to non-controlling interests at December 31, 2020 and 2019 relates to the following companies:

	€ Million	
	2020	**2019**
Petronor, S.A.	172	187
Refinería La Pampilla, S.A.	37	48
Repsol Comercial de Productos Petrolíferos, S.A.	35	33
Other companies	—	13
TOTAL	**244**	**281**

(7) Financial resources

7.1) Financial liabilities

The breakdown of financial liabilities included in the balance sheet headings can be found below:

	€ Million	
	2020	**2019**
Non-current financial liabilities:		
Non-current financial liabilities (1)	12,123	10,929
Non-current trade derivatives (2)	44	11
Current financial liabilities:		
Current financial liabilities (1)	3,880	6,538
Current trade derivatives (3)	208	350
TOTAL	**16,255**	**17,828**

(1) This change is due mainly to the bond issues described in the section below, which were partially offset by the cancellation of two bonds upon maturity
(2) Recognized under *"Other non-current liabilities"* on the balance sheet.
(3) Recognized under "*Trade and other payables*" on the balance sheet.

The breakdown of these financial liabilities at December 31, 2020 and 2019, is provided below:

	December 31, 2019 and 2018							
	At fair value through profit or loss		At amortized cost		Total		Fair value	
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	2020	2019
Bonds and obligations		—	5,513	4,199	**5,513**	**4,199**	6,005	4,551
Loans [1]		—	3,250	2,946	**3,250**	**2,946**	3,250	2,946
Lease liabilities		—	2,505	2,709	**2,505**	**2,709**	n/a	n/a
Bank borrowings		—	667	917	**667**	**917**	675	934
Derivatives [2]	145	82	—	—	**145**	**82**	145	82
Other financial liabilities		—	87	88	**87**	**88**	87	88
Non-current	**145**	**82**	**12,022**	**10,859**	**12,167**	**10,941**		
Bonds and obligations		—	2,438	3,721	**2,438**	**3,721**	2,471	3,748
Loans		—	430	970	**430**	**970**	430	970
Lease liabilities		—	486	424	**486**	**424**	n/a	n/a
Bank borrowings		—	270	1,328	**270**	**1,328**	272	1,328
Derivatives [2]	452	397		—	**452**	**397**	452	397
Other financial liabilities		—	12	48	**12**	**47**	12	48
Current	**452**	**397**	**3,636**	**6,491**	**4,088**	**6,887**		
TOTAL [2] [3]	**597**	**479**	**15,658**	**17,350**	**16,255**	**17,828**		

[1] Includes mainly the loan granted by Repsol Sinopec Brasil, B.V. (see Note 7.3), the interest rate of which is renewed on an annual basis.
[2] In 2020 it includes non-current and current hedging derivatives amounting to €78 million and €4 million, respectively (€73 million and €24 million in 2019, respectively). For further information, see Note 9.
[3] In relation to liquidity risk, the distribution of funding by maturity at December 31, 2020 and 2019 is provided in Note 10.

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

	2020		**2019**	
€Million	Average volume	Average cost	Average volume	Average cost
Bonds and obligations	8,245	2.1 %	7,709	2.29 %
Other financial liabilities	3,955	2.5 %	2,521	2.46 %
Bank borrowings	1,895	1.76 %	3,684	3.28 %
TOTAL	**14,095**	**2.17 %**	**13,914**	**2.58 %**

7.2) Bonds

Key issues, repurchases and redemptions carried out in 2020[14]

Changes	**Date of issue**	**Issuer**	**Nominal amount (€M)**	**Price**	**Fixed annual coupon %**	**Maturity**
Issue	Apr-20	RIF	750	99.967%	2.000%	2025
Issue	Apr-20	RIF	750	99.896%	2.625%	2030
Cancellation	May-13	RIF	1,200	n.a.	2.625%	2020
Issue	Oct-20	RIF	850	100%	0.125%	2024
Cancellation	Dec-15	RIF	600	n.a.	2.125%	2020

Note: Issues made under the EMTN Program.

[14] Key issues, repurchases and redemptions carried out in 2019: i) in February a bond issued by RIF (nominal amount of €1,000 million, with a fixed annual coupon of 4.875%) was canceled at maturity; ii) in July a bond issued by RIF (nominal amount of €100 million, with a fixed annual coupon of 0.125%) was canceled at maturity; and iii) in August RIF issued bonds secured by Repsol, S.A., for an amount of €750 million, with a fixed annual coupon of 0.25% and maturing in August 2027.

ISIN	Issuer	Date of issue	Currency	Nominal amount (millions)	Average rate %	Maturity	Listed [3]
US87425EAE32	Repsol Oil & Gas Canadá Inc.	Oct-97	Dollar	50	7.250%	Oct-27	—
US87425EAH62	Repsol Oil & Gas Canadá Inc.	May-05	Dollar	88	5.750%	May-35	—
US87425EAJ2	Repsol Oil & Gas Canadá Inc.	Jan-06	Dollar	102	5.850%	Feb-37	—
US87425EAK91	Repsol Oil & Gas Canada Inc.	Nov-06	Dollar	115	6.250%	Feb-38	—
US87425EAN31	Repsol Oil & Gas Canada Inc.	May-12	Dollar	57	5.500%	May-42	—
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%	Mar-75	LuxSE
XS1352121724 [1]	Repsol International Finance, B.V.	Jan-16	Euro	100	5.375%	Jan-31	LuxSE
XS1613140489 [1]	Repsol International Finance, B.V.	May-17	Euro	500	0.500%	May-22	LuxSE
XS2035620710 [1]	Repsol International Finance, B.V.	Aug-19	Euro	750	0.250%	Aug-27	LuxSE
XS2156581394 [1]	Repsol International Finance, B.V.	Apr-20	Euro	750	2.000%	Dec-25	LuxSE
XS2156583259 [1]	Repsol International Finance, B.V.	Apr-20	Euro	750	2.625%	Apr-30	LuxSE
XS2241090088 [1]	Repsol International Finance, B.V.	Oct-20	Euro	850	0.125%	Oct-24	LuxSE

NOTE: Excludes perpetual subordinated bonds, which qualify as equity instruments (see Note 6), issued by RIF in March 2015 and June 2020 for an outstanding nominal amount at December 31 of €406 million and €1,500 million, respectively.

(1) Issues made under the EMTN Program.

(2) Subordinated bond (does not correspond to any open-ended or shelf program) with a coupon that will be revised on March 25, 2025 and March 25, 2045.

(3) LuxSE (Luxembourg Stock Exchange). Multilateral trading systems or other trading centers or non-official OTC markets are not considered.

RIF also runs a Euro Commercial Paper (ECP) Program, underwritten by Repsol, S.A., with a limit up to €2,000 million. Under this program, several issues and cancellations took place over the course of the period, with an outstanding nominal amount of €1,370 million at December 31, 2020 (€1,845 million at December 31, 2019).

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 RIF and secured by Repsol, S.A., with an aggregate face value at year-end of €5,200 million, contain certain early termination clauses (including cross-acceleration or cross-default, applicable to the issuer and the guarantor) and negative pledge covenants in relation to future bond issues. In the event of failure to comply with any of these covenants, the trustee, at its sole discretion or at the behest of the holders of at least one-fifth of the series of bonds affected or on the basis of an extraordinary resolution, may declare the early maturity of the bonds. In addition, the holders of the bonds issued since 2013 may redeem these bonds if, as a result of a change in control of Repsol, Repsol's credit ratings are downgraded to below investment grade status.

Additionally, the subordinated bonds issue by RIF and secured by Repsol, S.A. in March 2015 and June 2020, for a total nominal value of €3,500 million (with an outstanding balance of €2,906 million at December 31), do not have early redemption covenants other than in the event of dissolution or liquidation.

At the date of authorization for issue of these consolidated Financial Statements, the Repsol Group was not in breach of any of its financial obligations or of any other obligation that could give rise to the early repayment of any of its financial commitments.

At December 31, 2020 and 2019 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.

7.3) Loans

This line item includes loans granted to Group companies that are not eliminated in the consolidation process. At December 31, 2020 and 2019, there were loans amounting to €3,680 million and €3,915 million, respectively, most notably is the loan granted by Repsol Sinopec Brasil B.V. (see Note 13) to its shareholders in proportion to their respective shareholdings, which at December 31, 2020 and 2019 showed a balance for the Group of €2,768 million and €2,946 million, respectively.

7.4) Lease liabilities

The Group's main lease agreements are disclosed in Note 12. The liabilities recognized[15] for lease payables at December 31, 2020 amounted to €2,991 million[16] and €3,133 million[15], respectively.

7.5) Bonds and obligations

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.

7.6) Fair value

The valuation techniques used for the derivative financial instruments classified in levels 2 and 3 of the hierarchy are based, in accordance with accounting standards, on an income approach, which consists of discounting known or estimated future flows using discount curves constructed on the basis of reference market interest rates (in the case of derivatives, they are estimated using implied market forward curves), including adjustments for credit risk based on the life of the instruments. In the case of options, price-fixing models based on Black & Scholes formulas are used.

The main variables for the valuation of financial instruments vary depending on the type of instrument, but are mainly the following: exchange rates (spot and forward), interest rate curves, counterparty risk curves, equity prices and volatilities of all the aforementioned factors. In all cases, market data are obtained from recognized information agencies or correspond to quotations from official bodies.

Financial assets recognized at fair value are classified, in accordance with their calculation methodology, into three levels:
Level 1: Valuations based on a quoted price in an active market for an identical instrument and relate 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.

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

€Million

Level 1 (1)		Level 2 (1)		Level 3		**Total**	
2020	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
113	**319**	**484**	**160**	**—**	**—**	**597**	**479**

(1) Includes level 1 and level 2 hedging derivatives amounting to €82 million and €97 million in 2020 and 2019, respectively.

(8) Financial assets

The breakdown of the current and non-current financial assets included under the headings of the balance sheet is as follows:

	€ Million	
	2020	**2019**
Non-current assets		
Non-current financial assets	916	1,125
Non-current trade derivatives (1)	47	9
Current assets		
Other current financial assets (2)	1,584	2,800
Current trade derivatives (3)	200	168
Cash and cash equivalents (4)	4,321	2,979
TOTAL	**7,068**	**7,081**

(1) Recognized under "*Other non-current assets*" on the balance sheet.
(2) The variation is due mainly to the cancellation of deposits during the period.
(3) Recognized under "*Trade and other receivables*" (see Note 15) in "*Other receivables*" on the balance sheet.
(4) See the statement of cash flows.

[15] The liabilities recognized do not include: (i) variable lease payments, which are not significant with respect to fixed payments; (ii) the options for expanding the current portfolio of contracts for 2021-2077, the estimated future undiscounted payments of which would amount to €189 million (this does not include the optional extensions of the contracts with Emera Brunswick Pipeline and Maritimes & North East Pipeline described in Note 12 due to the low probability of execution), the most significant being the five-year extension of the lease agreement for a vessel amounting to €105 million (with two further similar extensions); and (iii) the signed leases that have not yet begun, with fixed future payments amounting to €9 million in 2021 and €184 million in 2022 and subsequent years.

[16] 7% and 12% correspond to contracts that mature in more than 15 years in 2020 and 2019, respectively.

The breakdown, by type of asset, of financial assets included in the balance sheet can be found below:

	At fair value through profit or loss		At fair value through other comprehensive income		At amortized cost [5]		Total	
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Equity instruments [1]	37	29	86	122	—	—	123	151
Derivatives [2]	93	9	1	—	—	—	94	9
Loans	—	—	—	—	697	759	697	759
Time deposits	—	—	—	—	5	150	5	150
Other financial assets	28	43	—	—	16	22	44	65
Non-current	**158**	**81**	**87**	**122**	**718**	**931**	**963**	**1,134**
Derivatives [2]	268	238	125	40		—	393	278
Loans	—	—	—	—	199	203	199	203
Time deposits	—	—	—	—	1,181	2,481	1,181	2,481
Cash and cash equivalents [3]	3	8	—	—	4,318	2,971	4,321	2,979
Other financial assets	—	—	—	—	11	6	11	6
Current	**271**	**246**	**125**	**40**	**5,709**	**5,661**	**6,105**	**5,947**
TOTAL [4]	**429**	**327**	**212**	**162**	**6,427**	**6,592**	**7,068**	**7,081**

(1) Includes non-controlling financial investments in certain companies over which the Group does not have management influence.
(2) Includes current cash flow hedging derivatives (through other comprehensive income) amounting to €125 million (€40 million in 2019) and non-current fair value derivatives amounting to €1 million.
(3) Corresponds mainly to liquid financial assets, deposits or liquid financial 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.
(4) Does not include "*Other non-current assets*" and "*Trade and other receivables*" in the balance sheet, which at December 31, 2020 amounted to €833 million for non-current and €3,856 million for current, while at December 31, 2019 these headings amounted to €1,306 million for non-current and €5,743 million for current, respectively.
(5) The items that do not accrue explicit interest are recognized at their nominal value whenever the effect of not discounting the related cash flows is not significant.

The average return on the financial assets was accrued at an average interest rate of 3.9% and 4.3% in 2020 and 2019, respectively.

8.1) Loans

In 2020 and 2019, current and non-current loans include those loans granted mainly to companies accounted for using the equity method, which are not eliminated in the consolidation process, amounting to €899 million and €962 million. These included financing to joint ventures in Venezuela and the credit facility signed by Petroquiriquire, S.A., Repsol and Petróleos de Venezuela, S.A. (PDVSA).

In October 2016 Petroquiriquire, S.A., Repsol and PDVSA signed a range of agreements to shore up the financial structure of Petroquiriquire and enable it to implement its Business Plan. The agreements involved (i) the provision by Repsol of a credit facility for up to $1,200 million, backed by a guarantee given by PDVSA, to be used to pay past dividends owed to Repsol and for Petroquiriquire's capital and operating expenditures; and (ii) a commitment given by PDVSA to pay for hydrocarbon production of the mixed-ownership company via transfer to Petroquiriquire, S.A. of payments arising from crude oil sale contracts to offtakers or through outright cash payments in an amount sufficient for the mixed-ownership company to meet its capital and operating expenditures not covered by the financing from Repsol, and to pay Repsol's dividends generated in each financial year and its debt service obligations with Repsol. The financing granted by Repsol and the commitments assumed by PDVSA are governed by the Laws of the State of New York, and any disputes that may arise shall be submitted to arbitration in Paris in accordance with the rules of the International Chamber of Commerce. Drawdowns under the credit facility are subject to compliance by Petroquiriquire, S.A. and PDVSA of certain conditions precedent, and the terms and conditions include the covenants, breach clauses and acceleration or early termination clauses that are customary in such transactions. Failure by PDVSA to comply with any of its obligations under the guarantee, if there is a default by Petroquiriquire, could enable PDVSA's creditors and bondholders to declare default and acceleration of the rest of its financial debt. In addition, the agreement includes other elements such as a mechanism for offsetting of reciprocal debts between Petroquiriquire, S.A. and PDVSA. At December 31, 2020, the cumulative drawdowns under this credit facility amounted to $840 million, with an outstanding balance at December 31, 2020 of €341 million (a gross balance of €663 million and a provision of €322 million) and €426 million at December 31, 2019.

In addition, Repsol granted a loan to Cardón IV, which matures annually and can be extended by the shareholders (Repsol and Eni), and has been considered part of the net investment of this company (see Note 13).

The maturity of these types of financial assets is as follows:

	€ Million	
	2020	**2019**
2021	—	139
2022	42	67
2023	52	77
2024	98	129
Subsequent years	505	347
TOTAL	**697**	**759**

8.2) Fair value

The classification of the financial assets recognized at fair value (FV), by fair value calculation method, is as follows:

€ Million	Level 1		Level 2		Level 3		Total	
	2020	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
At FV through profit or loss	129	121	263	175	37	29	429	325
At FV through other comprehensive income	19	2	107	40	86	122	212	164
TOTAL	**148**	**123**	**370**	**215**	**123**	**151**	**641**	**489**

See Note 7.6 for classification and valuation techniques for financial instruments.

(9) Derivative and hedging transactions

9.1) Accounting hedges

In **cash flow hedges**, the effective portion of changes in fair value is recognized under "*Hedging transactions*" in equity and the gain or loss relating to the ineffective portion (absolute excess of the cumulative change in fair value of the hedging instrument over the hedged item) is recognized in the income statement. Accumulated amounts in equity are transferred to the income statement in periods in which the hedged items affect the income statement or, in the case of a hedge of a transaction that results in the recognition of a non-financial asset or liability, are included in the cost of the asset or liability when the asset or liability is recognized in the balance sheet. **Hedges of net investments** are accounted for in the same way as cash flow hedges, although changes in the valuation of these transactions are recognized in equity under "*Translation differences*" until the hedged foreign transaction is disposed of, at which time they are transferred to the income statement.

The Group contracts derivatives to hedge exposure to changes in cash flows, most notably in 2020 and 2019:

- A cash flow hedge in dollars in the form of interest rate swaps associated with the funding for the investment in the Canaport LNG project (Canada), for a notional amount of €349 million, maturing at long term, and with a negative fair value of €80 million at December 31, 2020. Therefore, the Group recognized a corresponding expense at an average fixed interest rate of 4.023% and the corresponding income at an interest rate of 3-month Libor. The fair value recognized in equity, yet to be recognized in profit or loss, amounts to €61 million after tax at December 31, 2020 (€-53 million after tax at December 31, 2019). The impact before tax recognized in 2020 in the income statement amounted to a loss of €13 million (€9 million in 2019).

- 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. Under these hedges, the Group pays a weighted average interest rate of 1.762% and receives 6-month Euribor. The fair value recognized in equity, yet to be recognized in profit or loss, amounts to €-52 million after tax at December 31, 2020 (€-63 million after tax at December 31, 2019). The impact before tax recognized in 2020 in the income statement amounted to €15 million (€14 million in 2019).

- Cash flow hedges to mitigate the risk of fluctuations in electricity purchase prices maturing mainly between 2021 and 2023. At December 31, 2020, its notional amount was €165 million and its positive fair value was €18 million.

- Cash flow hedges to mitigate the risk of fluctuations in gas sale prices maturing in 2021 y 2023. At December 31, 2020, its notional amount was €-364 million and its positive fair value was €50 million (€40 million at December 31, 2019).

In addition, the Group maintains instruments to hedge its exposure to fluctuations in foreign exchange rates relating to the ownership interest in the net assets of foreign operations. Of note are the financial instruments designated as hedges of net investments with respect to certain dollar assets in the Upstream segment, the notional amount of which at December 31 amounted to 3,000 million (€2,445 million). In 2019, the notional amount was $3,836 million (€3,416 million).

The instruments designated as accounting hedges at December 31, 2020 and 2019 are detailed below:

	Nominal amounts hedging instruments [3]		Carrying amount of the hedging instrument										Changes in FV of the hedging instrument [4]	
			Non-current assets		Current assets		Non-current liabilities		Current liabilities		Total FV			
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Cash flows	**150**	**248**	**—**	**—**	**68**	**40**	**(78)**	**(72)**	**(4)**	**(24)**	**(14)**	**(56)**	**44**	**1**
Interest rate	349	289	—	—	—	—	(78)	(71)	(2)	(1)	(80)	(72)	(8)	(15)
Product price	(199)	(41)	—	—	68	40	—	(1)	(2)	(23)	66	16	52	16
Fair value	**(19)**	**(22)**	**1**	**2**	**1**	**—**	**—**	**(1)**	**—**	**—**	**2**	**1**	**—**	**1**
Product price	**(19)**	**(22)**	**1**	**2**	**1**	**—**	**—**	**(1)**	**—**	**—**	**2**	**1**	**—**	**1**
Net investment [1]	**(2,445)**	**(3,416)**	**—**	**—**	**56**	**—**	**—**	**(2,857)**	**—**	**(559)**	**56**	**(3,416)**	**82**	**(59)**
Exchange rate	(2,445)	(3,416)	—	—	56	—	—	(2,857)	—	(559)	56	(3,416)	82	(59)
TOTAL [2]	**(2,314)**	**(3,190)**	**1**	**2**	**125**	**40**	**(78)**	**(2,930)**	**(4)**	**(583)**	**44**	**(3,471)**	**126**	**(57)**

[1] At December 31, 2020, the hedging instrument corresponded to a basket of derivatives, where as at December 31, 2019, the hedging instrument corresponded to a financial liability.
[2] Fair value measurement methods are described in Note 7.6.
[3] Instruments in US dollars translated into euros at year-end rates. In the case of product price derivatives, they correspond to the physical units at the contract price.
[4] In 2020 and 2019, the changes in fair value of the hedged items coincide with those of the hedging instruments since the hedges have been 100% effective.

The changes relating to hedging instruments at December 31, 2020 and 2019 recognized under "*Other cumulative comprehensive income*" in the balance sheet are detailed below:

	2020		**2019**	
€ Million	**Cash flow hedges**	**Hedges of net investments [1]**	**Cash flow hedges**	**Hedges of net investments**
Opening balance at December 31	**(109)**	**(84)**	**(106)**	**(41)**
Gains/(Losses) for measurement allocated to other comprehensive income	78	82	(55)	(59)
Amounts transferred to the income statement	(20)	—	56	—
Translation differences	3	—	(1)	—
Share of investments in joint ventures and associates	1	—	—	—
Effective tax	(15)	(21)	(3)	16
Closing balance at December 31	**(62)**	**(23)**	**(109)**	**(84)**

[1] The cumulative amount of translation differences from discontinued hedges amounts to €-139 million.

The cumulative balances by type of hedging instrument at December 31, 2020 and 2019 are:

	Cash flow hedging reserve and translation reserves	
€ Million	**2020**	**2019**
Cash flow hedges	**(62)**	**(109)**
- Interest rate	(139)	(163)
- Product price	56	11
- Tax effect	21	43
Hedges of net investments	**(23)**	**(84)**
- Exchange rate	(57)	(139)
- Tax effect	34	55

9.2) Other derivative transactions

Furthermore, Repsol has arranged a series of derivatives to manage its exposure to foreign exchange rate and price risk of crude oil and oil products (including CO_2) that are not recognized as accounting hedges. These derivatives include currency forward contracts that mature in less than a year, as part of the global strategy to manage the exposure to exchange rate risk. Additionally, the Group has entered into futures and swap contracts to hedge the product risk that derives from future physical transactions such as the sale and/or purchase of crude oil and other oil products.

The breakdown of these derivative instruments is as follows:

	Non-current assets		Current assets		Non-current liabilities		Current liabilities		Total fair value	
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Exchange rate	—	—	42	110	—	—	(242)	(46)	(200)	64
Product price	46	7	132	128	(44)	(9)	(206)	(327)	(72)	(201)
Share options	47	—	94	—	(23)	—	—	—	118	—
TOTAL [(1)]	**93**	**7**	**268**	**238**	**(67)**	**(9)**	**(448)**	**(373)**	**(154)**	**(137)**

[(1)] In 2020, this heading includes derivatives whose measurement in respect of interest rates amounts to €19 million (2019: €24 million).

The breakdown of these derivatives at December 31, 2020 and 2019 is provided below:

	Maturity fair values											
€ Million	**2020**						**2019**					
	2021	**2022**	**2023**	**2024**	**Sub. years**	**Total**	**2020**	**2021**	**2022**	**2023**	**Sub. years**	**Total**
Exchange rate	**(200)**	**—**	**—**	**—**	**—**	**(200)**	**64**	**—**	**—**	**—**	**—**	**64**
Product price	**(51)**	**(7)**	**(13)**	**(1)**	**—**	**(72)**	**(198)**	**(1)**	**4**	**(6)**	**—**	**(201)**
Purchase futures	318	49	3	(1)	—	369	17	—	(10)	—	—	7
Sale futures [(1)]	(322)	(57)	(14)	—	—	(393)	(230)	—	13	(6)	—	(223)
Options	1	1	—	—	—	2	1	—	—	—	—	1
Swaps	(19)	4	(1)	—	—	(16)	(32)	**(1)**	**1**	—	—	(32)
Others [(2)]	(29)	(4)	(1)	—	—	(34)	46	—	—	—	—	46
Share options	**94**	**—**	**24**	**—**	**—**	**118**	**—**	**—**	**—**	**—**	**—**	**—**
TOTAL	**(157)**	**(7)**	**11**	**(1)**	**—**	**(154)**	**(134)**	**(1)**	**4**	**(6)**	**—**	**(137)**

[(1)] The following is a breakdown of the physical units and the fair value of the product price derivatives associated with sales contracts:

Sale futures	**2020**		**2019**	
	Physical units	FV (€Million)	Physical units	FV (€Million)
EUAs CO_2 (Thousand tons)	3,524	(27)	24,749	(179)
Crude oil (Thousand barrels)	30,137	(262)	17,924	(51)
Gas (TBTU)	196	7	290	7
Products	n.a	(111)	n.a	—
Total		**(393)**		**(223)**

In 2020 and 2019, the negative impact of the valuation of product derivatives and CO_2 prices on "*Operating income*" was €41 million and €281 million, respectively.

In 2020 and 2019, short-term forward contracts and currency swaps were arranged that generated a financial loss of €260 million and a gain of €157 million, respectively, which are recognized under "*Financial result - Change in fair value of financial instruments*".

At December 31, 2020, Repsol had contracted options on its treasury shares for a total volume of 115 million shares (90 million call options and 25 million put options). The main characteristics of these options, which are measured at fair value through profit or loss under "*Changes in fair value of financial instruments*" in the income statement, are as follows:

- Call options acquired on a volume of 40 million shares, at an average exercise price of €5.9 per share and maturing in July 2021. Repsol may decide to settle the call options either through the physical delivery of shares or on a net basis. The impact on the income statement for the year amounted to €72 million.
- Two options: (i) a call option purchased on a volume of 50 million shares at an exercise price of €8.26 per share, and (ii) a put option sold on a volume of 25 million shares at an exercise price of €5.78 per share (jointly known as a "*Reverse collar*"). The maturity of the instrument begins on January 16, 2023 and ends on February 17, 2023 at a rate of 2 million shares per day for the call leg and 1 million shares per day for the put leg. Repsol may decide to settle the call leg through the physical delivery of shares or on a net basis, and the put leg is only settled on a net basis. The impact on the income statement for the year amounted to €-2 million.

(10) Financial risks

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 mitigate the risks to which the Group is exposed.

10.1) Market risk

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

The Company monitors exposure to market risk through ongoing sensitivity analysis. This strategy is complemented with other risk management measures when required by the nature of the risk exposure. Accordingly, the risk that affects the result is subject to maximum risk levels, measured in terms of Value at Risk (VaR), defined by the Executive Committee in line with the different authorization levels and supervised on a daily basis by an area that is separate from the area responsible for management.

A sensitivity analysis of the main risks inherent in financial instruments is included for each of the market risks described below, showing how profit and equity could be affected (under "*Other comprehensive income*") as a result of the financial instruments held by the Group at the reporting date.

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, with the US dollar generating the greatest level of exposure. The US dollar-euro exchange rate at December 31, 2020 and 2019 was as follows:

	December 31, 2020		December 31, 2019	
	Closing rate	Accumulated average rate	Closing rate	Accumulated average rate
US dollar	1.23	1.14	1.12	1.12

Exposure to exchange rate risk can be traced to financial assets and investments, liabilities and monetary flows in currencies other than the functional currency of Repsol, S.A. and to the translation to euros of the financial statements of Group companies with a different functional currency.

Repsol constantly monitors the Group's exposure to fluctuations in the exchange rate of currencies in which it undertakes significant operations and actively manages exchange rate risk positions that affect the financial result of the income statement. To this end, it contracts derivative financial instruments that seek to provide a consolidated economic hedge of currencies for which there is a liquid market.

Furthermore, net investment and cash flow hedges are arranged in order to ensure the carrying amount of net investments abroad, the economic value of the flows corresponding to investment and divestment operations, corporate operations or project execution or one-off contracts for which the monetary flows are distributed over a period of time.

For exchange rate derivatives, see Note 9.

The sensitivity of net income and equity to exchange rate risk, as a result of the effect on the financial instruments held by the Group at December 31, due to the appreciation or depreciation of the euro against the dollar, is illustrated below:

	Appreciation (+) / depreciation (-) in exchange rate	€Million 2020	€Million 2019
Effect on net income after tax	5%	2	6
	(5)%	(2)	(6)
Effect on equity	5%	183	89
	(5)%	(166)	(81)

b) Interest rate risk

Fluctuations in interest rates can affect interest income and expense from financial assets and liabilities with variable interest rates; which may also impact the fair value of financial assets and liabilities with a fixed interest rate. Furthermore, these fluctuations can affect the carrying amount of assets and liabilities due to variations in the discount rates of applicable cash flows, the return on investments and the future cost of raising financial resources.

Repsol's debt is linked to the most competitive financial instruments at any given time, both in terms of the capital market and banking market, and based on those market conditions considered to be ideal for each of them. Furthermore, Repsol contracts interest rate derivatives to reduce the risk of variations in financial burdens and in the fair value of its debt, and to mitigate the interest rate risk on future fixed-rate debt issues, which are designated in general as hedging instruments (see Note 9).

At December 31, 2020 and 2019, the net debt balance at fixed rates amounted to €7,359 million and €6,423 million, respectively. This is equivalent to 116% and 84%, respectively, of total net debt including interest rate derivative financial instruments.

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 December 31, is shown in the following table:

	Increase (+) / decrease (-) in interest rates (basis points)	€Million	
		2020	2019
Effect on net income after tax	50 b.p.	3	5
	-50 b.p.	(3)	(5)
Effect on equity	50 b.p.	13	11
	-50 b.p.	(14)	(12)

In connection with the process of transition to new benchmark interest rates currently under way in several jurisdictions worldwide, the Group reviewed the rates of the contracts entered into in accordance with the reform timetable. The main contracts identified to date, under which interbank interest rates are a key benchmark, are of a financial nature: mainly loans and credit facilities.

As to the hedging relations pegged to LIBOR/EURIBOR according to the *Interest Rate Benchmark Reform - Amendments to IFRS 9 and IAS 39*, which we applied early in 2019, we believe that the cash flows of the hedging instrument and the hedged item will not be altered as a result of the reform.

In addition, the Group is monitoring regulatory and market developments for an orderly transition. In this regard, the Group began to include a reference to risk-free rates in the new contracts, and specific clauses are included to govern permanent cessation events. In relation to existing contracts that will continue to be in force after the reform, the mechanisms for determining substitute benchmarks and market alternatives (i.e. ISDA 2020 IBOR, Fallbacks Protocol) are being reviewed to resolve permanent cessation events.

c) Commodity price risk

The Group's results are exposed mainly to volatility in the prices of oil, derivative products, natural gas and electricity.

In some cases, Repsol arranges derivatives to mitigate its exposure to commodity 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 9).

At December 31, 2020 an increase or decrease of 10% in commodity prices would have approximately led to the following changes in net income and in equity as a result of changes in value in the financial derivatives.

	Increase (+) / decrease (-) in commodity prices	€Million	
		2020	2019
Effect on net income after tax	+10%	(40)	2
	(10)%	40	(2)
Effect on equity	+10%	9	13
	(10)%	(9)	(13)

NOTE: In a highly volatile environment, such as that of the second quarter of 2020 as a result of COVID-19, a +/-50% change in commodity prices would have had an estimated impact of €-198 million and €198 million on net income, respectively, and €-47 million and €47 million on equity, respectively.

The sensitivity of the derivatives to increases in commodity prices partially offsets the adverse exposure of Repsol's physical operations -in inventories- inherent to its activity.

10.2) Liquidity risk[17]

The liquidity policy applied by Repsol is structured around guaranteeing the availability of the necessary funds to ensure compliance with the obligations assumed and the evolution of the Group's business plans, while maintaining the ideal amount of liquid resources and seeking the highest level of efficiency in the management of financial resources at all times. In line with this prudent financial policy, at December 31, 2020 Repsol had cash resources and other liquid financial instruments[18] and undrawn credit facilities that are sufficient to cover current debt maturities 2.8 times.

Repsol controls and monitors its financial needs ranging from the production of daily cash flow forecasts to the financial planning involved in the annual budgets and its strategic plan; it maintains diversified and stable sources of financing that facilitate efficient access to financial markets, all within the framework of a financing structure that is compatible with the corresponding credit rating in the investment grade category.

The Group had undrawn credit facilities amounting to €3,425 million and €1,808 million at December 31, 2020 and 2019, respectively. At the end of the period, liquidity stood at €8,926 million (including undrawn committed credit facilities).

The following table contain an analysis on the maturities of the financial liabilities existing at December 31, 2020 and 2019:

	Maturities (€ Million)							Maturities (€ Million)						
	2020							2019						
	2020	2021	2022	2023	2024	Seq.	Total	2019	2020	2021	2022	2023	Seq.	Total
Bonds and obligations (1)	2,525	622	120	970	868	6,045	11,149	3,815	1,123	587	86	86	5,333	11,030
Loans and other financial debts (1)	872	639	110	2,914	193	331	5,059	2,383	198	246	80	3,041	585	6,533
Lease payments	524	446	416	365	333	2,039	4,123	549	485	454	415	390	2,448	4,742
Derivatives (2)	(64)	—	24	—	—	—	(40)	(39)	—	—	—	—	—	(39)
Suppliers	2,471	—	—	—	—	—	2,471	3,638	—	—	—	—	—	3,638
Other payables	3,356	—	—	—	—	—	3,356	3,854	—	—	—	—	—	3,854

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

(1) Corresponds to future maturities of amounts recognized under "*Non-current financial liabilities*" and "*Current financial liabilities*", including interest or future dividends related to these financial liabilities. It does not include financial derivatives.

(2) The contractual maturities of the derivatives included under this heading are outlined in Note 9. It does not include trade derivatives recognized under "*Other non-current liabilities*" and "*Other payables*" on the balance sheet.

[17] For information on the definitions of the liquidity and solvency ratios and their reconciliations to the Alternative Performance Measures, see Appendix I of the consolidated Management Report.

[18] Includes immediately available time deposits recognized under "*Time deposits*" amounting to €1,181million.

10.3) Credit risk[19]

EXPECTED LOSS:

The Group calculates the expected credit loss on its **trade receivables** using its own risk assessment models for its customers, taking into account the probability of default, the balance at risk and the estimated loss given default. The general criteria for considering objective evidence of impairment (in the absence of other evidence of default such as bankruptcy, etc.) is that it has exceeded 180 days in default.

The remaining **financial instruments**, mainly certain loans and financial guarantees granted to joint ventures, are individually monitored.

The expected loss on financial instruments is calculated based on the stage of the debtor's credit risk in accordance with the following formula:

Expected credit loss = Probability of default[(1)] x Exposure[(2)] x LDG[(3)]

Phase 1: At the time of initial recognition, expected loss is calculated taking into account the probability of default in the first 12 months (for trade receivables, the calculation is spread over the life of the instrument).

Phase 2: When there is a significant increase in risk, expected loss is calculated for the entire life of the instrument.

Phase 3: For instruments that are already impaired, expected loss is calculated for the entire life of the instrument taking into account the interest accrued.

(1) Calculated individually for each debtor except for individuals, for whom an average default rate is used. The models take into account quantitative information (economic-financial variables of the customer, payment behavior, etc.), qualitative information (sector of activity, macroeconomic data on the country, etc, and market sensitivity variables (e.g. price performance). An internal rating and an associated probability of default are obtained for each debtor, according to the models.

(2) Calculated taking into account the amount of the outstanding receivable and a potential future exposure according to the available risk limit.

(3) Percentage of unrecovered exposure in the event of default, based on the historical behavior and taking into account whether or not such exposure is guaranteed.

Credit risk is defined as the possibility of a third party not complying with their payment obligations, thus creating credit losses. The Group specifically evaluates all available information consistent with internal credit risk management for each financial instrument, including those of a commercial nature.

The Company updated its customer management model using economic forecasts for the main countries where it operates, without this having a significant impact on the Group's financial statements from a change in the payment behavior of debtors.

For credit risk arising from financial instruments relating to operations in Venezuela, see Note 20.3.

The Group's exposure to credit risk, according to the type of financial instrument together with the impairment recognized at December 31, 2020 for each of them, is broken down as follows:

	Gross balance	Average impairment	Impairment	Net balance 12/31/2019	Net balance 12/31/2018
Current financial assets and Cash (1)	5,905	—	—	5,905	5,779
Non-current financial assets (2)	3,298	64 %	(2,127) (3)	1,171	1,496
Other current and non-current assets (4)	1,765	38 %	(669) (4)	1,096	1,510
Trade and other receivables (5)	4,266	5 %	(210)	4,056	5,911

(1) Impairments of less than one million euros due to the high credit quality of the counterparties (banks and financial institutions with ratings equal to or greater than BB). The Group's cash surplus is used to acquire safe and liquid short-term instruments, including short-term bank deposits and other instruments with similar low-risk characteristics. The portfolio of these investments is diversified to avoid a concentration of risk in any one instrument or counterparty.
(2) This heading is presented in the balance sheet net of the provision for the equity deficit of Cardón IV (see Note 15).
(3) Includes assets impaired in Phase III (see following section, "*Expected loss*"). The impairment losses at December 31, 2020 relate mainly to ongoing litigation and bankruptcy proceedings (€1,600 million) and to loans and credit facilities granted to joint ventures in Venezuela (€482 million).
(4) Includes mainly assets impaired in Phase III corresponding primarily to accounts receivable related to activity in Venezuela (see Notes 19.5 and 20.3).
(5) See the following section "*Trade and other receivables*".

[19] The credit risk information included in this section does not include the credit risk of investees or joint ventures, the impact of which is recognized under "*Net income from investments accounted for using the equity method*". Expected credit losses are an estimate, weighted by probability, of credit losses (i.e. the present value of all cash deficits) over the expected life of the financial instrument. A cash deficit is defined as the difference between the cash flows due to the entity under the contract and the cash flows it expects to receive. Because expected credit losses take into account both the amount and timing of payments, there is a credit loss if the entity expects to collect in full, but later than contractually agreed.

Trade and other receivables

The trade receivables are shown on the balance sheet at December 31, 2020 and 2019, net of provisions for impairment, for an amount of €4,056 million and €5,911 million, respectively. The following table shows the age of the trade receivables net of provisions for impairment (including expected loss):

	€ Million			
	2020			**2019**
Maturities	Debt	Impairment	Balance	Balance
Unmatured debt	3,970	81	3,889	5,536
Matured debt 0-30 days	103	3	100	235
Matured debt 31-180 days	28	3	25	79
Matured debt over 180 days	141	99	42	61
TOTAL	**4,242**	**186**	**4,056**	**5,911**

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 after its trade receivables have become impaired, including official bodies and public sector entities, does not exceed 1.7%.

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

As part of its business activities, the Group has guarantees extended by third parties in an amount of €3,264 million at December 31, 2020 and €3,206 million at December 31, 2019. Of this balance, the trade receivables secured by guarantees stood at €821 million at December 31, 2020 and €908 million at December 31, 2019.

NON-CURRENT ASSETS AND LIABILITIES

(11) Intangible assets

The breakdown of the intangible assets and of the related accumulated amortization and impairment losses at December 31, 2020 and 2019 is as follows:

	€ Million								
		Upstream			Industrial, and Commercial and			Corporate	
GROSS COST	Goodwill	Exploration permits	Computer software	Other assets	Service station association rights and other rights(4)	Computer software	Concessions and others (6)	Computer software and others	**Total**
Balance at January 1, 2019	**3,203**	**2,420**	**198**	**83**	**244**	**365**	**446**	**333**	**7,292**
Investments (1)	17	217	15	5	59	86	213	24	636
Disposals or reductions	—	(67)	—	—	(9)	(2)	(14)	(29)	(121)
Translation differences	53	42	4	2	2	1	—	—	104
Change in scope of consolidation	(7)	—	—	—	—	—	25	—	18
Reclassifications and other movements	(69)	73	1	1	10	11	90	—	117
Balance at December 31, 2019	**3,197**	**2,685**	**218**	**91**	**306**	**461**	**760**	**328**	**8,046**
Investments (1)	—	82	14	8	30	57	87	31	309
Disposals or reductions	—	(564)	(2)	(1)	(22)	(9)	—	(11)	(609)
Translation differences	(192)	(193)	(19)	(7)	(9)	(7)	(2)	—	(429)
Change in scope of consolidation	4	(3)	—	—	—	2	38	—	41
Reclassifications and other movements(5)	3	16	4	(2)	10	41	(384)	4	(308)
Balance at December 31, 2020	**3,012**	**2,023**	**215**	**89**	**315**	**545**	**499**	**352**	**7,050**
ACCUMULATED AMORTIZATION AND IMPAIRMENT LOSSES									
Balance at January 1, 2019	**(192)**	**(1,308)**	**(121)**	**(73)**	**(168)**	**(189)**	**(169)**	**(261)**	**(2,481)**
Amortization	—	(48)	(20)	—	(25)	(37)	(23)	(25)	(178)
Disposals or reductions	—	67	—	—	9	2	12	30	120
(Provision for)/Reversal of provisions for impairment (2)	(868)	(296)	—	—	—	—	(9)	(3)	(1,176)
Translation differences	—	(22)	(2)	(1)	(1)	(1)	—	—	(27)
Changes in scope of consolidation	—	—	—	—	—	—	—	—	—
Reclassifications and other movements	34	121	—	1	9	—	1	—	166
Balance at December 31, 2019(3)	**(1,026)**	**(1,486)**	**(143)**	**(73)**	**(176)**	**(225)**	**(188)**	**(259)**	**(3,576)**
Amortization	—	(56)	(21)	—	(26)	(48)	(30)	(27)	(208)
Disposals or reductions	—	564	2	—	13	9	—	10	598
(Provision for)/Reversal of provisions for impairment (2)	(667)	(101)	—	—	—	—	(1)	—	(769)
Translation differences	97	89	13	7	2	3	1	—	212
Changes in scope of consolidation	—	2	—	—	—	(1)	—	—	1
Reclassifications and other movements	6	32	2	(8)	5	—	15	(7)	45
Balance at December 31, 2020	**(1,590)**	**(956)**	**(147)**	**(74)**	**(182)**	**(262)**	**(203)**	**(283)**	**(3,697)**
Net balance at December 31, 2019	**2,171**	**1,199**	**75**	**18**	**130**	**236**	**572**	**69**	**4,470**
Net balance at December 31, 2020	**1,422**	**1,067**	**68**	**15**	**133**	**283**	**296**	**69**	**3,353**

(1) Investments in 2020 and 2019 come from the direct acquisition of assets. Investments in "*Exploration permits*" mainly refer to the acquisition of acreage and geological and geophysical costs in the amount of €82 million and €199 million in 2020 and 2019, respectively.
(2) See Note 20.
(3) At December 31, 2020 and 2019, provisions for impairment losses amounted to €1,916 million and €1,673 million, respectively, corresponding mainly to the impairment losses on "Goodwill" (€1,590 million and €1,026 million in 2020 and 2019, respectively).
(4) Includes the service stations association rights. At December 31, 2020 the capitalized costs of obtaining contracts amounted to €120 million.
(5) In 2020, "*Reclassifications and other movements*" includes mainly the reclassification of CO_2 emission allowances to inventories (see Note 16).
(6) Includes the customer portfolio of the Electricity and Gas sale business.

Repsol has taken out insurance to cover potential security incidents that could occur in its IT system, including computer software, due to malicious acts (cyber-attacks) or accidents that cause the system to be unavailable.

Goodwill

The breakdown of goodwill, by segment and company, at December 31, 2020 and 2019 is as follows:

	€ Million	
Goodwill	**2020**	**2019**
Upstream:		
Repsol Oil & Gas Canada, Inc.	958	1,640
Other companies	25	106
Commercial and Renewables [1]:		
Repsol Portuguesa, S.A.	154	154
Repsol Gas Portugal, S.A.	106	106
Repsol Comercial de Productos Petrolíferos, S.A.	104	103
Repsol Electricidad y Gas, S.A.	49	49
Other companies[1]	26	13
TOTAL [2]	**1,422**	**2,171**

(1) Corresponds to a total of 8 CGUs, with the most significant individual amount not exceeding to 11% of the Group's total. Of the total, €438 million and €424 million in 2020 and 2019, respectively, correspond to companies whose main activities are carried on in Europe. For more information on the calculation of the recoverable amount, see Note 20.

(2) Includes €1,590 million and €1,026 million of accumulated impairment losses in 2020 and 2019, respectively.

The goodwill that arose from the acquisition of ROGCI, which was allocated to the Upstream segment for the purpose of assessing its recoverability, is justified, among other reasons, by the synergies arising from the acquisition as a result of savings in corporate functions and support functions that benefit the segment as a whole, and which could not be allocated to specific assets on a non-arbitrary basis.

Once most of these synergies had been captured and after the decrease in the recoverable amount of the assets in the Upstream segment (see Note 20.2), an impairment loss of €-594 million was recognized on this goodwill. Unfavorable changes in the key assumptions that determine the recoverable amount of segment assets, mainly declining oil and gas prices and in production, as well as increases in the discount rate, would result in additional impairment losses on the goodwill of ROGCI. Note 20.2 includes additional information on the effect of changes in the key assumptions made on the value of the assets and the goodwill of the segment.

(12) Property, plant and equipment

The breakdown of *"Property, plant and equipment"* and of the related accumulated depreciation and impairment losses at December 31, 2020 and 2019 is as follows:

	€ Million								
	Upstream			Industrial, and Commercial and Renewables				Corporate	
GROSS COST	Investments in areas with reserves	Investments in exploration	Other property, plant and equipment	Land, buildings and other constructions	Machinery and plant	Other property, plant and equipment	Property, plant and equipment in progress (5)	Land, construction and others	**Total**
Balance at January 1, 2019	**24,827**	**3,620**	**838**	**2,424**	**21,080**	**1,453**	**838**	**1,079**	**56,159**
Investments	1,601	184	160	30	149	169	848	19	3,160
Disposals or reductions	(103)	(151)	(16)	(25)	(122)	(19)	(3)	(33)	(472)
Translation differences	479	67	17	11	62	8	3	—	647
Change in scope of consolidation	—	(3)	—	9	7	—	9	—	22
Reclassifications and other movements (1)	(1,541)	(582)	(97)	66	695	68	(794)	—	(2,185)
Balance at December 31, 2019	**25,263**	**3,135**	**902**	**2,515**	**21,871**	**1,679**	**901**	**1,065**	**57,331**
Investments	467	121	146	—	7	6	986	17	1,750
Disposals or reductions	(8)	(643)	(39)	(14)	(141)	(32)	(4)	(27)	(908)
Translation differences	(2,126)	(181)	(82)	(55)	(274)	(54)	(5)	—	(2,777)
Change in scope of consolidation	—	(390)	—	—	—	—	—	—	(390)
Reclassifications and other movements (1)	49	25	9	76	942	78	(858)	2	323
Balance at December 31, 2020	**23,645**	**2,067**	**936**	**2,522**	**22,405**	**1,677**	**1,020**	**1,057**	**55,329**
ACCUMULATED DEPRECIATION AND IMPAIRMENT LOSSES (3)									
Balance at January 1, 2019	**(10,943)**	**(2,578)**	**(315)**	**(1,239)**	**(13,127)**	**(590)**	—	**(497)**	**(29,289)**
Depreciation (2)	(1,161)	(54)	(60)	(58)	(793)	(89)	—	(41)	(2,256)
Disposals or reductions	2	151	6	18	109	16	—	33	335
(Provision for)/Reversal of provisions for impairment (3)	(3,887)	(392)	(9)	(3)	284	(9)	—	—	(4,016)
Translation differences	(196)	(45)	(7)	(8)	(46)	4	—	—	(298)
Changes in scope of consolidation	—	3	—	—	—	—	—	—	3
Reclassifications and other movements (1)	1,220	409	3	(22)	(270)	(5)	—	—	1,335
Balance at December 31, 2019	**(14,965)**	**(2,506)**	**(382)**	**(1,312)**	**(13,843)**	**(673)**	—	**(505)**	**(34,186)**
Depreciation	(877)	(20)	(44)	(60)	(845)	(112)	—	(41)	(1,999)
Disposals or reductions	7	643	28	12	125	29	—	22	866
(Provision for)/Reversal of provisions for impairment (3)	(1,350)	(13)	(5)	—	152	(18)	—	(2)	(1,236)
Translation differences	1,404	119	32	42	172	19	—	—	1,788
Changes in scope of consolidation	—	390	—	—	—	—	—	—	390
Reclassifications and other movements (1)	7	(13)	5	(4)	315	(334)	—	(1)	(25)
Balance at December 31, 2020 (4)	**(15,774)**	**(1,400)**	**(366)**	**(1,322)**	**(13,924)**	**(1,089)**	—	**(527)**	**(34,402)**
Net balance at December 31, 2019	**10,298**	**629**	**520**	**1,203**	**8,028**	**1,006**	**901**	**560**	**23,145**
Net balance at December 31, 2020	**7,871**	**667**	**570**	**1,200**	**8,481**	**588**	**1,020**	**530**	**20,927**

(1) In 2020 and 2019 this item included reclassifications from "*Property, plant and equipment in progress*" mainly to "*Machinery and plant*", as a result of several upgrade, repair and remodeling projects of the Group's refineries. In 2019 *"Investments in areas with reserves"* included the reclassification for the final recognition of the interest prior to the acquisition of the 63% interest in the Eagle Ford asset, *"Investments in exploration" included* the reclassification of the Upstream assets in Vietnam to "*Other non-current assets*" (see Note 14) ,and "*Machinery and plant*" included the reclassification of the net reversal of the impairment loss on the Gas & Trading business in North America to "*Onerous contracts*" (see Note 15).
(2) See the table below in this section for the measurement and useful life of the items of property, plant and equipment.
(3) See Note 20.
(4) At December 31, 2020 and 2019, the provisions for impairment losses on assets came to €6,679 million and €7,553 million, respectively, corresponding mainly to the impairment on "*Investments in areas with reserves*" (€5,186 million and €5,245 million in 2020 and 2019, respectively) and "*Machinery and plant*" (€836 million and €1,386 million in 2020 and 2019, respectively).
(5) In 2020 and 2019, includes property, plant and equipment in progress corresponding to investments in the industrial complexes of the Refining and Chemicals businesses, mainly in Spain and, to a lesser extent, in Peru and Portugal.

The breakdown, by geographical area, of the Group's most significant investments is detailed in section 6.1 of the 2020 Management Report which is presented using the Group's reporting model.

"Property, plant and equipment" includes investments made by the Group in service concession arrangements in the amount of €247 million and €243 million at December 31, 2020 and 2019, respectively. These concessions revert to the State over a period of time ranging from 2021 to 2066.

As a general rule, non-current assets are depreciated on a straight-line basis over their estimated useful lives. The estimated useful lives of the main assets are detailed below:

Estimated useful life	Years
Buildings and other constructions	20-50
Machinery and plant:	
Machinery, plant and tools	8-25
Specialized complex installations (Refining and Chemical industrial complexes):	
- Unit	8-25
- Storage tank	20-40
- Cabling and network	12-25
Specialized complex installations (electricity and gas):	
- Electricity generation plant	18-40
- Gas and electricity infrastructure and distribution	12-40
Transport elements	5-20
Other property, plant and equipment:	
- Furniture and fixtures	9-15

In relation to the connection rights of service stations, their ownership is conditional on the life of the contracts that give rise to them, which are amortized on a straight-line basis over the term of each contract (between 25 and 30 years).

See Note 3.7 for the useful life of the items of property, plant and equipment related to hydrocarbon exploration and production activities.

The figures corresponding to non-depreciable assets, i.e. land and property, plant and equipment in progress, amount to €584 million and €1,284 million at December 31, 2020, respectively, and €586 million and €1,054 million at December 31, 2019, respectively.

"Property, plant and equipment" includes fully depreciated items in the amount of €9,497 million and €9,536 million at December 31, 2020 and 2019, respectively.

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

The breakdown of and changes in the right-of-use assets, as well as their accumulated depreciation, are as follows:

€ Million	Machinery and plant	Transport elements	Buildings	Land	Other property, plant and equipment	Total
Balance at January 1, 2019	**1,448**	**144**	**111**	**184**	**20**	**1,907**
Acquisitions	147	159	38	9	1	354
Disposals and reductions	(1)	—	(11)	(1)	(6)	(19)
Depreciation	(167)	(48)	(26)	(18)	(10)	(269)
Translation differences and other	62	1	(2)	11	(4)	68
Balance at December 31, 2019	**1,489**	**256**	**110**	**185**	**1**	**2,041**
Acquisitions	197	36	41	27	193	494
Disposals and reductions	(12)	(2)	—	(1)	—	(15)
Depreciation	(41)	(70)	(28)	(17)	(25)	(181)
Translation differences and other	(152)	(12)	(7)	(13)	(12)	(196)
Balance at December 31, 2020	**1,481**	**208**	**116**	**181**	**157**	**2,143**

The most significant lease agreements are as follows:

- 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 for a period of 25 years (renewable for up to an additional 30 years). It came into effect in July 2009. At December 31, 2020, the rights of use under this contract were impaired in full and the future payments recognized as financial liabilities amounted to $421 million (€343 million).

– Agreement with Maritimes & North East Pipeline for the transportation of Canadian natural gas from the Canadian border to Dracut (USA) for an initial term of 25 years (renewable for up to an additional 30 years). It initially came into effect in March 2009. At December 31 2020, the corresponding rights of use amounted to €460 million[20] and the future payments recognized as a financial liability were $931 million (€759 million).

– For the service stations that the Group has in Spain, Portugal, Italy, Peru and Mexico, lease agreements are signed for various concepts and with varying terms. At December 31, 2020, the corresponding rights of use amounted to €985 million and the future payments recognized as financial liabilities were €976 million.

(13) Investments accounted for using the equity method

Movement in this heading during 2020 and 2019 was as follows:

	€ Million	
	2020	**2019**
Opening balance for the year	**7,237**	**7,194**
Impact of new standards	—	**(50)**
Adjusted opening balance for the year	**7,237**	**7,144**
Net investments	10	(7)
Changes in scope of consolidation	54	56
Net income from investments accounted for using the equity method [(1)]	(609)	351
Dividends paid out	(202)	(426)
Translation differences	(473)	145
Reclassifications and other movements [(2)]	(120)	(26)
Balance at year end	**5,897**	**7,237**

(1) Corresponds to the net income for the period from continuing operations. It does not include "*Other comprehensive income*" amounting to €-484 million in 2020 (€-472 million for joint ventures) and €142 million in 2019 (€139 million for joint ventures), mainly due to translation differences.
(2) Includes mainly the reclassification of the equity deficit of Petroquiriquire and Cardón (see "*Value of interest in joint ventures*" below).

The breakdown of the investments accounted for using the equity method is as follows:

	€ Million	
	Carrying amount of the investment [(2)]	
	2020	**2019**
Joint ventures	5,757	7,126
Associates [(1)]	140	111
TOTAL	**5,897**	**7,237**

(1) This mainly includes the interest in Repsol Ibereólica Renovables Chile SpA and Oleoducto de Crudos Pesados (OCP) Ltd.
(2) In 2020, €5,448 million correspond to Upstream (€6,780 million in 2019).

On the basis of the shareholders agreements signed at each company, where strategic, operational and financial decisions require the unanimous consent of the parties sharing control, these companies are considered joint ventures provided they are not a joint operation The most significant joint ventures are:

Repsol Sinopec Brasil (RSB)

Repsol holds a 60% interest in Repsol Sinopec Brasil, S.A. and Repsol Sinopec Brasil B.V (through Repsol Exploración 17, B.V. and Repsol Exploraçao Brasil, Ltda., respectively, both wholly owned by Repsol, S.A.), which were included in the tables below together with RSB. The remaining 40% of these companies corresponds to Tiptop Luxembourg, S.A.R.L.

This company's main businesses are hydrocarbon exploration, production and sale. It operates mainly in Brazil.

For loans granted to the Repsol Group by RSB, see Note 7.3. For the guarantees granted by the Group to RSB, see Note 25.

YPFB Andina, S.A.

Repsol holds a 48.33% interest in YPFB Andina, S.A., through Repsol Bolivia, S.A., with the other shareholders being YPF Bolivia (51%) and non-controlling shareholders (0.67%). It engages mainly in hydrocarbon exploration, operation and sale. It operates mainly in Bolivia.

[20] Contract provisioned for an amount of €88 million.

BPRY Caribbean Ventures, LLC. (BPRY)

Repsol holds a 30% interest in the share capital of BPRY Caribbean Ventures LLC through Repsol Exploración, S.A. The remaining 70% is owned by British Petroleum Ltd. This company and its subsidiaries mainly engage in hydrocarbon exploration, operation and sale, and other related activities in Trinidad and Tobago.

Petroquiriquire, S.A.

Repsol has a 40% interest 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 20.3.

Cardón IV, S.A.

Repsol has a 50% interest in Cardón IV, S.A. through Repsol Exploración, S.A. The other 50% is 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 20.3.

Repsol Sinopec Resources UK Ltd. (RSRUK)

A company held by Talisman Colombia Holdco, Ltd, a subsidiary of the Repsol Group, and by Addax Petroleum UK Limited ("Addax"), a subsidiary of the Sinopec group, with a 51% and 49% interest, respectively. They company mainly engages in hydrocarbon exploration and operation in the North Sea. For information on the arbitration procedure concerning the purchase by Addax of its 49% interest in RSRUK, see Note 15.

Equion Energía Ltd.

Equion is a company held 51% and 49% by Ecopetrol, S.A. and Talisman Colombia Holdco, Ltd, respectively. Equion engaged mainly in activities for the exploration, research, operation, development and sale of hydrocarbon and derivative products in Colombia. This company is currently in the process of liquidation and therefore did not have significant activity in 2020.

The tables below provides a summary of the financial information for these investments, prepared in accordance with EU-IFRS accounting policies, as detailed in Note 3 and its reconciliation with the carrying amount of the investment in the consolidated financial statements:

Income from joint ventures:

	RSB		YPFB Andina		BPRY		Petroquiriquire		Cardón IV		RSRUK		Equion
€ Million	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2019**
Revenue	810	1,339	165	213	768	1,794	78	244	589	538	646	1,156	337
Amortization and impairment [(1)]	(361)	(413)	(138)	(85)	(2,060)	(1,890)	78	(77)	(193)	(46)	(876)	(401)	(130)
Other operating income/ (expenses)	(251)	(466)	(108)	(90)	(591)	(932)	(26)	(60)	(146)	(144)	(428)	(276)	(79)
Operating income	**198**	**460**	**(81)**	**38**	**(1,883)**	**(1,028)**	**130**	**107**	**250**	**348**	**(658)**	**479**	**128**
Net interest	128	168	4	10	(73)	(95)	(40)	(51)	(106)	(146)	18	23	13
Financial result	(30)	(62)	(8)	(7)	(29)	(26)	1	3	3	(7)	(68)	(94)	(30)
Net income from investments accounted for using the equity method-net of taxes	6	23	14	14	—	—	—	—	—	—	—	—	—
Net income before tax	**302**	**589**	**(71)**	**55**	**(1,985)**	**(1,149)**	**91**	**59**	**147**	**195**	**(708)**	**408**	**111**
Tax expense	(240)	(159)	15	(12)	499	690	(196)	(87)	184	(107)	232	(136)	(45)
Net income attributable to the parent	**62**	**430**	**(56)**	**43**	**(1,486)**	**(459)**	**(105)**	**(28)**	**331**	**88**	**(476)**	**272**	**66**
Repsol interest	60 %	60 %	48 %	48 %	30 %	30 %	40 %	40 %	50 %	50 %	51 %	51 %	49 %
Consolidation income	**37**	**258**	**(27)**	**21**	**(446)**	**(138)**	**(42)**	**(11)**	**166**	**44**	**(243)**	**139**	**32**
Dividends	**34**	**274**	**41**	**44**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**	**—**
Other comprehensive income [(2)]	**(373)**	**87**	**(35)**	**10**	**1**	**13**	**38**	**(8)**	**27**	**(10)**	**(57)**	**17**	**5**

Note: The amounts itemized in the footnotes feature the Group's percentage of ownership interest in each of the companies:
[(1)] Includes impairment losses on assets at BPRY, Petroquiriquire, Cardón IV and RSRUK, and due to credit risk, mainly at Cardón IV and PQQ (see Note 20).
[(2)] Relates to "*Valuation gains/(losses)*" and "*Amounts transferred to the income statement*" in the statement of recognized income and expense.

Carrying amount of interest in joint ventures:

	RSB		YPFB Andina		BPRY		Petroquiriquire		Cardón IV		RSRUK		Equion
€ Million	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2019
Assets													
Non-current assets	8,366	9,434	699	894	3,191	7,067	106	215	739	1,033	2,921	3,278	36
Current assets	476	1,316	280	435	427	582	345	547	389	309	1,093	1,556	690
Cash and cash equivalents	132	27	41	94	89	74	12	13	3	12	71	8	51
Other current assets (1)	344	1,289	239	341	338	508	333	534	386	297	1,022	1,548	639
Total Assets	**8,842**	**10,750**	**979**	**1,329**	**3,618**	**7,649**	**451**	**762**	**1,128**	**1,342**	**4,014**	**4,834**	**726**
Liabilities													
Non-current liabilities	1,780	2,056	210	234	2,420	5,481	736	898	1,113	1,605	2,730	2,875	20
Financial liabilities	997	933	—	—	1,117	1,656	652	740	826	1,203	58	143	—
Other non-current liabilities	783	1,123	210	234	1,303	3,825	84	158	287	402	2,672	2,732	20
Current liabilities	396	1,432	55	168	895	382	772	913	523	629	159	248	95
Financial liabilities	126	141	—	—	587	—	11	—	7	—	32	—	—
Other current liabilities (1)	270	1,291	55	168	308	382	761	913	516	629	127	248	95
Total Liabilities	**2,176**	**3,488**	**265**	**402**	**3,315**	**5,863**	**1,508**	**1,811**	**1,636**	**2,234**	**2,889**	**3,123**	**115**
NET ASSETS	**6,666**	**7,262**	**714**	**927**	**303**	**1,786**	**(1,057)**	**(1,049)**	**(508)**	**(892)**	**1,125**	**1,711**	**611**
Repsol interest	60 %	60 %	48 %	48 %	30 %	30 %	40 %	40 %	50 %	50 %	51 %	51 %	49 %
Share in net assets (2)	4,000	4,357	343	445	91	536	(423)	(420)	(254)	(446)	574	873	299
Capital gains/(losses)	—	—	—	—	—	—	—	—	—	—	—	—	—
Carrying amount of the investment	**4,000**	**4,357**	**343**	**445**	**91**	**536**	—	—	—	—	**574**	**873**	**299**

Note: The amounts itemized in the footnotes feature the Group's percentage of ownership interest in each of the companies:
(1) With regard to Petroquiriquire, other current assets and liabilities include the offsetting of reciprocal claims and debts with PDVSA under the agreed terms.
(2) Petroquiriquire: in 2020 and 2019 a provision was recognized for contingencies and charges amounting to €423 million and €420 million at December 31, respectively, corresponding to the equity deficit of Petroquiriquire (see Note 15).
Cardón IV: The value of the investment is made equal to zero by deducting the carrying amount from the loan granted to Cardón IV (the balance of which, net impairment, at December 31, 2020 and 2019 amounted to €255 million and €371 million, respectively, and which is considered a net investment (see Note 8.1)). In addition, in 2019 a provision for contingencies and charges was also recognized for the remaining equity deficit in the amount of €75 million.

Regarding joint arrangements and associates that are material or of significant relative importance: (i) there are no applicable legal restrictions on the capacity to transfer funds to Repsol, (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 unrecognized losses.

(14) Other non-current assets

In 2020 and 2019, this heading mainly included accounts receivable from PDVSA in Venezuela (see Notes 20.3) amounting to €293 million (€347 million in 2019) and the deposits associated with the decommissioning of Upstream assets ("sinking funds") amounting to €154 million (€157 million in 2019), mainly in Malaysia and Indonesia. In 2019 it also included the carrying amount of assets whose activity was suspended in Vietnam.

Following the agreement with PetroVietnam to transfer its 51.75% interest in Block 07/03 and 40% interest in Blocks 135 & 136/03 and after having received the related consideration (see Note 24), the carrying amount of these assets was derecognized.

(15) Current and non-current provisions

Repsol makes judgements and estimates that affect the recognition and measurement of provisions for litigation, decommissioning and other contingencies. The final cost of settling complaints, claims and litigation may vary from the estimates previously made due to differences in the identification of dates, interpretation of rules, technical opinions and assessments of the amount of damages and liabilities.

The calculations to recognize provisions for the cost of decommissioning its hydrocarbon production operations are complex, on account of the need to initially 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 used as a result of technological advances and regulatory changes, economic, political and environmental security factors, as well as changes in the initially-established schedules or other terms. The decommissioning 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 2.7%.

The decommissioning provisions associated with refineries and petrochemical facilities are generally not recognized, as the potential obligations cannot be measured, given their undetermined settlement dates. The Group regularly reviews its refineries and long-lived petrochemical assets to detect changes in facts and circumstances that may require the recognition of a decommissioning provision.

Additionally, Repsol makes judgements and estimates in recognizing costs and establishing provisions for environmental clean-up and remediation costs, which are based on current information regarding costs and expected plans for remediation based on applicable laws and regulations, the identification and assessment of the effects on the environment, as well as sanitation technologies.

Therefore, any change in the factors or circumstances related to provisions of this nature, as well as changes in laws and regulations could therefore have a significant effect on the provisions recognized.

15.1) Provisions

At December 31, 2020 and 2019, the balance and changes in these items during 2020 and 2019 are as follows:

	€ Million				
	Provisions for current and non-current contingencies and charges				
	Field decommissioning [3]	Onerous contracts	Legal contingencies	Other provisions [4]	Total
Balance at December 31, 2018	**1,962**	**731**	**105**	**1,133**	**3,931**
Impact of new standards	—	(116)		—	(116)
Balance at January 1, 2019	**1,962**	**615**	**105**	**1,133**	**3,815**
Provisions charged to income [1]	94	105	861	416	1,476
Provisions reversed with a credit to income	(85)	(12)	(16)	(17)	(130)
Cancellation due to payment	(99)	(51)	—	(86)	(236)
Changes in scope of consolidation	(4)	—	12	(1)	7
Translation differences	30	17	2	1	50
Reclassifications and other [2]	(28)	(254)	(16)	93	(205)
Balance at December 31, 2019	**1,870**	**420**	**948**	**1,539**	**4,777**
Provisions charged to income [1]	84	20	14	370	488
Provisions reversed with a credit to income	(22)	(33)	(5)	(21)	(81)
Cancellation due to payment	(54)	(47)	(11)	(86)	(198)
Changes in scope of consolidation	(2)	—	—	(28)	(30)
Translation differences	(144)	(30)	(79)	(22)	(275)
Reclassifications and other [2]	41	—	24	(434)	(369)
Balance at December 31, 2020	**1,773**	**330**	**891**	**1,318**	**4,312**

(1) In 2020 and 2019, this line item included €75 million and €114 million, respectively, reflecting the discounting to present value of provisions and "*Other provisions*" included the provision corresponding to the consumption of CO_2 allowances (see Note 29) for €281 million and €325 million, respectively. In 2019, "*Legal contingencies*" included the provision relating to the arbitration initiated by Addax Petroleum UK Limited in relation to the purchase of Talisman Energy UK Limited (see section 2 of this Note).

(2) In 2020 and 2019 "*Other provisions*"included mainly the derecognition of the CO_2 emissions allowances consumed in 2019 amounting to €320 million (see Note 29) and the adjustment for the negative value of the investments in Petroquiriquire and Cardón IV (see Note 13). In 2019 "*Onerous contracts*" included the reclassification of the provision for onerous charges of the Wholesaler & Trading Gas business in North America to "*Machinery and plant*" (see Notes 12 and 20).

(3) In 2020, a change in the discount rate of +/- 50 bp would have the effect of decreasing/increasing decommissioning provisions by €(101) million and €114 million, respectively.

(4) "*Other provisions*" includes mainly the provisions recognized to cover obligations arising from environmental clean-up and remediation costs (see Note 29), pension commitments (see Note 27), use of CO_2 allowances (see Note 29), employee incentive schemes (see Note 27), provisions for tax risks not related to income tax (see Note 22), provisions for workforce restructuring and other provisions to cover obligations arising from the Group's interests in companies. The tax provisions related to income tax are presented under "*Deferred taxes and other*" in the balance sheet (see Note 23).

The following table provides an estimate of maturities of provisions at year-end 2020:

	Due dates[1] € Million			
	Less than one year	From 1 to 5 years	> 5 years and/or undetermined	Total
Provisions for field decommissioning	104	351	1,318	1,773
Provision for onerous contracts	32	106	192	330
Provision for legal and tax contingencies	1	887	3	891
Other provisions	603	633	82	1,318
TOTAL	**740**	**1,977**	**1,595**	**4,312**

[1] 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 depending on the circumstances on which these estimates are based.

15.2) Disputes

The amounts 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 from past events.

At December 31, 2020, Repsol's balance sheet includes provisions for litigation in the ordinary course of its activities totaling €891 million (€948 million at December 31, 2019). The most significant legal or arbitration proceedings and their status as of the date of authorization for issue of these consolidated Financial Statements are summarized below.

United Kingdom

<u>Addax arbitration in relation to the purchase of Talisman Energy UK Limited (TSEUK)</u>

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. (currently "ROGCI") and Talisman Colombia Holdco Limited ("TCHL") in connection with the purchase of 49% of the shares of TSEUK (currently "RSRUK"). On October 1, 2015, ROGCI and TCHL submitted the answer to the "Notice of Arbitration". On May 25, 2016, Addax and Sinopec formalized the arbitration claim, in which they requested that, in the event that their claims are upheld in full, they be paid the amount of their initial investment in RSRUK, materialized in 2012 through the purchase of 49% of this from TCHL, a wholly-owned subsidiary of ROGCI, together with any additional investment, past or future, in such company, as well as any loss of opportunity that could have occurred, which is estimated to be a total figureof approximately $5,500 million.

The dispute relates to events which took place in 2012, prior to Repsol's acquisition of Talisman in 2015 -and that does not involve any actions by Repsol.

ROCGI and TCHL submitted their response to the arbitration complaint and corresponding evidence on November 25, 2016. Addax and Sinopec submitted a reply brief with additional evidence on May 31, 2017; and ROCGI and TCHL submitted a rejoinder brief and further evidence on August 2, 2017. New expert reports were exchanged on October 18, 2017, November 1, 2017, and May 23, 2018.

ROGCI and TCHL asked the Arbitral Tribunal to dismiss the claims of Addax and Sinopec based on contractual guarantees and in January 2017 the Court decided that it would deliberate on that request prior to other issues. The hearing regarding this request took place on June 19 and 20, 2017. On August 15, 2017, the Arbitral Tribunal issued a Partial Award dismissing Addax and Sinopec warranty claims.

The Arbitral Tribunal decided, among other procedural matters, to split the procedure into two phases: the first addressing liability and the second dealing with the amount of any liability found that, where appropriate, would have been determined. The oral hearing on liability issues took place between January 29 and February 22 and between June 18 and 29, 2018, this last period being devoted mainly to the testimonies of the experts proposed by the parties. The hearing on the oral conclusions was held from July 9 to 11, 2018 and the written conclusions were presented on September 29 and October 12, 2018.

The five main matters in dispute are Reserves, Production, Abandonment, Projects and Maintenance. On January 29, 2020, the Arbitral Tribunal issued its second Partial Award on the first aspect of the five matters to be determined in the liability phase and, although Repsol had considered the claims to be without merit -supported by external advice-, and still does, the Tribunal has decided that ROGCI and TCHL are liable to Sinopec and Addax in respect of that aspect of the claim.

As indicated, the partial Award issued addresses one of the five claims regarding liability. The Court has indicated that it will decide the result of the remaining ones in due time, through subsequent awards, although the time at which they will be issued is currently unknown. In principle, once all of them have been decided, a new procedural phase will be necessary to determine the amounts, whose schedule has not yet been established. It is likely that this calendar should include deadlines for new allegation briefs, evidence, additional expert statements and a new oral hearing. It is estimated that the phase related to the determination of the amount, without taking into account any challenges to the awards, will not be resolved before the first quarter of 2022.

On April 28, 2020, Repsol challenged the partial award in the Singapore courts, as the case had been transferred to the Singapore International Commercial Court (SICC). The oral hearing will be held on March 8, 15 and 18, 2021 (March 19 as a reserve date) and a decision on the action for annulment is therefore expected to be handed down during the second quarter of 2021.

In accordance with the foregoing, the Court still has yet (i) to hand down one or more awards in which it decides on the liability issues relating to the Production, Abandonment, Projects and Maintenance area, and (ii) to process the entire second phase for the quantification of damages.

Although it is not known with certainty the amount of the eventual compensation (if any), since the litigation still has a long way and numerous pending decisions, in view of the partial award issued, Repsol has estimated the economic impacts that could be derived finally and as a whole from the litigation, and therefore has recognized a provision of $940 million in their financial statements as of December 31, 2020.

Additionally, on November 30, 2017 Repsol, S.A. commenced arbitration proceedings against China Petroleum Corporation and TipTop Luxembourg S.A.R.L (Sinopec Group companies) seeking relief from any adverse ruling on the arbitration mentioned above together with other damages yet unquantified. This procedure is based on their conduct towards Repsol during the months leading up to its acquisition of the Talisman Group. They are currently deciding on issues relating to the evidence. The hearing will begin on May 27, 2021 and an award is expected to be handed down during the second half of 2021. If Repsol's claim is upheld, SINOPEC should hold Repsol harmless from any judgment in the other arbitration proceedings.

United States of America

<u>The Passaic River / Newark Bay lawsuit</u>

The events underlying this litigation related to the sale by Maxus Energy Corporation (*"Maxus"*) of its former chemicals subsidiary, Diamond Shamrock Chemical Company ("*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. 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 plant which allegedly contaminated the Passaic River, Newark Bay and other bodies of water and properties in the vicinity.

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") demanding, among other things, that Repsol and YPF be held liable for Maxus' debts. 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. In February 2015, Repsol file a claim against OCC for the $65 million that it had to pay to the State of New Jersey.

On April 5, 2016 the Presiding Judge decided to dismiss OCC's suit against Repsol in full. On June 17, 2016 Maxus filed for bankruptcy with the Federal Bankruptcy Court of the State of Delaware, and also requested the stay of the Cross Claim. On October 19, 2017, the Presiding Judge upheld Repsol's claim against OCC in full, ordering OCC to pay $65 million plus interest and costs.

On September 14, 2018, Maxus (declared by the Federal Bankruptcy Court of Delaware, the successor to OCC -its main creditor- as the claimant in the Cross Claim) filed an appeal against the ruling handed down in these proceeding, and that rejected the claim between Maxus and Repsol. At the same time, OCC filed an appeal against the claim ordering them to pay the $65 million that Repsol had to pay to the State of New Jersey. The hearing for both appeals was held on December 16, 2020.

On June 14, 2018, the Maxus Bankruptcy Administration filed a lawsuit ("*New Claim*") in the Federal Bankruptcy Court of the State of Delaware against YPF, Repsol and certain subsidiaries of both companies for the same claims as those contained in the Cross Claim. In February 2019, the Federal Bankruptcy Court rejected the petitions submitted by Repsol requesting that the Court reject the New Claim from the outset, which implies that the proceedings will be ongoing.

Repsol maintains the view, as has been shown in the Cross Claim, that the claims made in the New Claim and in the Insurance Claim are unfounded.

On December 10, 2019, the bankruptcy managers of Maxus filed an Insurance Claim in Texas against Greenstone Assurance Limited (a historical captive reinsurance company of the Maxus Group and currently 100% owned by Repsol - "Greenstone"), claiming that this company would be required to pay Maxus compensation for the liabilities arising from the indemnity granted to OCC, by virtue of alleged insurance policies issued by Greenstone between 1974 and 1998. Repsol continues to maintain the view that the claims asserted in the Insurance Claim are unfounded. However, the parties have reached a settlement agreement for an amount of $25 million, subject to the signing of a final agreement, and on February 9, 2021, the judge agreed to suspend all deadlines in the proceedings for a period of 30 days.

CURRENT ASSETS AND LIABILITIES

(16) Inventories

Inventories are measured at weighted average cost. Commodities related to trading activity are measured at fair value less costs to sell and changes in value are recognized in the income statement.

The breakdown of "Inventories" at December 31, 2020 and 2019 is as follows:

	€ Million	
	2020	2019
Crude oil and natural gas	1,130	1,457
Finished and semi-finished products	1,653	2,778
Materials and other inventories [(1)]	596	362
TOTAL [(2)]	**3,379**	**4,597**

[(1)] Includes zero-cost CO_2 allowances for a total of €189 million (equal to 7,747 thousand tons).
[(2)] Includes inventory write-downs of €38 million and €51 million at December 31, 2020 and 2019, respectively. The write-downs recognized and reversed amounted to €(8) million and €20 million, respectively (€(6) million and €13 million in 2019).

At December 31, 2020 the balance of commodities, related to trading activity, amounted to €360 million, and the effect of their measurement at market value represented income of €49 million. Recoverable amounts are calculated using forward price curves provided by the market depending on the time horizon for the transactions. The main variables used are: prices taken from official publications (Platt's, Argus, OPIS, brokers, etc.) and historic or mark-to-market premiums, if available.

The decrease in inventories is mainly due to a lower average Brent price in 2020 ($41.8/bbl; compared to $64.2/bbl in 2019) and, to a lesser extent, to the lower volume of products distilled and stored in refineries as a result of falling demand due to COVID-19.

At December 31, 2020 and 2019 the Repsol Group complied with the legal requirements regarding minimum safety stocks established under prevailing legislation (see Appendix III) through its Spanish Group companies.

(17) Trade and other receivables

The breakdown of this heading at December 31, 2020 and 2019 is as follows:

	€ Million	
	2020	**2019**
Trade receivables for sales and services (gross amount)	3,046	3,984
Impairment	(210)	(200)
Trade receivables for sales and services	**2,836**	**3,784**
Receivables from operating activities and other receivables	597	669
Receivables from operations with staff	41	46
Public administrations	202	281
Trade derivatives (Note 9)	200	168
Other receivables	**1,040**	**1,164**
Current tax assets	**180**	**963**
Trade and other receivables	**4,056**	**5,911**

The environment affected by COVID-19 led to a decrease in activity and, therefore, in the balance of accounts receivable for sales and services, without this entailing a significant increase in credit risk (see Note 10.3).

(18) Trade and other payables

Repsol had the following accounts payable classified under *"Trade and other payables"*:

	€ Million	
	2020	**2019**
Suppliers	**2,471**	**3,638**
Payables and others	2,611	2,902
Payables to public administrations	537	600
Derivative financial instruments (Note 9)	208	350
Other payables	**3,356**	**3,852**
Current tax liabilities	**72**	**192**
TOTAL	**5,899**	**7,682**

Information on the average period of payment to suppliers in Spain

The disclosures made in respect of the average period of payment for trade payables are presented in accordance with that established in applicable law.

	Days	
	2020	**2019**
Average period of payment to suppliers [1]	28	24
Ratio of transactions paid [2]	28	24
Ratio of transactions payable [3]	30	30
	Amount (€ Million)	
Total payments made	10,752	11,833
Total payments outstanding	283	625

[1] ((Ratio of transactions paid * total payments made) + (Ratio of transactions payable * total payments outstanding)) / (Total payments made + total payments outstanding).
[2] Σ (Number of days of payment * amount of the transaction paid) / Total payments made.
[3] Σ (Number of days outstanding * amount of the transaction payable) / Total payments outstanding.

In accordance with the transitional provisions of Law 15/2010, the maximum legal payment deadline is 60 days.

INCOME

(19) Operating income

On the same date as these consolidated Financial Statements, Repsol published its 2020 consolidated Management Report, which includes an explanation of performance results and other aggregates.

19.1) Sales and income from services rendered

Income is recognized based on compliance with performance obligations to customers. Income from ordinary activities represents the transfer of committed goods or services to customers for an amount that reflects the consideration to which the entity expects to be entitled in exchange for these goods and services. There are five distinct steps in income recognition: i) identify the customer's contract(s), ii) identify performance obligations, iii) determine the transaction price, iv) assign the transaction price to the different performance obligations, and v) income recognition according to the fulfillment of each obligation. At December 31, there were no relevant performance obligations outstanding with customers.

Most of the Group's business contracts have a single performance obligation that is fulfilled with the delivery of the product, which takes place at a specific point in time.

In sales in which the Group acts as an agent, the Group only recognizes the net interest margin as revenue.

With regard to excise duties (tax on hydrocarbons), this is a single-phase tax and the company assumes the same repercussions as the holder of the tax warehouse (normally CLH), and Repsol subsequently transfers this cost to its customers as part of the price of the product. In other words, Repsol does not act as a mere collection agent for the Spanish Tax Agency as it is not a tax that can be recovered from the tax authorities (for example, in the event of non-payment by the end customer), but rather a tax for which the Group assumes all the risks (for example, also in the event of the destruction or loss of the product) and rewards, and therefore in essence constitutes a production cost to be recovered, where appropriate, through the sale of the product, with the company being free to set the sales price. This is why Repsol considers the tax on hydrocarbons to be a cost incurred and, symmetrically, as an increase in revenue from sales.

In Upstream, income was mainly generated either from the sale of crude oil, condensates and liquefied natural gas and natural gas, or from the provision of hydrocarbon operation services, depending on the contracts in force in each of the countries in which the Group operates. In the Industrial segment, income is generated mainly from the sale of oil products (petrol, fuel oil, LPG, asphalt, lubricants, etc.), petrochemical products (ethylene, propylene, polyolefins and interim products). With regard to Commercial and Renewables, income is generated mainly from the sale of gas (natural gas and LNG) and electricity.

The distribution, by country, of income from ordinary activities ("*Sales*" and "*Income from services rendered*") by segment in 2020 and 2019 is as follows:

	2020	2019
Upstream	2,963	4,678
Industrial	25,142	38,236
Commercial and Renewables	16,315	23,770
Corporate	(11,138)	(17,356)
TOTAL	**33,282**	**49,328**

Note: Includes excise duties levied on hydrocarbon consumption amounting to €5,033 million and €6,850 million in 2020 and 2019, respectively.

The reduction in revenue in 2020 is explained by the economic impacts of the COVID-19 pandemic and, in particular, (i) a decline in realization prices and production volumes in the assets of the Exploration and Production segment, mainly the US, Brazil, Norway and Algeria, (ii) lower activity in industrial complexes due to slack demand for oil products, and (iii) a drop in sales in the commercial businesses as a result of the decline in demand due to mobility restrictions. In addition, the decline in revenue in the Exploration and Production segment was the result of the long-term production shutdowns in Libya due to safety conditions.

For more information, see section 6.1 of the 2020 Management Report.

The distribution, by country, of income from ordinary activities ("*Sales*" and "*Income from services rendered*") in 2020 and 2019 is shown below:

€ Million	2020	2019
Spain	17,088	26,175
United States	1,988	3,052
Peru	1,672	2,846
Portugal	1,912	2,611
Other	10,622	14,644
TOTAL [(1)(2)]	**33,282**	**49,328**

(1) The distribution by geographical area has been drawn up based on the markets to which the sales or income relate.

(2) The distribution of the target markets is as follows: i) EU euro zone: €22,464 million (€33,879 million in 2019), ii) EU non-euro zone: (includes the UK, considering that the transition period agreed with the EU was extended to December 31, 2020, see Note 20.3): €488 million (€396 million in 2019), and iii) Other countries: €10,330 million (€15,053 million in 2019) in 2020 including that generated in the UK following its departure from the EU on January 31, 2020 (see Note 20.3).

19.2) Changes in inventories of finished goods and work in progress

The expense recognized under this heading is explained by the drop in prices in the period for finished goods and work in progress at the industrial complexes, and for unsold inventories in the hydrocarbon exploration and production activities.

19.3) Other operating income

This heading reflects, inter alia, income recognized on the remeasurement of trade derivatives (see Note 9) and the reversal of provisions, taken to the income statement (see Note 15). It also includes operating grants amounting to €18 million and €19 million in 2020 and 2019, respectively.

19.4) Procurements

This heading includes the following items:

	€ Million	
	2020	**2019**
Purchases	24,158	36,960
Changes in inventories	677	(157)
TOTAL	**24,835**	**36,803**

The lower costs of "*Procurements*" were mainly due to lower prices of raw materials and the fall in volumes due to less activity at the industrial complexes.

This heading includes excise duties levied on hydrocarbon consumption mentioned in *"Sales and income from services rendered"* of this Note.

19.5) (Charges for)/Reversal of impairment

These headings include the following items:

	€ Million	
	2020	**2019**
Impairment charges of assets (Notes 10.3, 17, 20)	(2,494)	(5,746)
Reversal of impairment (Note 20)	335	424
TOTAL	**(2,159)**	**(5,322)**

19.6) Personnel expenses

"*Personnel expenses*" includes the following items:

	€ Million	
	2020	**2019**
Remuneration and other	1,407	1,493
Social security costs	438	453
TOTAL	**1,845**	**1,946**

19.7) Exploration expenses

Hydrocarbon exploration expenses in 2020 and 2019 amounted to €253 million and €916 million, of which €86 million and €120 million are recognized under *"Amortization and depreciation of non-current assets"* and €116 million and €690 million under *"(Charges for)/Reversal of impairment"* in 2020 and 2019, respectively.

The geographical distribution of the costs taken to the income statement in respect of exploration activities is as follows:

	€ Million	
	2020	**2019**
Europe	105	134
America	60	143
Africa	24	111
Asia	64	403
Oceania	—	125
TOTAL	**253**	**916**

For more information, see *Information on oil and gas exploration and production activities* (non-audited information) at www.repsol.com.

19.8) Gains/(losses) on disposal of assets

No assets with a significant impact on the income statement were disposed of in 2020 or 2019.

19.9) Transport and freights and other operating expenses

The costs recognized under "*Transport and freight*" decreased as a result of lower prices in the freight market in 2020.

Moreover, "*Other operating expenses*" includes the following items:

	€ Million	
	2020	**2019**
Operator expenses (1)	559	613
Services of independent professionals	439	537
Leases (2)	125	170
Taxes (3)	325	433
Taxes on production	73	154
Other	252	279
Repair and upkeep (4)	258	272
Measurement of trade derivatives (5)	139	305
Consumption of CO_2 allowances (6)	281	325
Others (7)	1,299	2,100
TOTAL	**3,425**	**4,755**

Note: In order to minimize transport costs and optimize the Group's logistics chain, oil product exchanges of a similar nature are carried out with other companies in different geographical locations. These transactions are not recognized in the income statement for the year as individual purchases and sales, but rather any economic differences are recognized at their net amount.

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

(2) In 2020, it included expenses for short-term and low-value leases (€110 million) and for variable payments (€15 million).

(3) They correspond to taxes other than income tax (see Note 23). Taxes on hydrocarbon production in Upstream activities have been paid mainly in Libya, Algeria and Peru. The other taxes reflect mainly local taxes. For further information on taxes paid, see section 8.6 of the consolidated Management Report and the Report on Payments to Governments published by the Company.

(4) Relates to repair, upkeep and maintenance activities carried out mainly at the Group's industrial complexes.

(5) Relates mainly to derivatives arranged in trading activities involving crude oil, gas, oil products and electricity (see Note 9).

(6) See Note 29.1.

(7) Includes, among others, the period provisions.

The decrease in "*Leases*" in 2020 is due to, among other things, the reduction in the variable portion of contracts linked to performance, which has been affected by the environment (lower sales), mainly at service stations. The decrease in "*Taxes*" is explained by the decline in activity and lower prices. The decrease in expenses under "*Measurement of trade derivatives*" is mainly explained by the decline in value of derivatives and commitments over commodities as a result of the drop in price of crude oil and oil products.

"*Consumption of CO_2 allowances*" was reduced as a result of the reduction in activity at industrial complexes due to the drop in demand given the backdrop of COVID-19.

The decrease in "*Others*" compared to 2019 is explained mainly by the period provisions to cover litigation risks, which included the provision during that year corresponding to the arbitration proceedings with Addax (see Note 15).

19.10) Research and development

Research expenses incurred are recognized under "*Other operating expenses*" as expenses for the year and development expenditure is capitalized only if all the conditions established in the accounting standard of reference are met.

The expense recognized in the income statement in connection with research and development activities amounted to €65 million in 2020 and €72 million in 2019. The capitalized expenses corresponding to development activities amounted to €20 million in 2020.

(20) Asset impairment

Impairment test

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 ("impairment test"). If the recoverable amount of an asset is estimated to be less than its net book value, the carrying amount of the asset is reduced to its recoverable amount, and an impairment loss is recognized in the 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.

When there are 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 is given for the recoverable amount of the corresponding asset, and, if applicable, the impairment losses recognized in previous years are reversed. An impairment loss of goodwill cannot be reversed in subsequent years.

If a previously recognized impairment loss is reversed, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, up to the limit of the carrying amount that would have been recorded had no impairment loss on the value of the asset been recognized in previous periods.

Cash-generating units

For the impairment test, assets are grouped into cash-generating units (CGUs) if, when individually considered, they do not generate cash inflows that are independent of the cash inflows from other assets of the CGU. The grouping of assets into the various CGUs implies the use of professional judgements and the determination, among other criteria, of the business units and geographical 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 case of the Industrial, and Commercial and Renewables segments, the CGUs correspond to activities (mainly Refining, Chemicals, Wholesale and Trading Gas, Mobility, LPG, Lubricants, Asphalts and Specialized Products, Electricity Generation and Sale) and geographical areas. In 2020 there were no significant changes in the composition of the CGUs.

Goodwill acquired on a business combination is allocated among the CGUs or groups of CGUs that benefit from the synergies of the business combination, up to the limit of the business segment.

Calculating the recoverable amount

The recoverable amount is the higher of fair value less costs to sell and value in use.

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 after tax expected to derive from the operation of these assets. For specific information on the methodology for calculating the recoverable amount, see Note 3.6.

20.1) Asset impairment test

The Group has assessed the recoverable amount of its cash-generating units as per the methodology described in Note 3 and the scenarios consistent with its new vision of the market, the expected environment and its strategy. The main assumptions are described below:

a) Future price path:

In 2020, in view of the situation in the commodity markets, the social and economic consequences of the COVID-19 pandemic and the foreseeable evolution of the energy transition, the Group reviewed its expectations of future oil and gas prices, modifying the price paths defined at the end of 2019 to bring them into line with the new scenario.

It should be noted that these estimates were made in an environment of high uncertainty, marked by the scenarios of emerging from the COVID-19 crisis, by the dynamics of the energy transition and decarbonization of the economy and, in short, by their possible impacts on the Oil & Gas markets. Against this backdrop, in 2020, compared with the expected oil prices, especially gas prices, in 2019 (see Note 21 to the 2019 consolidated Financial Statements):

- The Brent's path was revised downwards in the short and medium term (until 2024) as a result of a contraction in the demand for oil never seen before and a reaction of supply that was insufficient to adjust to the low demand, despite the fact that the OPEC+ made the biggest production cut in its history and other producers have also taken heavy cuts.

- The Henry Hub path was revised upwards for 2021, due to the drop in gas production and the boost in the demand for gas for the electricity industry and electricity generation in the US, and the path was revised downwards in the medium and long term due to the expectation of greater penetration of renewable energies on a global scale and the consolidation of excess supply in the face of falling global demand.

The new assumptions for the main price references are:

Real terms 2020	**2021-2050[(1)]**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026-2050[(2)]**
Brent ($/ barrel)	59	49	55	58	62	67	59
WTI ($/ barrel)	57	46	52	56	59	64	57
HH ($/ Mbtu)	2.8	2.9	2.8	2.8	2.9	2.9	2.8

[(1)] Average prices for the 2021-2050 period.
[(2)] Average prices for the 2026-2050 period.

The most relevant CO_2 prices for the Group are those of the current EU ETS mechanism (see Note 29.1). For these purposes, the estimated price of the allowances for the 2021-2025 period is $25.0/Tn, $27.0/Tn, $29.2/Tn, $31.5/Tn and $34.0/Tn, respectively ($58.6/Tn in the 2021-2050 period). Specific assumptions have been used for other countries with CO_2 emission allowances or taxes.

These assumptions consider the implementation of the public policies and commitments aimed at boosting the pace of the decarbonization of the economy to achieve the climate change objectives of the Paris Agreement and sustainability goals of the UN. They represent a commitment to the decarbonization of the economy and, therefore, assume the restriction on the use of fossil fuels and the development of new alternative technologies that drive the energy transition; this will mean a reduction in the demand for hydrocarbon products in the medium and long term should be noted. This will require companies to have a strategy in place to adapt to the energy transition that Repsol has already begun.

b) Discount rates:

The discount rate used by Repsol is the weighted average cost of capital employed after tax for each country and business. This rate seeks to reflect current market assessments with regard to the time value of money and the specific risks of the business. Therefore, the discount rate used takes into account the risk-free rate, the country risk, the currency in which the cash flows are generated and the market, credit and business and/or asset risk. For more information, see Note 3.6.

	2020	**2019**
UPSTREAM [(1)]		
Latin America-Caribbean	7.2% - 37.6%	7.5% - 37.6%
Europe and North Africa	7.0% - 18.6%	7.3% - 13.1%
North America	7.5% - 7.6%	8.0%
Asia and Russia	7.4% - 9.2%	7.6% - 10.1%
INDUSTRIAL [(2)]	4.6% - 8.4%	5.2% - 9.0%
COMMERCIAL AND RENEWABLES [(2)]	4.2% - 9.7%	4.2% - 8.7%

[(1)] Discount rates in US dollars.
[(2)] Discount rates in euros and US dollars.

c) Impairment recognized

In 2020 impairment charges have been recognized for the Group's assets in these balance sheet headings:

€ Million	**Notes**	**Total**
Goodwill	11	(667)
Other intangible assets [(1)]	11	(45)
Property, plant and equipment [(1)]	12	(1,190)
Investments accounted for using the equity method [(2)]	13	(932)
Provisions for onerous charges	15	54
Deferred tax assets	22	(236)

[(1)] It does not include impairment losses on unsuccessful exploratory investments (see Note 19.7) amounting to €71 million, recognized in the normal course of operations (apart from the annual calculation of the recoverable amount of the assets).
[(2)] Before tax. Includes the impairment of deferred tax assets of companies accounted for using the equity method.

Impairment, net of reversals, amounted to €-3,016 million before tax (€-2,774 million after tax)[21].

Upstream assets

The Group has recognized net impairment losses in relation to the assets of the Upstream segment[22] amounting to €-3,115 million, before tax, which affect:

- North America (€-885 million): mainly in Canada, because of lower crude oil and gas prices and adjustments to asset development plans.
- Latin America (€-432 million): mainly in Trinidad and Tobago as a result of lower gas prices.
- Europe and North Africa (€-540 million): mainly in the United Kingdom, Norway and Algeria, due to lower gas prices and changes to asset development plans.
- Asia and Russia (€-468 million): mainly in Indonesia, due to new expectations regarding gas demand and prices and in Malaysia as a result of increased costs for reducing emissions.
- Exploratory and development assets (€-121 million): in Russia, Indonesia and Bolivia, due to the lower crude oil and gas prices.
- Goodwill associated with the ROGCI business combination (€-594 million): due to a decrease in the recoverable amount of segment assets

Also, the deferred tax assets allocated to this segment were derecognized by €-75 million (which includes those corresponding to investments accounted for using the equity method).

The recoverable amount of assets impaired in the period stood at €9,383 million.The carrying amount of the cash-generating units of the segment[23] after recognizing the impairment stood at €12,556 million.

Industrial, and Commercial and Renewables assets

An impairment loss before tax of €212 million (net of the provision for onerous charges) recognized for the Gas & Trading business in North America (mainly the Canaport regasification plant and the gas pipelines for transporting gas in Canada and the US) was reversed due to lower procurement costs (lower future gas prices) and transport costs (contracts renegotiated during the year).

Deferred tax assets have also been impaired by €-113 million (see Note 22).

With regard to the rest of the assets of the Industrial, and Commercial and Renewables segments, the new scenarios assumed, in the context of decarbonization and energy transition, consider an environment marked by a reduction in the demand for oil products and fuels, and an increase in the expected cost of CO_2 emissions. The quality of the assets and the capacity of the business models to adapt to the new environment and the new strategic approach means that, even in the new and demanding scenarios, no impairment losses were observed during the year.

20.2) Sensitivities

The changes in estimated future prices or discount rates used would affect the amount of the impairment of the Repsol Group assets. The principal sensibilities to these variations without taking into account the rebalancing of other related variables or the possible adjustments of the operative plans, which would allow the negative impact of the above mentioned variations to be mitigated, are indicated in the table below:

[21] In 2019 provisions, net of reversals, amounted to €6,111 million before tax (€4,867 million after tax)
[22] This relates to the impairment losses recognized under "*Goodwill*", "*Other intangible assets*", "*Property, plant and equipment*" and "*Investments accounted for using the equity method*" before tax.
[23] Includes investments accounted for using the equity method. Does not include goodwill or the carrying amount of exploratory assets.

	Increase (+) / decrease (-)	€ Million (1)	
		Operating income	Net income
Change in hydrocarbons prices	+10%	938	1,188
	-10%	(2,190)	(2,186)
Change in hydrocarbons production	+5%	494	647
	-5%	(1,122)	(1,135)
Change in hydrocarbons prices and production	+10%	1,962	2,213
	-10%	(3,835)	(3,913)
Changes in the margins of Industrial, and Commercial and Renewables	+5%	44	33
	-5%	(213)	(169)
Change in discount rate	+100 b.p.	(1,034)	(915)
	-100 b.p.	425	474

(1) Includes impact on investments accounted for using the equity method.

20.3) Geopolitical risks

Repsol is exposed to risks arising in countries that may present specific economic, social and political circumstances that may have a negative impact on its businesses (unexpected regulatory changes; highly volatile exchange rate; high inflation; possibility of economic and financial crises or political instability or social tensions and public unrest, etc.) and that may have a negative impact on its business.

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

Venezuela

Repsol has a presence in Venezuela through its shareholdings in mixed oil companies and gas licensees. The current situation of crisis in the country generates increased uncertainty regarding business performance. To assess the recoverability of the investments in this country, which include both the investment in the share capital of the companies and the financing granted through loans and trade receivables, it is necessary to use certain hypotheses and assumptions (such as asset development plans, compliance with the agreements signed and changes in the environment) which involves judgements and estimates that may vary from those initially made (see Notes 10 and 13).

Repsol's equity exposure[24] in Venezuela at December 31, 2020 amounted to €320 million, (€239 million at December 31, 2019) which includes mainly the financing granted to its Venezuelan subsidiaries (see Note 8 and 14).

In 2020, the situation of political instability, economic recession (GDP[25] dropped by 35.5% in 2020) and inflation (3,000%[26] in 2020 and it is expected to be 1,000% in 2021) continues and, therefore, the State of Economic Emergency has been extended. Oil production has declined significantly in recent years. There was a significant devaluation of the Venezuelan currency against the euro (€1,359,495/BsS compared to €52,231/BsS at December 31, 2019, the SIMECA[27] exchange rate) with no significant impact on the Group's financial statements, since the functional currency of its subsidiaries in the country is the US dollar, except in the case of Quiriquire Gas[28] (see Note 13).

With regard to international sanctions affecting the Venezuelan government and PDVSA and its subsidiaries, noteworthy of mention is the inclusion in 2020 of various entities, individuals and vessels on the "Specially Designated Nationals and Blocked Persons List" (SDN List) administered by the US government's Office of Foreign Assets Control (OFAC), as they were considered to be responsible for activities that violated or attempted to evade US sanctions against Venezuela, as well as the announcement made on November 17 by the US government that the OFAC General License 8F (now 8G) would be extended with regard to the oil company Chevron and four other US companies in the hydrocarbon sector. However, although these companies will not be able to extract, sell or transport Venezuelan oil, hire additional personnel or pay any dividends to PDVSA or its subsidiaries, they will be able to continue activities aimed at limited maintenance of their operations that are essential for the security or preservation of the assets until June 3, 2021.

Repsol has adopted the measures necessary to continue its activity in Venezuela, with full respect of the applicable international regulations regarding sanctions, including US regulations in relation to Venezuela, and is constantly monitoring

24 Equity exposure relates to the value on the Group's balance sheet of net consolidated assets exposed to own risks of the countries reported.
25 Source: Estimate from the International Monetary Fund.
26 National Price Index of the National Assembly (INPCAN).The Central Bank of Venezuela has not officially released a cumulative inflation figure since 2016.
27 SMC (Foreign Exchange Market System) reference exchange rate.
28 The functional currency of Quiriquire Gas is the bolivar (the carrying amount of the investment is non-existent, so any effect arising from the translation of the bolivar to the euro is not significant).

its development and, therefore, any possible effects it may have on these activities. However, if the current situation continues over the long term or if there are further changes in US policies, our activities in Venezuela could be affected.

The Group assesses the recoverability of its investments and the credit risk on accounts receivable from PDVSA.

With regard to financial instruments, expected loss is calculated by considering the cash flow scenarios expected for the business, weighted by their estimated probability. Three LGD scenarios (moderate, significant and severe) are applied with different assumptions and economic impacts on the estimated cash flows. The probability of occurrence of these scenarios is weighted according to the historical information of sovereign defaults (Moody's Report: "Sovereign Default and Recovery Rates, 1983-2019") and Management's expectations. The estimation of the cash flow scenarios is consistent with those used for the purpose of calculating the recoverable amount of the assets. The assessment of credit risk impairment in Venezuela required estimates of the implications and evolution of a highly uncertain environment, which made it advisable to have an independent expert to validate Management's judgements.

As a result, in 2020 the Group recognized impairment for the credit profile of PDVSA and for the deterioration of the business environment in Venezuela, which affects the value of the financing instruments and accounts receivable from PDVSA (€-70 million) as well as the value[29] of the investments accounted for using the equity method (€-5 million).

Libya

Repsol's equity exposure in Libya as of December 31, 2020 amounts to about €289 million (including primarily property, plant and equipment at that date).

Repsol has operated in Libya since the 1970s when it started exploring in the Sirte Basin. As of December 31, 2020, Repsol has acreage on two contractual areas (namely, NC115 and NC186) with exploration and production activities located in the Murzuq basin in the Sahara desert and whose proved reserves at December 31, 2020 amount to 95.9 million barrels of oil equivalent.

Libya's political situation has entered a new phase since September with the joint declaration of a ceasefire agreed between the GNA (government officially established in Tripoli and supported by the United Nations) and the LNA (Libyan National Army) with the endorsement of the international community. On February 5, 2021, the Libyan Political Dialogue Forum (LDPF), sponsored by the UNSMIL (United Nations Support Mission for Libya), achieved a major breakthrough: the creation of a transitional government that will lead the country until elections in December 2021. The Forum, composed of 75 elected officials from all over Libya, elected Mohammad Younes Menfi, a former diplomat, as president of the new government, and Abdul Hamid Mohammed Dbeibah, a businessman from Misrata, as the new prime minister, while Mossa Al-Koni and Abdullah Hussein Al-Lafi will be vice-presidents. The new list defeated the one that a priori started out as the favorite, headed by the president of the Parliament in Tobrouk, Aquilah Saleh. This new government must form a Cabinet that is representative of various regions and interests in order to reconcile the country.

Production at the El Sharara Field, which had been discontinued since January 19, was restored on October 11, 2020. Repsol's net crude oil production in 2020 amounted to 9.35 thousand barrels of oil per day (vs. 29 thousand barrels of oil per day during the same period in 2019).

Algeria

Repsol's equity exposure in Argelia at December 31, 2020 amounted to about €434 million (including mainly property, plant and equipment at that date). This was lower than at December 31, 2019 after the impairment recognized in profit and loss (see Note 20.1).

In Algeria, Repsol has three blocks in the production/development phase (Reggane Nord, block 405a (with the MLN, EMK and Ourhoud licenses) and Tin Fouyé Tabankort II (TFT)).

Net average production in Argelia in 2020 came to 25,9 thousand barrels of oil equivalent per day (31.5 kboe in 2019) from Reggane Nord, block 405a and TFT.

The estimated net proved reserves at December 31, 2020 amount to 45.4 million barrels of oil equivalent. Around 50% of the net proved reserves refer to the gas production project at Reggane, which is located in the Algerian Sahara in the Reggane basin. Repsol holds a 29.25% interest 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 Italy's Edison (11.25%). The net production of the Reggane project in 2020 amounted to 7.9 thousand barrels of oil equivalent per day.

[29] Recognized under "*Provision for/(Reversal of) provisions for impairment*" (see Note 20.1) and "*Impairment of financial instruments*" (see Note 21) in the income statement.

Following the election of Abdelmayid Tebboune in the elections called in December 2019, Algeria has started a process of political and economic reform, which means that the rules are constantly evolving and changing. The economic and social situation of the country was complicated by the Covid-19 pandemic and the drop in price of crude oil and gas, and political instability has continued despite the election of President Tebboune.

BREXIT

In the referendum held on June 23, 2016, the United Kingdom approved its exit from the European Union. After the absolute majority victory of the conservative party in the elections on December 12, 2019, Parliament voted in favor of the draft bill of the withdrawal agreement, which was finally approved. The UK left the EU on January 31, 2020, following the agreement ratified by both the EU and the House of Commons. A transitional period was established until December 31, 2020, during which the United Kingdom remained in the European market. As of January 1, 2021 the relationship between the UK and the European Union is based on the "Trade and Cooperation Agreement".

The Group's exposure in the United Kingdom is limited mainly to its interest in Repsol Sinopec Resources UK Limited (RSRUK), which operates a mature business engaging in hydrocarbon exploration and production activities and whose functional currency is the US dollar, meaning that even under the most extreme Brexit scenarios no significant risks have been detected.

With regard to the extraction, transport and sale of hydrocarbons, no substantial changes are expected, as the British government has always had sovereignty and control over the key aspects for the sector, such as the licensing of mineral concessions and the tax framework for the activities of oil companies. The messages received by the sector during the Brexit process is one of regulatory stability.

The European Union Emission Trade System (EU ETS)[30] was affected by BREXIT, due to the fact that the European Commission decided to suspend any free allocation of benefits involving the United Kingdom. After signing the exit agreement, it was announced that effective as of January 1, 2021, the United Kingdom's own emission allowances market (UK ETS) will replace the current European emission allowances market (EU ETS). The economic impact of this is still unknown.

(21) Financial result

The financial result has improved compared to 2019 mainly due to the exchange gains recognized as a result of the weakening of the dollar against the euro and the favorable valuation of derivatives on treasury shares (options, see Note 9).

The breakdown of financial income and expenses in 2020 and 2019 is as follows:

€ Million	2020	2019
Financial income	96	148
Financial expenses	(340)	(391)
Net interest [(1)]	**(244)**	**(243)**
By interest rate	29	59
By exchange rate	(293)	98
Other positions	116	59
Change in fair value of financial instruments [(2)]	**(148)**	**216**
Exchange gains/(losses) [(3)]	**406**	**(27)**
Impairment of financial instruments	**57**	**6**
Adjustment for provision discounting	(82)	(105)
Interim interest	86	78
Financial restatement of lease liabilities	(200)	(185)
Gains/(losses) on disposal of financial instruments		—
Others	(16)	(41)
Other financial income and expenses	**(212)**	**(253)**
FINANCIAL RESULT	**(141)**	**(301)**

(1) Includes interest income from financial instruments valued at amortized cost in the amount of €96 million (€146 million in 2019).
(2) Includes the results from the valuation and settlement of derivative financial instruments (see Note 9). "*Other provisions*" includes the results from the settlement of derivatives on treasury shares (see Note 6.2).
(3) Includes the exchange gains and losses generated by the valuation and settlement of monetary items in foreign currency. The improvement compared

[30] Under the multilateral trading system for greenhouse gas emissions, each Member State has a National Emission Allowance Allocation Plan that specifies a basket of greenhouse gas emissions, so that in order to comply with the Plan, companies can reduce their emissions by adjusting to the allowances allocated free of charge or turning to the market to cover their deficit.

to 2019 is explained by exchange gains arising from the impact of changes in the exchange rate of the dollar in the period on financing instruments.

(22) Taxes

The appropriate assessment of the income tax expense is dependent on several factors, including estimates on the timing and realization of deferred tax assets and the timing of income tax payments. Collections and payments may be materially different from these estimates as a result of changes in the expected performance of the Company's businesses or in tax regulations or their interpretation, as well as unforeseen future transactions that impact the Company's tax balances

Deferred tax assets are only recognized when it is considered 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.

Deferred tax assets are reviewed when there are indications of impairment, and in any event once a year, to verify that they still qualify for recognition and they are considered to be recoverable in the future, and the appropriate adjustments are made on the basis of the outcome of the analyses performed. These analyses are based on: (i) assumptions made to analyze the existence or otherwise of sufficient future earnings for tax purposes that might offset the tax losses or apply existing tax credits, based on the approach used to ascertain the presence of indications of impairment on its assets; (ii) the assessment of earnings estimates for each entity or tax group in accordance with their individual business plans and 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.

22.1) Applicable taxes

With regard to taxation and, particularly, income tax, the 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 comprising the Group.

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 under Spain’s consolidated tax regime. Under this regime, the companies comprising the tax group jointly determine the Group’s taxable profit and tax liability.

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. The aforementioned Consolidated Tax Group was composed of 82 companies in 2020, the most significant of which are: Repsol, S.A., Repsol Petróleo, S.A., Repsol Trading, S.A., Repsol Química, S.A., Repsol Butano, S.A., Repsol Exploración, S.A., Repsol Comercial de Productos Petrolíferos, S.A. and Repsol Electricidad y Gas, S.A.

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

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 have been taxed at the general rate of 25% in 2020, 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 regime of Vizcaya, is taxed at 24%.

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 tax on their presumed minimum 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, with the permanent establishments of the Spanish companies that carry out hydrocarbon 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	Country	Tax rate
Algeria [1]	38 %	Norway	78 %
Bolivia	25 %	Netherlands	25 %
Brasil	34 %	Peru	29,5%
Canada [2]	25 %	Portugal	22.5% - 31.5%
Colombia	32 %	United Kingdom	40 %
Ecuador	25 %	Russia	20 %
United States [3]	21 %	Singapore	17 %
Indonesia	32.5% - 44%	Trinidad and Tobago	55% - 57.2%
Libya	65 %	Venezuela	34% (Gas) and 50% (Oil)
Malaysia	38 %	Vietnam	32% - 50%
Mexico	30 %		

(1) Plus tax on exceptional profits (TPE).
(2) Federal and provincial rate.
(3) Does not include state taxes.

22.2) Accrued income tax expense

The table below shows how the accrued income tax expense for accounting purposes in 2020 and 2019 was calculated:

	€ Million	
	2020	**2019**
Current tax (expense)/income for the year	(105)	(948)
Adjustments to current tax [1]	13	(184)
Current income tax (expense)/income (a)	**(92)**	**(1,132)**
Deferred tax (expense)/income for the year	296	979
Adjustments to deferred tax [2]	(220)	(435)
Deferred income tax (expense)/income (b)	**76**	**544**
Income tax (expense)/income(a+b)	**(16)**	**(588)**

(1) Includes changes in tax provisions amounting to €-51 million and other current tax adjustments amounting to €37 million.
(2) Includes the derecognition of deferred tax assets amounting to €-236 million and other deferred tax adjustments amounting to €16 million.

The reconciliation of "*Income tax expense*" recognized and the expense that would result from the application of the nominal income tax rate existing in the country of the parent company (Spain) to the net income before tax and investees is as follows:

	€ Million	
	2020	**2019**
Profit before income tax	**(3,304)**	**(3,201)**
Profit of investments accounted for using the equity method	(609)	351
Profit before income tax and profit of investments accounted for using the equity method	**(2,695)**	**(3,552)**
General nominal income tax rate in Spain	25 %	25 %
Income tax (expense)/income at the general nominal rate in Spain	**674**	**888**
Additional income tax (expense)/income due to adjustments to nominal rates other than the general rate in Spain [1]	83	(385)
Increased income tax expense from non-deductible expenses [2]	(644)	116
Lower income tax expense due to application of mechanisms to avoid double taxation [3]	45	(620)
Lower income tax expense due to application of tax credits and incentives [4]	77	67
Income tax (expense)/income due to adjustments for deferred taxes [5]	(236)	(536)
Income tax (expense)/income due to provision/reversion of provisions for income tax risks	(51)	(85)
Other items	36	(33)
Income tax (expense)/income	**(16)**	**(588)**

(1) Profit taxed abroad or in Spain at rates other than 25% (special hydrocarbons regime, regional regimes, etc.).
(2) Corresponds mainly to accounting provisions that are not tax deductible (the most noteworthy were those for impairment of assets described in Note 20).
(3) Includes mechanisms to prevent international and internal double taxation, whether in the form of exemptions, tax relief and tax credits.
(4) Mainly relates to tax credits in Spain for R&D and other tax credits.
(5) Includes the derecognition of deferred tax assets (€236 million in 2020) that have not passed the recoverability test in the new scenarios of lower oil and gas prices used in calculating the recoverable amount of the assets (see Note 20).

22.3) Deferred taxes

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	**2020**	**2019**
Tax losses, tax credits and similar benefits not yet used	3,122	3,193
Amortization differences for tax and accounting purposes	(1,214)	(1,648)
Provisions for field decommissioning (non-deductible)	543	617
Staff and other non-deductible provisions	476	555
Other deferred taxes	252	507
Total deferred tax	**3,179**	**3,224**
Provisions for contingencies related to income tax[1]	(1,576)	(1,549)
Net deferred tax and other taxes	**1,603**	**1,675**

[1] The changes in provisions for contingencies related to income tax is as follows: (i) provisions/reversals charged to profit or loss, €-51 million; (ii) reclassifications/payments, €42 million; and (iii) translation and other differences, €-18 million.

The tax assets recognized corresponding to tax losses and tax loss carryforwards amount to €3,122 million and correspond mainly to:

Country	€ Million	Legal expiry	Estimated recoverability
Spain	2,003	No time limit	In less than 10 years
United States	808	20 years	Mostly in 10 years
Luxembourg	131	No time limit	In less than 10 years
Other	180	-	-
Total	**3,122**		

Below is a breakdown of changes in deferred tax:

€ Million	**2020**	**2019**
Opening balance for the year	**3,224**	**2,863**
Impact of the new standards	—	13
Adjusted opening balance	**3,224**	**2,876**
Income (expense) in income statement	58	550
Income (expense) in equity	—	(7)
Translation differences for balances in foreign currency	(101)	(41)
Other items	(2)	(154)
Balance at year end	**3,179**	**3,224**

In 2020, following the review performed by the Group, the new scenarios of prices determined for the asset impairment test made it difficult to justify the full recovery of certain deferred tax assets (see Note 3.6), in particular in Canada (see Note 20) and, therefore, the Group has reduced the deferred tax assets recognized by €236 million (does not include impairment losses on joint ventures, see Note 13 and 20).

The Group had deferred tax assets not recognized of €5,021 million at year-end 2020, mainly in Luxembourg (€3,458 million, most of which has no limitation period), the US (€585 million, valid between 2028 y 2037), Canada (€520 million, valid between 2031 y 2040) and Spain (€200 million, without a limitation period). The amount for 2019 totaled €3,885 million.

The Group has unrecognized deferred tax liabilities of €113 million and €95 million at year-end 2020 and 2019, respectively. This mainly relates to taxable temporary differences associated with investments in subsidiaries, associates and permanent establishments that qualify for the exemption provided for under IAS 12.

22.4) Government and legal proceedings with tax implications

In accordance with prevailing tax legislation, tax returns cannot be considered final until they have been audited by the tax authorities or until the statute of limitations period in each tax jurisdiction has expired.

The time frame for which the Group companies have their tax returns open for audit with regard to the main applicable taxes are as follows:

Country	Years	Country	Years
Algeria	2016 - 2020	Malaysia	2015 - 2020
Australia	2016 - 2020	Norway	2018 - 2020
Bolivia	2015 - 2020	Netherlands	2019 - 2020
Canada	2014 - 2020	Peru	2016 - 2020
Colombia	2015 - 2020	Portugal	2017 - 2020
Ecuador	2017 - 2020	United Kingdom	2014 - 2020
Spain	2017 - 2020	Singapore	2016 - 2020
United States	2017 - 2020	Trinidad and Tobago	2015 - 2020
Indonesia	2015 - 2020	Venezuela	2014 - 2020
Libya	2013 - 2020		

Whenever discrepancies arise between Repsol and the tax authorities with respect to the tax treatment applicable to certain operations, the Group behaves towards the authorities in a transparent and cooperative manner in order to resolve the resulting controversy, using the legal avenues available with a view to reaching non-litigious solutions. However, as in prior years, this year there are administrative and legal proceedings with tax implications that may have an adverse impact on the Group's interest and that have given rise to litigation proceedings that could result in additional 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.

As a general rule, the Group recognizes provisions for tax-related proceedings that it deems it is likely to lose. 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 from past events in these matters.

In view of the uncertainty generated by the materialization of existing tax risks associated with litigation and other tax contingencies, the Group has recognized provisions that are considered adequate to cover the aforementioned risks. At December 31, 2020, the Group had recognized €1,576 million relating to uncertain income tax positions (€1,549 million at December 31, 2019). In addition, it recognized other tax provisions amounting to €101 million (€131 million at December 31, 2019), which are presented under "*Other provisions*" in Note 15.

At December 31, the main tax-related proceedings concerning the Repsol Group were as follows:

Bolivia

YPFB Andina, S.A. is involved in a lawsuit regarding the deductibility of royalty payments and hydrocarbon shares from the Company's income tax. A judgment has been handed down at first instance, rejecting the company's claim; the lawsuit is currently awaiting a ruling at second stage. The Company believes, despite the ruling handed down at first instance in 2019, that its position is expressly supported by law.

Brazil

Petrobras, as operator of the Albacora Leste, BMS 7, BMES 21 and BMS 9 consortia (in which Repsol has a 10%, 37%, 11% and 25% interest, respectively) received diverse tax assessments (IRRF, CIDE and PIS/COFINS)[31] for tax years 2008 to 2013, in connection with payments to foreign companies for charter contracts for exploration platforms and related services used for activities in the blocks.

Likewise, Repsol Sinopec Brasil received assessments for the same items and taxes (tax years 2009 and 2011), in connection with payments to foreign companies for contracts for exploration charters and related services used in blocks BMS 48, BMS 55, BMES 29 and BMC 33, in which Repsol Sinopec Brasil is the operator.

[31] IRRF: Imposto de Renda Retido na Fonte (Withholding tax), CIDE: Contribuição sobre Intervenção no Domínio Econômico (Contribution on Economic Activities), PIS: Programa de Integração Social (Social Integration Program) and COFINS: Contribuição para o financiamento da seguridade social (Contribution for Social Security Financing).

These lawsuits are currently limited to CIDE and PIS/COFINS, after the company availed itself of a program authorized by Law 13,586/17, which made it possible to reduce the amount in dispute regarding personal income tax (IRRF) through the retroactive application of the price determination percentages (split) contained in this Law, abandoning the lawsuits in progress and without any penalties being applicable.

All these assessments have been appealed in administrative or court proceedings (at first or second instance), with a favorable ruling at second instance. The Company considers that it has acted in accordance with the law and in line with general practice in the sector.

Canada

The Canadian Revenue Agency (CRA) periodically reviews the tax situation of the companies of Repsol Oil & Gas Canada Inc. (ROGCI, formerly Talisman Group, acquired by Repsol in 2015) resident in Canada. In recent years, and by applying good tax practices, Repsol has obtained a rating for ROGCI as a low-risk taxpayer, which has allowed it to reach agreements with the CRA. In 2020, the tax audit of international operations for tax years 2011, 2012 and 2013 was concluded with an agreement reached and without any significant impact for the Group. International operations from 2014 and 2015 and corporate income tax for 2015 and 2016 are currently being audited.

Spain

Proceedings relating to the following corporate income tax years are still open.

- Financial years 2006 to 2009. The matters discussed relate mainly to transfer prices, deduction of losses for investments abroad and deductions for investments, the majority of them as a result of changes in the criteria maintained by the Administration in previous actions. In relation to the transfer price adjustments, the settlements were annulled as a consequence of the resolution of a dispute by the Arbitration Board of the Economic Agreement with the Basque Country, the resolution of an amicable procedure with the US and two rulings handed down by the Central Economic Administrative Tribunal; the tax authorities issued a new assessment for the 2007-2009 period applying the criteria already accepted in subsequent years by the Administration and the taxpayer (the assessment for 2006 is still pending). In relation to the other matters, the Central Economic Administrative Court partially upheld the Company's appeal, and the Company has appealed to the National High Court with regard to the aspects that were not upheld (tax incentives for R&D, deduction of losses on overseas business), as the Company believes it has acted within the law.

- Financial years 2010 to 2013. The actions were concluded in 2017 without any penalties being imposed and, for the large part, by means of assessments signed on an uncontested basis or agreements from which no significant liabilities have arisen for the Group. However, with regards to two issues (deductibility of interest for the late payment of taxes and the deduction of losses on overseas business), the administrative decision has been subject to appeal, as the Company believes it has acted within the law. The Central Economic Administrative Tribunal has rejected this claim. An appeal for judicial review has been lodged with the National Appellate Court against the ruling of the Central Economic Administrative Tribunal.

- Financial years 2014 to 2016. The audit ended in December 2019 without the imposition of any penalty and, for the most part, with assessments signed on an uncontested basis or agreements that did not generate significant liabilities for the Group. However, there are still disputes regarding the deduction of losses for foreign investments and the corresponding claim has been filed against the administrative ruling, since the Company believes that its actions have been in accordance with the law.

Indonesia

The Indonesian tax authorities have been questioning various aspects regarding the taxation of the profits of the permanent establishments that the Group has in the country, in particular with regard to the application of the reduced rate of the double taxation treaties signed by Indonesia. The company considers that its actions are in line with general practice in the sector and are in accordance with the law and, therefore, the disputes on which the aforementioned actions are based are being appealed through administrative proceedings or a ruling has yet to be handed down by the courts.

Malaysia

Repsol Oil & Gas Malaysia Ltd. and Repsol Oil & Gas Malaysia (PM3) Ltd., the Group's operating subsidiaries in Malaysia, have received tax assessments from the Inland Revenue Board (IRB) with regard to tax years 2014, 2015 and 2016 questioning the deductibility of certain expenses. The assessments were appealed as the Company considered that its actions were in accordance with the law.

The Company does not expect any additional liabilities to arise that could have a significant impact on the Group's profit as a result of the above proceedings.

(23) Earnings per share

The earnings per share at December 31, 2020 and 2019 are detailed below:

Earnings per share (EPS)	**2020**	**2019**
Net income attributed to the parent (€ million)	(3,289)	(3,816)
Adjustment to the interest expense on subordinated perpetual bonds (€ million)	(54)	(29)
Weighted average number of shares outstanding (millions of shares) [1]	1,572	1,649
Basic and diluted earnings per share (euros/share)	(2.13)	(2.33)

[1] The outstanding share capital at December 31, 2019 came to 1,527,396,053 shares, although the average weighted number of shares outstanding for the purposes of calculating earnings per share on said date includes the effect of capital increases undertaken as part of the "*Repsol Flexible Dividend*" shareholder remuneration program, as per the applicable accounts regulations (see Note 3.2).

CASH FLOWS

(24) Cash flow

24.1) Cash flow from operating activities

During 2020 the cash flow from operating activities amounted to €2,738 million compared to €4,849 million in 2019. The decrease was due mainly to lower crude oil prices and lower demand for products, and therefore to lower volume in many of the Group's businesses as a result of the international crisis triggered by COVID-19 (see Note 2.3). The lower revenue was partly offset by the effect on working capital of the lower cost of inventories (price of inventories in the industrial businesses) and by lower tax payments.

The breakdown of *"Cash flows from operating activities"* in the statement of cash flows is as follows:

		€ Million	
	Notes	**2020**	**2019**
Net income before tax		**(3,304)**	**(3,201)**
Adjusted result:		**5,074**	**8,632**
Amortization of non-current assets	3, 11 and 12	2,207	2,434
Operating provisions	10.3, 15 and 20	2,204	6,600
Net income from the disposal of assets		(102)	(147)
Financial result	21	141	301
Share of results of companies accounted for using the equity method, net of taxes	13	609	(351)
Other adjustments (net)		15	(205)
Changes in working capital:		**1,000**	**137**
Increase/Decrease in accounts receivable	17	985	276
Increase/Decrease in inventories	16	1,525	(182)
Increase/Decrease in accounts payable	18	(1,510)	43
Other cash flows from operating activities:		**(32)**	**(719)**
Dividends received		183	464
Income tax refunded/(paid) [1]		100	(975)
Other proceeds from/(payments for) operating activities [2]		(315)	(208)
Cash flows from operating activities		**2,738**	**4,849**

[1] In 2020, of particular note were corporate income tax refunds in Spain and Norway. In 2019, the tax payments in Spain (installment payments for tax group 6/80), Libya and Indonesia are noteworthy of mention. For further information on the Group's tax contribution, see section 8.6 of the 2020 consolidated Management Report and Appendix III *"Responsible tax policy"*.
[2] Includes mainly payments for the application of provisions (see Note 15).

24.2) Cash flows from investing activities

During 2020 the net cash flow from investing activities resulted in the net payment of €222 million.

"(Payments for)/proceeds from investments in Group companies and associates" includes €878 million for the tax refund (income tax prepayment) attributed to the divestment in Naturgy in May 2018 and the compensation for the divestment in Vietnam (see Note 14).

"*(Payments for)/proceeds from investments in property, plant and equipment, intangible assets and investment property*" (€(1,782) million) decreased significantly with respect to the comparative period in line with reduction targets under the Resilience Plan, due to lower expenditure on assets in the Exploration and Production segment and the Industrial segment; with capital expenditure partially offset, however, in the new electricity businesses and renewable projects in the Commercial and Renewables segment.

"*(Payments for)/proceeds from investments in other financial assets*" reflected net disposals of €1,074 million through termination of time deposits in the period and the changes in loans extended to joint ventures.

24.3) Cash flows from financing activities

In 2020 the net cash flow from financing activities resulted in a net payment of €1,615 million which represents a decrease of 29.4% with respect to 2019 due to the net issuance of equity instruments (see Note 6) and debt (see Note 7) in 2020, lower purchases of own shares, lower cash payments to shareholders (who mostly chose to receive shares), and lower interest payments (lower borrowing costs) than in 2019.

In short, Cash and cash equivalents increased by €1,342 million compared to December 31, 2019 to reach €4,321 million. The strong cash position, a part of the Group's liquidity (see Note 10), allowed the Group to cope with the adverse international environment as a result of the COVID-19 pandemic.

The breakdown of the changes to liabilities linked to financing activities in 2020 is as follows:

	€ Million					
	2019	2020				
			Non-cash changes			
	Opening balance [1]	Cash flows	Exchange rate effect	Changes in FV	Others [3]	Closing balance [1]
Bank borrowings	2,245	(1,284)	(56)	—	32	937
Bonds and other marketable securities	7,920	(116)	(32)	—	179	7,951
Derivatives (liabilities)	118	(792)	27	979	12	344
Loans [2]	3,915	10	(362)	—	117	3,680
Other financial liabilities	136	(35)	(9)	—	7	99
Lease liabilities	3,133	(528)	(182)	—	568	2,991
Shareholder remuneration and perpetual bonds	1,137	540	—	—	362	2,039
Treasury shares and own equity instruments	(1,170)	(378)	—	—	1,386	(162)
Total liabilities from financing activities	**17,434**	**(2,583)**	**(614)**	**979**	**2,663**	**17,879**
Derivatives (assets)	(110)	887	(191)	(827)	1	(240)
Other proceeds from/payments for financing activities	73	81	—	—	(154)	—
Total other assets and liabilities	**(37)**	**968**	**(191)**	**(827)**	**(153)**	**(240)**
Total	**17,397**	**(1,615)**	**(805)**	**152**	**2,510**	**17,639**

[1] Corresponds to the current and non-current balance on the balance sheet.
[2] Includes loans to companies accounted for using the equity method.
[3] This mainly includes the capital reduction carried out during the year through the redemption of treasury shares amounting to €1,221 million (see Note 6.2), the increase in liabilities due to the addition of leases, and the accrual of interest and dividends.

The breakdown of the changes to liabilities linked to financing activities in 2019 is as follows:

	€ Million					
	2018	2019				
			Non-cash flow items			
	Opening balance [1]	Cash flows	Exchange rate effect	Changes in FV	Others [3]	Closing balance [1]
Bank borrowings	1,912	215	34	—	84	2,245
Bonds and other marketable securities	8,098	(365)	16	—	171	7,920
Derivatives (liabilities)	106	(466)	8	461	9	118
Loans (2)	3,449	276	66	—	124	3,915
Other financial liabilities	116	9	2	—	9	136
Lease liabilities	1,624	(425)	44	—	1,890	3,133
Shareholder remuneration and perpetual bonds	1,204	(396)	—	—	329	1,137
Treasury shares and own equity instruments	(350)	(1,844)	—	—	1,024	(1,170)
Total liabilities from financing activities	**16,159**	**(2,996)**	**170**	**461**	**3,640**	**17,434**
Derivatives (assets)	(77)	634	(5)	(662)	—	(110)
Other proceeds from/payments for financing activities	—	73	—	—	—	73
Total other assets and liabilities	**(77)**	**707**	**(5)**	**(662)**	**—**	**(37)**
Total	**16,082**	**(2,289)**	**165**	**(201)**	**3,640**	**17,397**

[1] Corresponds to the current and non-current balance on the balance sheet.
[2] Includes loans to companies accounted for using the equity method.
[3] This mainly includes the capital reduction carried out during the year through the redemption of treasury shares amounting to €1,024 million (see Note 6.2), the increase in liabilities due to the addition of leases, and the accrual of interest and dividends.

OTHER DISCLOSURES

(25) Commitments and guarantees

25.1) Contractual commitments

Commitments consist of future unconditional obligations (non-cancellable, or cancellable only under certain circumstances), as a result of commercial agreements. These commitments were quantified using Repsol's best estimates, and, if fixed total amounts were not stipulated, using price estimates and other variables that are consistent with those considered for calculating the recoverable amount of the assets (see Notes 3 and 20).

At December 31, 2020, the Group has contractually committed to the following purchases, investment and other expenditures:

€ Million	**2020**	**2021**	**2022**	**2023**	**2024**	**Subsequent years**	**Total**
Purchase commitments	**2,893**	**1,171**	**1,282**	**1,286**	**1,261**	**16,568**	**24,461**
Crude oil and others [(1) (3)]	1,962	435	370	372	360	3,166	6,665
Natural gas [(2) (3)]	931	736	912	914	901	13,402	17,796
Investment commitments [(4)]	**510**	**202**	**174**	**117**	**68**	**115**	**1,186**
Provision of services [(5)]	**400**	**287**	**213**	**141**	**102**	**256**	**1,399**
Transport commitments [(6)]	**181**	**166**	**156**	**96**	**73**	**295**	**967**
TOTAL	**3,984**	**1,826**	**1,825**	**1,640**	**1,504**	**17,234**	**28,013**

(1) 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 2021) and with Overseas Petroleum and Investment Corporation (expires in 2021).

(2) Primarily includes commitments to purchase liquefied natural gas (LNG) in North America (with "take or pay" clauses). These contracts are classified for accounting purposes as "own use". Long-term firm commitments for the purchase and sale of gas and crude oil are analyzed to determine whether they correspond to the supply or marketing needs of the Group's normal business activities (own use), or whether, on the contrary, they should be considered a derivative and recognized in accordance with the criteria established in IFRS 9 (see Note 9).

(3) Committed crude oil and gas volumes are as follows:

Purchase commitments	Unit of measurement	2020	2021	2022	2023	2024	Subsequent years	Total
Crude oil	kbbl	28,892	186	187	183	180	483	30,111
Natural gas								
Natural gas	Tbtu	52	35	27	16	16	9	155
Liquefied natural gas	Tbtu	158	114	162	165	164	2,316	3,079

(4) Includes mainly investment commitments in Spain, Algeria, Norway, Chile and Bolivia amounting to €389 million, €161 million, €100 million and €80 million, respectively.

(5) Includes mainly commitments associated with hydrocarbon exploration and productions activities in Upstream totaling €745 million and commitments for technological developments amounting to €285 million.

(6) Includes, primarily, hydrocarbon transportation commitments in North America, Peru and Indonesia amounting to approximately €936 million.

25.2) Guarantees

In the course of its business activities, Repsol assumes guarantees of various types and content for third parties or companies whose assets, liabilities and earnings are not presented in the consolidated financial statements (joint ventures and associates). The guarantees cannot be considered a definite outflow of resources to third parties, as the majority of these guarantees will mature without any payment obligation arising. At the date of issue of these consolidated Financial Statements, the probability of a breach that would trigger a liability for these commitments to any material extent is remote.

At December 31, 2020, the most significant guarantees for the fulfillment of obligations are:

– For the rental of three floating production platforms for the development of the BMS 9 field in Brazil: (i) a guarantee for $475 million corresponding to 100% of RSB's obligations (see Note 13), for which Repsol holds a counter guarantee from China Petrochemical Corporation in respect of the latter's 40% interest in RSB; and (ii) two additional guarantees of $435 million and $400 million, corresponding to the 60% interest held by the Group in RSB. The guaranteed amounts are reduced annually until 2036, the date on which the contracts are completed.

– For 51% of the guarantees for the decommissioning of RSRUK in the North Sea, for £615 million.

In addition, in line with general industry practice, the Group grants guarantees and commitments to offset obligations arising in the ordinary course of business and activities, and for any liabilities arising from its activities, including environmental liabilities and for the sale of assets.

Guarantees granted in the ordinary course of business correspond to a limited number of guarantees totaling €61 million. In Venezuela an undetermined guarantee has been granted to Cardón IV to cover the commitment to supply gas to PDVSA until 2036. However, PDVSA has provided a guarantee to Cardón IV to cover collection rights for the supply commitment; the Group has also provided a guarantee to the Republic of Venezuela to cover the obligations assumed in the development of gas assets in the country.

Environmental guarantees are arranged in the normal course of hydrocarbon exploration and production operations, however, the probability of occurrence of the contingencies covered is remote and their amounts indeterminable.

Outstanding guarantees for asset sales, granted in accordance with general industry practice, are immaterial. Of recent note are those granted in the sale of LNG assets to Shell in 2015.

(26) 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, the Company's significant shareholders that are deemed related parties are:

Significant shareholders	Total as % of share capital December 31, 2020
Sacyr, S.A. (1)	8.034

Note: Data available to the Company at December 31, 2020 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) Sacyr, S.A. holds its investment through Sacyr Securities, S.A.U., Sacyr Investments, S.A.U. and Sacyr Investments II, S.A.U.

b. Directors and executives: includes members of the Board of Directors as well as members of the Executive Committee, who are considered "*key management personnel*" for purposes of this section (see Note 28.4).

c. People, companies or entities within the Group: includes transactions with Group companies or entities that were not eliminated in the consolidation process, corresponding mainly to transactions undertaken with companies accounted for using the equity method (see Note 13).

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

€ Million	2020				2019			
EXPENSES AND REVENUE	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total
Financial expenses	—	—	92	92	—	—	123	123
Leases	2	—	—	2	—	—	—	—
Services received	22	—	36	58	29	—	70	99
Purchase of goods [2]	—	—	738	738	—	—	1,192	1,192
Other expenses [3]	—	—	24	24	—	—	135	135
TOTAL EXPENSES	**24**	**—**	**890**	**914**	**29**	**—**	**1,520**	**1,549**
Financial income	—	—	81	81	—	—	124	124
Services provided	—	—	2	2	5	—	4	9
Sale of goods [4]	44	—	221	265	178	—	386	564
Other revenue	1	—	131	132	1	—	190	191
TOTAL REVENUE	**45**	**—**	**435**	**480**	**184**	**—**	**704**	**888**

€ Million	2020				2019			
OTHER TRANSACTIONS	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total
Financing agreements: credit and contributions of capital (creditor) [4]	—	—	457	457	—	—	246	246
Financing agreements: loans and contributions of capital (borrower) [5]	—	—	872	872	—	—	903	903
Guarantees and sureties given [6]	—	—	637	637	—	—	654	654
Guarantees and sureties received	7	—	5	12	7	—	4	11
Commitments assumed [7]	56	—	90	146	11	—	1	12
Dividends and other profits distributed [8]	58	—	—	58	109	—	—	109
Other operations [9]	12	—	1,799	1,811	35	—	1,565	1,600

€ Million	2020				2019			
CLOSING BALANCES	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total	Significant shareholders	Directors and executives [1]	People, companies or entities within the Group	Total
Customer and trade receivables	2	—	101	103	2	—	128	130
Loans and credits granted	—	—	900	900	—	—	962	962
Other receivables	—	—	82	82	—	—	77	77
TOTAL RECEIVABLE BALANCES	**2**	**—**	**1,083**	**1,085**	**2**	**—**	**1,167**	**1,169**
Suppliers and trade payables	16	—	62	78	12	—	85	97
Loans and credits received	—	—	3,674	3,674	—	—	3,915	3,915
Other payment obligations [10]	28	—	—	28	3	—	2	5
TOTAL PAYABLE BALANCES	**44**	**—**	**3,736**	**3,780**	**15**	**—**	**4,002**	**4,017**

Note: In 2020 the tables for Expenses and Revenue and Other Transactions include transactions with the Temasek Group until April 16 (date of sale of the entire interest).

(1) Includes transactions performed with executives and directors not included in Note 28 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 dividends and other remuneration received as a result of holding shares of the Company.

(2) In 2020 "*People, companies or entities within the Group*" primarily includes products purchased from Repsol Sinopec Brasil (RSB) and from BPRY Caribbean Ventures LLC (BPRY), for the amount of €509 million and €85 million, respectively (€790 million and €223 million in 2019).

(3) Includes mainly supplies and provisions for credit risks of accounts receivable and financial instruments (see Note 10.3 and 20.3).

(4) In 2020 and 2019 "*Significant shareholders*" includes mainly the sales of crude oil to the Temasek group. In 2020 and 2019 "*Persons, companies or entities of the Group*" includes mainly sales of products to Iberian Lube Base Oil, S.A. (ILBOC) and Dynasol Group for €154 million and €57 million in 2020 and €257 million and €107 million in 2019, respectively.

(5) Includes loans granted and new provisions for credit facilities in the period, as well as capital contributions to Group companies with companies accounted for using the equity method.

(6) Includes primarily guarantees granted to joint ventures in the United Kingdom, issued in the ordinary course of business to cover obligations to decommission offshore platforms in the North Sea.

(7) Corresponds to purchase, investment or expense commitments acquired in the period (see Note 25).

(8) 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 and July 2020 (in the 2019 table: January and July 2019), as part of the "*Repsol Flexible Dividend*" shareholder remuneration program (see Note 6.3).

(9) In 2020 and 2019 "*People, companies or entities within the Group*" includes mainly the cancellations of guarantees provided to joint ventures in the UK and financing agreements.

(10) In 2020 and 2019 "*Significant shareholders*" includes the sale to Repsol, at the guaranteed fixed price, of the bonus share rights as part of the bonus share issue closed in January 2020 and 2019. These rights are recognized as accounts payable at December 31.

(27) Personnel obligations

27.1) Defined contribution pension plans

Certain employees in Spain have pension plans with defined contributions for retirement. In addition, certain Group companies outside Spain have defined contribution pension plans for their employees.

The annual cost charged to "*Personnel expenses*" in the income statement in relation to the defined contribution pension plans detailed above amounted to €52 million and €54 million in 2020 and 2019, respectively.

The Group's executives in Spain are beneficiaries of an executive pension plan that complements the standard pension plan known as "*Plan de previsión de Directivos*" (Executive welfare plan), which covers the participant's retirement, their full or total permanent disability, comprehensive disability and death. Repsol makes defined contributions based on a percentage of participants' salaries. The plan guarantees a fixed return equal to 125% the National Consumer Price Index for the previous year. The plan is instrumented through collective insurance policies underwritten by an insurance company that finances and outsources the commitments in respect of contributions and the fixed return mentioned above.

The cost of this plan recognized under "*Personnel expenses*" in the income statement in 2020 and 2019 amounted to €12 million and €10 million, respectively.

27.2) Defined benefit pension plans

Certain groups of employees have pension plans for the contingencies of full or total permanent disability, comprehensive disability and death, the insurance policies of which are taken out with an external entity. The total amount charged to the Group's income statement in 2020 and 2019 was €5 million and €11 million, respectively, while the provisions recognized on the balance sheet at year-end 2020 and 2019 stood at €81 million and €82 million, respectively (see Note 15).

27.3) Long-term variable remuneration

A loyalty building plan aimed at executives and other persons occupying positions of responsibility consisting of long-term incentives as part of their benefit package. The purpose of this program is to strengthen the link with shareholders' interests, based on the sustainability of medium and long-term results as well as compliance with the Strategic Plan, while at the same time facilitating the retention by the Group of key personnel.

At year end, the 2017-2020, 2018-2021, 2019-2022 and 2020-2023 plans were in force. The 2016-2019 plan was closed and its beneficiaries received their bonuses in 2020.

The four plans are independent of each other and fulfillment of the objectives tied to each plan allows its beneficiaries to receive an incentive in the first four months of the year following the last year of the plan. However, receipt is tied to the beneficiary remaining in the Group 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.

The 2017-2020, 2018-2021 and 2019-2022 plans do not involve the delivery of shares or options, with the exception of the Chief Executive Officer, who is partially paid in shares. In this regard, the amount of the 2017-2020 Long-Term Incentive will be paid to the Chief Executive Officer in a proportion of 70% in cash and 30% in shares, so that he will receive €865,170 in cash and 19,337 Company shares equal to €163,574.

In accordance with the provisions of the current Directors Remuneration Policy, the final number of shares to be delivered to the Chief Executive Officer is calculated based on: (i) the amount that is effectively payable following application of the corresponding taxes (or withholdings); and (ii) the weighted average for the daily volume of weighted average Repsol share prices in the fifteen trading sessions before the Friday of the week preceding the date on which the Board of Directors agrees to pay the incentive of each of the Plans for the Chief Executive Officer.

Accordingly, the 2020-2023 plan corresponds to the new Long-Term Incentive Plans, which differs from the previous plans in that beneficiaries are entitled to receive a "*cash incentive*" and a certain number of "*Performance Shares*", which will entitle them to receive Repsol, S.A. shares at the end of the Plan's vesting period, subject to the performance of certain metrics.

To reflect these commitments assumed, a provision of €9 million and €20 million was recognized in 2020 and 2019, respectively. At December 31, 2020 and 2019, the provisions totaled €50 million and €67 million, respectively.

27.4) Share Purchase Plans for Beneficiaries of Long-Term Incentive and Share Acquisition Plans

i.) *"Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans"*

This Plan allows investments in shares of up to 50% of the gross amount of the Long-term Incentive to encourage its beneficiaries (including the Chief Executive Officer and the other Executive Committee members) to align themselves with the long-term interests of the Company and its shareholders. If the beneficiary maintains the shares for three years from the initial investment and the remaining conditions of the Plan are met, the Company will give the employee one additional share for every three initially acquired.

In the case of Senior Management, (the Chief Executive Officer and other Executive Committee members), they are subject to an additional performance requirement in order to receive these additional shares, namely overall fulfillment of at least 75% of the targets set in the Long-Term Incentive Plan closed in the year preceding that of delivery of the shares.

The following cycles of this Plan are currently in force:

	No. of shares	Total initial investment (no. of shares)	Average price (Eur/Share)	Maximum commitment for delivery of shares
Eighth cycle (2018-2021)	158	150,476	16.3021	50,160
Ninth cycle (2019-2022) (1)	201	246,508	14.4101	82,168
Tenth cycle (2020-2023) (2)	238	340,537	8.4935	113,512

(1) Includes 14,330 shares delivered to the Chief Executive Officer as a partial payment of the 2015-2018 Plan. In accordance with the provisions of the Directors Remuneration Policy, the shares delivered to the Executive Directors under each long-term variable remuneration plan may be calculated for the purposes of the investment in shares referred to in the Share Purchase Plan for the Beneficiaries of the Long-Term Incentive Plans.
(2) Includes 14.743 shares delivered to the Chief Executive Officer as a partial payment for the 2016-2019 Plan.

During this tenth cycle, the current members of the Executive Committee, including the Chief Executive Officer, have acquired a total of 135,532 shares.

As a result of this Plan, at December 31, 2020 and 2019, the Group had recognized an expense under "*Personnel expenses*" with a balancing entry under "*Other equity instruments*" in equity of €0.6 million.

In addition, the seventh cycle of the Plan (2017-2020) vested on May 31, 2020. As a result, the rights of 133 beneficiaries vested 39,780 shares (29,901 shares net of payment on account of the personal income tax). Specifically, the rights of the members of the Executive Committee and the Chief Executive Officer to 16,536 shares also vested (11,464 shares net of payment on account).

ii.) *"Share Acquisition Plans"*

Since 2011, various Share Acquisition Plans have been set up that were approved at the Annual General Meetings of April 15, 2011 (2011-2012 Share Acquisition Plan), May 31, 2012 (2013-2015 Share Acquisition Plan), April 30, 2015 (2016-2018 Share Acquisition Plan) and May 11, 2018 (2019-2021 Share Acquisition Plan).

These Plans are targeted at employees of the Group in Spain and enable those so wishing to receive a portion of their remuneration in shares up to an annual limit of €12,000. The shares to be delivered are valued at the closing share price on the continuous Spanish stock market on each date of delivery.

In 2020 the Group purchased 1,502,421 shares of Repsol, S.A. (643.458 shares in 2019) amounting to €12.2 million (€9.2 million in 2019) for delivery to employees (see Note 6).

The members of the Executive Committee acquired 11,856 shares in accordance with the plan terms and conditions in 2020.

iii.) "*Global Employee Share Purchase Plan: YOUR REPSOL*"

In 2020 the *YOUR REPSOL* Plan was launched, which allows all employees to allocate a certain amount of their remuneration to purchase Company shares and receive one free share for every two initially acquired, provided that the shares are held for a period of 2 years and the other conditions of the Plan are met.

Under the *YOUR REPSOL* Plan for 2020, the members of the Executive Committee acquired a total of 1,830 shares which, in accordance with the terms and conditions of the Plan, will entitle them to receive a total of 915 shares in February 2023.

The shares to be delivered under plans i.), ii.) and iii.) may come from Repsol's direct or indirect treasury shares, be newly issued or come from third parties with which agreements have been signed.

(28) Remuneration of the members of the Board of Directors and key management personnel

28.1) 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 Bylaws, 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 in the Directors 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 Directors Remuneration Policy approved at the Annual General Meeting held on May 31, 2019 is €8.5 million.

The remuneration accrued in 2020 for membership of the Board of Directors and with a charge to bylaw-stipulated emoluments amounted to €6.937 million, the detail being as follows:

	Remuneration of Board members relating to their position *(euros)*							
Board of Directors	Board	Delegate C.	Independent Lead Director	Audit C.	Appoints C.	Remun. C.	Sustain. C.	**Total**
Antonio Brufau Niubó [(1)]	(1)	(1)		—	—	—	—	2,500,000
Josu Jon Imaz San Miguel	176,594	176,594						353,188
Arantza Estefanía Larrañaga	176,594				22,074		44,149	242,817
María Teresa García-Milá Lloveras	176,594			88,297	22,074			286,966
Henri Philippe Reichstul	176,594	176,594						353,188
Mª del Carmen Ganyet i Cirera	176,594			88,297	22,074	22,074		309,040
Ignacio Martín San Vicente	176,594	176,594						353,188
María Teresa Ballester Fornés	176,594			88,297		22,074		286,966
Manuel Manrique Cecilia	176,594	176,594						353,188
Rene Dahan	176,594	176,594						353,188
José Manuel Loureda Mantiñán	176,594					22,074	44,149	242,817
Mariano Marzo Carpio	176,594		22,074		22,074	22,074	44,149	286,966
Isabel Torremocha Ferrezuelo	176,594			88,297			44,149	309,040
J. Robinson West	176,594	176,594						353,188
Luis Suárez de Lezo Mantilla	176,594	176,594						353,188

Note: In accordance with the scheme approved by the Board of Directors, and at the proposal of the Remuneration Committee, the amount due in 2020 came to: (i) €176,594 for membership of the Board of Directors; (ii) €176,594 for membership of the Delegate Committee; (iii) €88,297 for membership of the Audit and Control Committee; (iv) €44,149 for membership of the Sustainability Committee; (v) €22,074 for membership of the Appointments Committee; and (vi) €22,074 for membership of the Remuneration Committee; and (vii) €22,074 for the position of Independent Lead Director.

(1) On April 30, 2015, Mr. Brufau stepped down from his executive duties, and on this same date the shareholders at the Annual General Meeting approved his re-election as non-executive Chairman of the Board of Directors and his new remuneration conditions, applicable from May 1, 2015, consisting of a fixed remuneration of €2,500 thousand gross per year. In addition, remuneration in kind and payments on account/withholdings linked to remuneration in kind totaled €0.286 million.

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 arrangement 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 on remuneration for membership of the managing bodies in this section.
- No Group company, joint arrangement or associate 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 Chief Executive Officer, whose remuneration is subject to the commitments set forth in his contract for services, as described further on.

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

In 2020, compensation to Directors for the performance of executive duties was as follows:

€ Million	Josu Jon Imaz San Miguel
Fixed monetary remuneration	1.200
Variable remuneration and in kind [1]	1.878

[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 seventh cycle of the Share Purchase Plan for the Beneficiaries of the Long-Term Incentive Plans, as detailed in section 27.3.

The above amounts do not include the amounts detailed in section c) and d) below.

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

In 2020 the members of the Board of Directors of the parent company did not receive any amount for membership of the governing bodies of other Group companies, joint arrangements or associates.

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

The cost in 2020 of the contributions made to pension plans, long-service bonuses and welfare plans for the Chief Executive Officer discharging executive duties in the Group amounted to:

	€ Million
Josu Jon Imaz San Miguel	0.254

e) Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans

On May 31, 2020, the vesting period concluded for the seventh cycle of the share purchase plan for beneficiaries of long-term incentive plans (see Note 27.4.i). Upon vesting, Josu Jon Imaz became entitled to receive a total of 3,644 shares, valued at a price of €9.53 per share.

28.2) Indemnity payments to Board members

In 2020, no Director received any indemnity payments from Repsol.

28.3) Other transactions with directors

In 2020, 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.

The Chief Executive Officer signed up for the 2018-2021, 2019-2022 and 2020-2023 cycles of the Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans, as detailed in Note 27.

In 2020, 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 Spanish Companies Act, the resolutions of the Board and of the Appointments Committee during the year regarding related-party transactions, ratification, re-election and continuity of Directors and on appointment to positions on the Board and its committees were passed in the absence of the Director affected by the relevant proposed resolution.

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

28.4) Remuneration of key management personnel

a) Scope

Repsol considers *"key management personnel"* to be the members of the Executive Committee. In 2020, a total of 9 persons formed the Executive Committee. The term *"key management personnel"* 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 2020 by the people who, at some juncture during the period and during the time they occupied such positions, were members of the 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.; (information included in section 1 of this note).

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

The total remuneration earned in 2020 is as follows:

	€ Million
Wages	5.613
Allowances	0.101
Variable remuneration (1)	5.379
Remuneration in kind (2)	0.585
Executive welfare plan	1.163

(1) This consists of an annual bonus, and a multi-annual bonus, calculated as a given percentage of the fixed remuneration earned on the basis of the degree to which certain targets are met.
(2) Includes vested entitlement to 12,892 additional shares (before withholdings) for the seventh cycle of the Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans, valued at €9.53 per share, equivalent to a gross amount of €122,877. It also includes contributions to pension plans for executives (see Note 27), and the premiums paid for life and disability insurance, amounting to €0.209 million.

c) Advances and loans granted

At December 31, 2020, Repsol, S.A. had granted loans to key management personnel amounting to €0.293 million, having accrued an average interest rate of 2.1% during the current financial year.

28.5) Indemnity payments to key management personnel

Key management personnel are entitled 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 their contracts.

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

In 2020, the indemnity payments received by the Company's key management personnel for the termination of their contract and for non-competition agreements amounts to €5.357 million.

28.6) Other transactions with key management personnel

In 2020, Executive Committee members did not conclude any material transaction with the parent 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.

Additionally, the Executive Committee members signed up for the 2018-2021, 2019-2022 and 2020-2023 cycles of the Share Purchase Plan for Beneficiaries of the Long-term Incentive Plans, as detailed in Note 27.3.

28.7) Civil liability insurance

In 2020, the Group took out a civil liability policy for Board members, the key management personnel referred to in Note 28.4.a), and the other executives and people executing such functions, for a total premium of €3.8 million. The policy also covers different Group companies under certain circumstances and conditions.

(29) Climate change and environmental information

In accordance with its express commitment to transparency, Repsol prepares its climate change information in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)[32], which it has voluntarily joined. The main aspects related to climate change are reported below and are explored in detail in section 8.1 of the consolidated Management Report:

- *Strategy:* Repsol has made public its commitment to be part of the solution in the fight against climate change by focusing its strategy on becoming a company with net zero CO_2 emissions by 2050, in line with the objectives of the Paris Summit and the Sustainable Development Goals of the United Nations, which aim to limit global warming to below two degrees Celsius with respect to pre-industrial levels.

  To achieve this ambitious objective, five levers of action have been defined and integrated into the business strategy:

  - Efficiency of operations for the decarbonization of scope 1 and 2 emissions of the assets operated: this implies an ongoing process of seeking out opportunities in the areas of technology, design, and operating and maintenance procedures, focusing on: (i) energy efficiency and electrification of energy consumption, and (ii) reduction of methane and flaring emissions.

  - Transformation of the exploration and production asset portfolio: this focuses on portfolio management based on prioritizing assets with a shorter life cycle and that are less carbon intensive.

  - Low-carbon fuels and circular economy: advanced biofuels, biogas from organic waste and synthetic fuels are key to the decarbonization of such important segments as transportation and industry. Sustainable biofuel production capacity will be 1.3 million tons in 2025 and more than 2 million tons in 2030, of which more than 65% will be produced from waste, with the possibility of reaching 100% to meet market or regulatory demands. The Company also aims to reach a renewable production equivalent to 400 MW in 2025 with the goal of exceeding 1.2 GW in 2030.

    With regard to the circular economy, this concept is implemented in all countries in which it operates and throughout its value chain, from obtaining raw materials to selling products and services. In addition, Repsol is committed to a business of efficient products with a greater percentage of recycling in its polyolefin production, setting itself the goal of recycling the equivalent of 10% of its production in 2025 and 20% in 2030.

  - Renewable energies: target of 7,500 MW of low-carbon power generation capacity, which is increased to 15,000 MW by 2030.

  - New technological developments and carbon sinks: technologies for carbon capture, utilization and storage will be key elements for a carbon-neutral future.

- *Risks and opportunities:* The methodology for identifying climate risks is adapted to that used in the Integrated Risk Management System, with a five-year time horizon, in order to extend its scope to 2050 and bring it into line with the commitment to net zero emissions. The risk analysis is carried out for the short, medium and long term:

  - Throughout the 2021-2025 Strategic Plan, approximately 10% of the Group's risks analyzed will be closely related to climate change.

  - By 2030, the probability of being negatively impacted by the energy transition is very low (less than 5%); with a probability of more than 95% for opportunities (energy efficiency, renewable power generation,

[32] The G-20 Ministers of Finance and central bank governors asked the Financial Stability Board (FSB) to review how the financial sector can address climate-related issues. The FSB established the Task Force on Climate-related Financial Disclosures (the Task Force), which has developed certain recommendations, the core elements of which are: governance, strategy, risk management, and metrics and targets. More information at https://www.fsb-tcfd.org.

advanced biofuels, renewable hydrogen, medium- and long-term circular economy, carbon capture and storage), which will counteract the potential impacts of the energy transition.

- In 2040 and 2050, the Company's exposure to climate risks will grow, with a reasonably high probability (50%) that the Company will not be negatively impacted, but rather positively impacted as a result of the energy transition, which will depend on how climate policies evolve, the price of carbon, the costs of reducing greenhouse gas emissions, etc. The main risks (and opportunities) are:

  i. Changes in the basket of primary energy sources towards other less carbon-intense sources, which involve a reduction in the use of hydrocarbons.

  ii. Changes in energy end-uses leading to a reduction in demand for the products sold.

  iii. Regulatory changes that affect operations and/or future investments.

  iv. Inefficient or late adoption of new practices, processes, or novel or less mature technologies.

  v. Changes that promote efficiency in the use of natural resources, including the reduction, reuse and recycling of non-energy products.

  vi. Potential difficulty or limitation for the Group to raise funds.

  vii. Harm to the reputation of the Company and/or the industry.

One of the main conclusions of the climate risk analysis is that Repsol is more exposed to transitional risks than to physical risks. However, measures are being implemented to reduce exposure to both risks. Physical risks are those adverse weather phenomena to which Repsol is exposed (hurricanes, floods, changes in rainfall or temperature, etc.), capable of triggering impacts on its activities.

Accordingly, exposure to climate change risks is different in each of the Company's business areas. This exposure, measured in absolute terms, is influenced by the size of each of the businesses. Those most exposed are the hydrocarbons Exploration and Production activities and Refining activities.

– *Metrics and objectives:* To achieve the goal of net zero emissions by 2050, Repsol has defined a Carbon Intensity Indicator (CII) measured in gCO_2e/MJ[33], to establish its emissions reduction targets based on scopes 1+2+3 over time and with respect to the base year 2016: 12% in 2025, 25% in 2030, and 50% in 2040. By 2050, it is estimated that there will be at least an 80% reduction in the IIC with the technological progress that is currently expected, and Repsol undertakes to apply the best technologies available at that time to raise this figure, including carbon capture, utilization and storage (CCUS), and if this is not enough, offsetting emissions through reforestation and other natural climate solutions. In 2020, a 5% reduction was achieved, thus exceeding the initial target set of 3%. This value was well above the target, mainly as a result of reduced business activity given the context of the year.

  In addition, Repsol has established plans to reduce CO_2 equivalent emissions in order to reduce energy and carbon intensity through efficiency in its operations. In 2020, it completed its 2014-2020 reduction plan, achieving a reduction of 2.4 Mt CO_2 above the initial target of 2.1, and has drawn up a new plan for the 2021-2025 period with the aim of achieving a reduction of an additional 1.5 million tons of CO_2 by 2025.

  In addition, a target has been set to reduce the intensity of methane emissions from operated assets by 25% by 2025 compared to 2017. In 2020, methane intensity decreased by even more than the 2025 target. A new target of 0.2% methane intensity has been assumed for 2030.

  A target has also been set to reduce CO_2e emissions from routine gas flaring by 50% by 2025, with regard to E&P operated assets, the baseline for which was set in 2018. In 2020, routine gas flaring had increased compared to 2018 due to increased production in the most flaring-intensive assets and improvements in the measurement methodology.

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[33] The IIC takes into account in the numerator the emissions derived from the Company's activity (direct and indirect emissions arising from exploration and production, refining and chemical activities and from electricity generation) and the emissions associated with the use of fuel products derived from our primary energy production (oil and natural gas). In the denominator, the indicator includes the power that Repsol makes available to society in the form of end products derived from the primary energy production from oil and gas and from low-carbon energy sources (More information at www.repsol.com).

Greenhouse gas emissions over the last five years have been as follows:

Mt CO_2e (CO_2, CH_4 y N_2O)	**2020**	**2019**	**2018**	**2017**	**2016**
Emissions scope 1 [(1)]	22.0	24.7	22.0	23.0	24.9
Emissions scope 2 [(2)]	0.4	0.5	0.4	0.4	0.5
Emissions scope 3 [(3)]	157	189	194	193	183

(1) Scope 1 (direct emissions from the Company's activities).
(2) Scope 2 (indirect emissions associated with the purchase of electricity and steam from third parties).
(3) Scope 3 (indirect emissions associated with the use of products sold and the production of raw materials such as crude oil and hydrogen).

– *Governance:* The entire organization, businesses, corporate areas and employees are involved in achieving the climate change objectives. The Board of Directors approved the decarbonization strategy and the climate change policy, and it monitors compliance with the objectives included in the Strategic Plan on a quarterly basis, analyzing, among others, the indicators related to sustainability and energy transition. Its Sustainability, Audit and Control, and Remuneration Committees also play an important role in the deployment of the strategy and policy defined by the Board.

  The Executive Committee (EC) is the body that is directly responsible for managing climate change issues, strategic decisions and lines of action. The EC approves the Strategic Plan, the multiannual strategic objectives and the annual targets to reduce greenhouse gas (GHG) emissions.

  The Company's climate change objectives have a direct impact on the variable remuneration of all employees.

Within the framework of its commitments to decarbonization and the energy transition, Repsol has reviewed the main assumptions for the assessment of both future investments and existing assets. In particular, expectations regarding future crude oil and gas prices have been reduced, as have long-term estimates on the consumption of oil products, and CO_2 emission costs have been revised upwards, forming a scenario that is in line with the obligations assumed to fulfill the climate objectives of the Paris Agreement and Sustainable Development Goals of the United Nations. These new scenarios had an impact on the measurement of assets for accounting purposes in both 2020 and 2019, mainly in the hydrocarbon Exploration and Production segment (see Note 20).

29.1) CO_2 emission allowances

Emission allowances are recognized as inventory and are initially recognized at acquisition cost. Those allowances free of charge received under the emissions trading system for the 2013-2020 period, are initially recognized as inventory at the market price prevailing at the beginning of the year in which they are issued, against deferred income as a grant. As the corresponding tons of CO_2 are issued, the deferred income is reclassified to profit or loss.

They are not amortized as their carrying amount matches their residual value and are subject to an impairment test based on their recoverable amount, (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 CO_2 emissions released during the year, recognizing a provision calculated based on the tons of CO_2 emitted, measured at: (i) their carrying amount in the case of the allowances that the Group has at year end; and (ii) the closing list price in the case of allowances that it does not yet have at year end.

When the emissions allowances for the tons of CO_2 emitted are delivered to the authorities, the inventories and their corresponding provision are derecognized from the balance sheet without any effect on the income statement.

When CO_2 emission allowances are actively managed to take advantage of market trading opportunities, the trading allowances portfolio is classified as trading inventories (see Note 16).

In relation to the estimated price of CO_2 emission allowances to calculate the recoverable amount of the assets, see Notes 3 and 20.

In Europe, the EU Emissions Trading System (EU-ETS) Directive entered Phase III on January 1, 2013. This phase, which was completed in 2020, marks the end of the free allocation of CO_2 emission allowances to activities related to electricity generation, while they have been significantly reduced in others. The 2014 update to the EU-ETS Directive confirmed that refining and chemicals activity in Europe was one of the sectors exposed to carbon leakage and has therefore continued benefiting from the free allocation of CO_2 allowances, partially covering its deficits.

The movements in provisions recognized in respect of CO_2 emission allowances (see Note 15) used in 2020 and 2019 is as follows:

	€ Million	
	2020	**2019**
Opening balance for the year	**325**	**113**
Provisions charged to the income statement (1)	281	325
Reclassifications and other movements (2)	(325)	(113)
Balance at year end	**281**	**325**

(1) Corresponds to the expense incurred to acquire the allowances needed to cover the Group's CO_2 emissions.
(2) In 2020 and 2019, corresponds to the derecognition of allowances used to cover emissions made in 2019 and 2018, respectively (see Note 11).

In 2020 and 2019, the Group companies recognized emission allowances allocated free of charge under the Spanish National Allocation Plan equivalent to 7.7 million tons of CO_2, initially measured at €189 million and €201 million, respectively (see Note 11).

The net cost of carbon management amounted to €96 million in 2020 and €132 million in 2019, corresponding mainly to the CO_2 emitted by industrial complexes in Spain not covered by free emission allowances.

29.2) Environmental investment, expenses and provisions[34]

Environmental investments in 2020 amounted to €110 million (€44 million classified as '*work in progress*' at December 31). Of note are those aimed at reducing emissions into the atmosphere, managing and optimizing water consumption, those relating to soil remediation and those aimed at fulfilling the obligations assumed by the Company with regard to the energy transition (energy savings and increased energy efficiency). In 2020 the investments made in the industrial complexes are particularly noteworthy: in the Refining business, investments were made to improve the energy integration of the production units, to recover hydrogen and to reduce emissions from flares, which resulted in savings in fuel consumption; and in the Chemicals business, investments were made to improve the efficiency of the olefin plants and for the use of waste as a raw material.

Environmental expenses, which are recognized under "*Procurements*" and "*Other operating expenses*", excluding the expenses for the allowances necessary to cover CO_2 emissions (see previous section), amounted to €314 million and €94 million in 2020 and 2019, respectively. In 2020, of note are the actions carried out for the protection of the atmosphere in the industrial facilities amounting to €28 million (€26 million in 2019); water management amounting to €16 million (€19 million in 2019); and waste management amounting to €13 million (€17 million in 2019).

Provisions for environmental actions[35] at December 31, 2020 amount to €87 million, with no significant provisions recognized during the year. In addition, the Group has recognized field decommissioning provisions for its hydrocarbon exploration and production assets (see Note 15).

The corporate insurance policies cover, subject to terms and conditions, civil liability for pollution on land and at sea and certain liabilities via-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.

(30) Further breakdowns

30.1) Staff[36]

The Repsol Group employed a total of 23,739 people at December 31, 2020, geographically distributed as follows: Spain (16,632), North America (1,068), South America (3,831), Europe, Africa and Brazil (1,818), and Asia and Russia (444). Average headcount in 2020 was 24,183 employees (24,891 employees in 2019).

[34] Items identified as of an environmental nature, are understood as those the purpose of which is to minimize environmental impact and to protect and improve the environment. The criteria for their assessment are based on the Group's technical criteria in accordance with the guidelines issued by the American Petroleum Institute (API).

[35] Repsol recognizes the provisions required to cover measures aimed at preventing and repairing environmental impact. These provisions are presented under "*Current and non-current provisions*" on the balance sheet and under "*Other provisions*" in the table reconciling the movement in provisions in Note 15.

[36] For further information on the workforce and human resource management policies, see section 8.2 of the consolidated Management Report.

Below is a breakdown of the Group's total staff[37] distributed by professional category and gender at year-end 2020 and 2019:

	2020		2019	
	Men	Women	Men	Women
Executives	196	46	208	55
Technical Managers	1,631	766	1,694	738
Technicians	6,738	3,626	7,262	4,678
Manual workers and junior personnel	6,314	4,476	6,266	3,733
Total	**14,879**	**8,914**	**15,430**	**9,204**

The Repsol Group employed a total of 527 differently-abled people at December 31, 2020 (2.21% of its workforce).

In Spain, in 2020, using the computation criteria stipulated in the Spanish law on the rights of disabled persons and their social inclusion (*Ley General de derechos de las personas con discapacidad y de su inclusión social*), the Group surpassed the legally required percentage threshold: its differently-abled workforce accounted for 2.42% of the total in Spain, namely 427 direct hires.

30.2) Fees paid to auditors

The fees for audit services, professional services related to the audit and other non-audit services provided during the year to Repsol Group companies by PriceWaterhouseCoopers Auditores, S.L. and the companies in its network (PwC), as well as the fees for those provided by other audit firms, are shown below:

	Main auditor	
€ Million	**2020**	**2019**
Audit and related services:	**7.6**	**7.8**
Audit services	6.9	7.1
Professional services related to the audit	0.7	0.7
Tax services	**—**	**—**
Other services	**0.1**	**—**
Total(1)	**7.7**	**7.8**

(1) The fees approved in 2020 by PriceWaterhouseCoopers Auditores, S.L for audit and related services amounted to €4,9 million and €0,7 million, respectively.

"*Audit services*" includes the fees relating to the audit of the separate and consolidated financial statements of Repsol, S.A. and of the companies forming part of its Group, the limited reviews of the Group's financial statements, and the review of the information relating to the Group's Internal Financial Reporting Control System, whose work allows evidence to be obtained for the audit.

"*Professional services related to the audit*" includes, mainly, verifications and certifications for partners and official bodies, reports for the issuance of bonds and other marketable securities (comfort letters), as well as the verification of the non-financial information of the consolidated management report.

The directors of the Parent Company obtained confirmation from the auditors of their compliance with the independence requirements established in applicable regulations.

30.3) Other annual information

Along with these consolidated Financial Statements, Repsol publishes annual information that is available on the Repsol website (www.repsol.com):

- Management Report, which includes an appendix with the Annual Corporate Governance Report.
- Alternative Performance Measures (APMs).
- Directors Remuneration Report.
- Information on oil and gas exploration and production activities.
- Report on payments to governments on oil and gas exploration and production activities.

The Shareholder Information Office is located at calle Méndez Álvaro, 44, Madrid and its telephone number is 900.100.100.

[37] Pursuant to the provisions of Organic Law 3/2007, of March 22, which promotes true equality between men and women, published in the Official State Gazette of March 23, 2007.

(31) Subsequent events

On February 3, 2021, Repsol International Finance B.V. notified the bondholders of the subordinated bonds issued in March 2015 (see Note 6.4) of its decision to redeem the remaining balance of the issue (a nominal amount of €406 million) on March 25, which will entail an estimated payment of €422 million (including the nominal amount and any unpaid interest accrued to date).

(32) 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: Group's corporate structure

APPENDIX IA: Main companies comprising the Repsol group at December 31, 2020

					December 2020			
					%		€ Million	
Name	Parent company	Country	Corporate purpose	Method of conso. (1)	Control Int. (2)	Total Group Interest	Equity (3)	Share Capital (3)
UPSTREAM								
Agri Development, B.V. (16)	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.(J.V.)	10.00	6.00	—	—
Akakus Oil Operations, B.V.	Repsol Exploración Murzuq, S.A.	Netherlands	Oil and gas exploration and production	E.M.	49.00	49.00	—	—
ASB Geo	Repsol Exploración, S.A.	Russia	Oil and gas exploration and production	E.M.(J.V.)	50.01	50.01	1	—
BP Trinidad & Tobago, Llc. (16)	BPRY Caribbean Ventures, Llc.	United States	Oil and gas exploration and production	E.M.(J.V.)	100.00	30.00	—	—
BPRY Caribbean Ventures, Llc. (15)	Repsol Exploración S.A.	United States	Oil and gas exploration and production	E.M.(J.V.)	30.00	30.00	303	2,544
Cardón IV, S.A. (15)	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	50.00	50.00	(508)	3
CSJC Eurotek - Yugra	Repsol Exploración Karabashsky, B.V.	Russia	Oil and gas exploration and production	E.M.(J.V.)	68.30	68.30	37	—
Dubai Marine Areas, Ltd.(6)	Repsol Exploración S.A.	United Kingdom	Oil and gas exploration and production	E.M.(J.V.)	50.00	50.00	2	—
Equion Energia Ltd. (15)	Talisman Colombia Holdco Ltd.	United Kingdom	Oil and gas exploration and production	E.M.(J.V.)	49.00	49.00	591	—
FEHI Holding S.ar.l.	Repsol Exploración, S.A.(20)	Luxembourg	Portfolio company	F.C.	100.00	100.00	640	182
Fortuna Resources (Sunda) Ltd.	Talisman UK (South East Sumatra) Ltd.	British Virgin Islands	Oil and gas exploration and production (11)	F.C.	100.00	100.00	23	—
Guará, B.V. (16)	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	25.00	15.00	—	—
MC Alrep, Llc.	AR Oil & Gaz, B.V.	Russia	Management services for JV	E.M.(J.V.)	100.00	49.00	—	—
Lapa Oil & Gas, B.V. (16)	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	25.00	15.00	—	—
Sierracol Energy Arauca, LLC (32)	Repsol International Finance, B.V.	United States	Portfolio company	E.M.(J.V.)	25.00	25.00	96	86
Paladin Resources Ltd.	TE Holding S.a.r.l.	United Kingdom	Portfolio company	F.C.	100.00	100.00	—	40
Petrocarabobo, S.A.	Repsol Exploración S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	11.00	11.00	67	506
Petroquiriquire, S.A. Emp. Mixta (15)	Repsol Exploración S.A.	Venezuela	Oil and gas exploration and production.	E.M.(J.V.)	40.00	40.00	(1,057)	212
Quiriquire Gas, S.A. Emp. Mixta	Repsol Venezuela, S.A.	Venezuela	Oil and gas exploration and production.	E.M.(J.V.)	60.00	60.00	—	—
Repsol Alberta Shale Partnership	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	287	1,383
Repsol Angostura, Ltd.	Repsol Exploración S.A.	Trinidad and Tobago	Oil and gas exploration and production (11)	F.C.	100.00	100.00	1	34
Repsol Bulgaria Khan Kubrat, S.A.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	9	—
Repsol Canada Energy Partnership	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	231	1,246
Repsol Ductos Colombia, S.A.S.	Talisman Colombia Holdco Ltd.	Colombia	Oil and gas exploration and production	F.C.	100.00	100.00	64	3
Repsol E&P Bolivia, S.A.	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	F.C.	100.00	100.00	598	2
Repsol E&P Eurasia, LLc.	Repsol Exploración S.A.	Russia	Oil and gas exploration and production	F.C.	99.99	99.99	—	5
Repsol E&P USA, Inc.	Repsol USA Holdings Corporation	United States	Oil and gas exploration and production	F.C.	100.00	100.00	2,621	2,679
Repsol E&P USA Holdings, Inc.	Repsol Oil & Gas Holdings USA, Inc.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	1,575	1,542
Repsol Ecuador, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	41	5
Repsol Energy North America Corporation	Repsol USA Holdings Corporation	United States	Marketing of GNL	F.C.	100.00	100.00	(527)	233
Repsol Exploración 17, B.V.	Repsol S.A. (30)	Netherlands	Portfolio company	F.C.	100.00	100.00	2,001	1
Repsol Exploración 405A, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	26	—
Repsol Exploración Aitoloakarnania, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	3	—
Repsol Exploración Argelia, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	154	4
Repsol Exploración Aru, S.L.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	—	—
Repsol Exploración Atlas, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	1	4
Repsol Exploración Colombia, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	64	2
Repsol Exploración Gharb, S.A. (14)	Repsol Exploración S.A.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	8	—

					December 2020			
					%		€ Million	
Name	Parent company	Country	Corporate purpose	Method of conso. (1)	Control Int. (2)	Total Group Interest	Equity (3)	Share Capital (3)
Repsol Exploración Guinea, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	—	—
Repsol Exploración Guyana, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	24	—
Repsol Exploración Ioannina, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	17	—
Repsol Exploración Irlanda, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	15	—
Repsol Exploración Jamaica, S.A.	Repsol Exploración 17, B.V. (27)	Spain	Portfolio company	F.C.	100.00	100.00	1,623	—
Repsol Exploración Karabashsky, B.V.	Repsol Exploración S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	51	131
Repsol Exploración Kazakhstan, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	7	—
Repsol Exploración México, S.A. de C.V.	Repsol Exploración S.A.	Mexico	Oil and gas exploration and production	F.C.	100.00	100.00	146	181
Repsol Exploración Murzuq, S.A.	Repsol Exploración Jamaica, S.A. (28)	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	292	8
Repsol Exploración Perú, S.A.	Repsol Exploración Jamaica, S.A. (28)	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	306	21
Repsol Exploración South East Jambi B.V.	Repsol Exploración S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	4	—
Repsol Exploración South Sakakemang, S.L.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	2	2
Repsol Exploración Tanfit, S.L.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	15	3
Repsol Exploración Tobago, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	5	—
Repsol Exploración West Papúa IV, S.L.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	—	—
Repsol Exploración, S.A.	Repsol S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	6,212	25
Repsol Exploraçao Brasil, Ltda.	Repsol S.A. (30)	Brazil	Oil and gas exploration and production	F.C.	100.00	100.00	2,618	904
Repsol Greece Ionian, S.L.	Repsol Exploración, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	6	—
Repsol Groundbirch Partnership	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	2	212
Repsol Investigaciones Petrolíferas, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	357	194
Repsol Libreville, S.A. avec A.G.	Repsol Exploración S.A.	Gabon	Oil and gas exploration and production (11)	F.C.	100.00	100.00	(10)	62
Repsol LNG Holdings, S.A.	Repsol Exploración S.A.	Spain	Hydrocarbon marketing	F.C.	100.00	100.00	23	2
Repsol Norge, AS	Repsol Exploración S.A.	Norway	Oil and gas exploration and production	F.C.	100.00	100.00	300	—
Repsol OCP de Ecuador, S.A.	Repsol Ecuador, S.A.	Spain	for the transport of hydrocarbons	F.C.	100.00	99.99	64	—
Repsol Offshore E & P USA, Inc.	Repsol USA Holdings Corporation	United States	Oil and gas exploration and production (11)	F.C.	100.00	100.00	10	27
Repsol Oil & Gas Australia (JPDA 06-105) Pty Ltd.	Paladin Resources Ltd.	Australia	Oil and gas exploration and production	F.C.	100.00	100.00	2	133
Repsol Oil & Gas Australasia Pty Ltd.	Talisman International Holdings, B.V.	Australia	Shared services company	F.C.	100.00	100.00	—	62
Repsol Oil & Gas Canada, Inc. (10)	Repsol Energy Resources Canada Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	3,607	6,143
Repsol Oil & Gas Gulf of Mexico, LLC	Repsol E&P USA Holdings, Inc.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	397	—
Repsol Oil & Gas Holdings USA Inc.	FEHI Holding S.a.r.l.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	4,067	1,754
Repsol Oil & Gas Malaysia (PM3) Ltd.	Fortuna International Petroleum Corporation	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	(17)	10
Repsol Oil & Gas Malaysia Ltd.	Fortuna International Petroleum Corporation	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	156	—
Repsol Oil & Gas USA LLC.	Repsol E&P USA Holdings Inc.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	(8)	1,649
Repsol Oil & Gas Vietnam 07/03 Pty Ltd	Repsol Exploración, S.A.	Vietnam	Oil and gas exploration and production	F.C.	100.00	100.00	13	—
Repsol Oriente Medio, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	67	—
Repsol Services México, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Oil and gas exploration and production	F.C.	100.00	100.00	8	7
Repsol Servicios Colombia, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	(1)	—
Repsol Sinopec Brasil, S.A. (15)	Repsol Exploración 17, B.V. (27)	Brazil	Hydrocarbon operations and marketing	E.M.(J.V.)	60.01	60.01	6,666	2,003
Repsol Sinopec Resources UK Ltd. (15)	Talisman Colombia Holdco Ltd.	United Kingdom	Oil and gas exploration and production	E.M.(J.V.)	51.00	51.00	1,125	4,023
Repsol Suroriente Ecuador, S.A.	Repsol Exploración S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	1	2

					December 2020			
					%		€ Million	
Name	Parent company	Country	Corporate purpose	Method of conso. [1]	Control Int. [2]	Total Group Interest	Equity [3]	Share Capital [3]
Repsol U.K., Ltd.	Repsol Exploración S.A.	United Kingdom	Oil and gas exploration and production	F.C.	100.00	100.00	5	30
Repsol USA Holdings Corporation	Repsol Exploración S.A.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	4,259	4,409
Repsol Venezuela, S.A.	Repsol Exploración Venezuela, B.V.	Venezuela	Oil and gas exploration and production	F.C.	100.00	100.00	132	653
Saneco	AR Oil & Gaz, B.V.	Russia	Oil and gas exploration and production	E.M.(J.V.)	100.00	49.00	17	—
SC Repsol Baicoi, S.R.L.	Repsol Exploración S.A.	Romania	Oil and gas exploration and production [11]	F.C.	100.00	100.00	7	50
SC Repsol Pitesti, S.R.L.	Repsol Exploración S.A.	Romania	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	7
SC Repsol Targoviste, S.R.L.	Repsol Exploración S.A.	Romania	Oil and gas exploration and production [11]	F.C.	100.00	100.00	3	44
SC Repsol Targu Jiu, S.R.L.	Repsol Exploración S.A.	Romania	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	5
Talisman (Asia) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production [11]	F.C.	100.00	100.00	(129)	—
Talisman (Block K 39) B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production [11]	F.C.	100.00	100.00	(1)	—
Repsol Colombia Oil & Gas Limited	Repsol Exploración, S.A.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	557	1,447
Repsol Corridor, S.A.[34]	Fortuna International (Barbados), Inc	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	215	38
Talisman (Jambi Merang) Ltd.	Talisman International Holdings, B.V.	United Kingdom	Oil and gas exploration and production [11]	F.C.	100.00	100.00	4	66
Talisman (Sageri) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production [11]	F.C.	100.00	100.00	(78)	—
Talisman (Sumatra) Ltd.	Repsol Oil & Gas Canada Inc.	Canada	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	—
Talisman (Vietnam 133 &134) Ltd.	Repsol Exploración, S.A.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	—	29
Talisman (Vietnam 15-2/01) Ltd.	Repsol Exploración, S.A.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	21	176
Repsol Andaman B.V. [23]	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	32	—
Talisman Colombia Holdco Ltd.	Repsol Exploración, S.A.	United Kingdom	Portfolio company	F.C.	100.00	100.00	1,099	1,738
Talisman East Jabung B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	3	—
Repsol Perpetual Norge, A.S.	Talisman Perpetual (Norway) Ltd.	Norway	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	1
Talisman Resources (Bahamas) Ltd.	Paladin Resources Ltd.	Bahamas	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	—
Talisman Resources (North West Java) Ltd.	Talisman UK (South East Sumatra) Ltd.	United Kingdom	Oil and gas exploration and production [11]	F.C.	100.00	100.00	31	—
Repsol Sakakemang B.V. [22]	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	101	—
Talisman South Sageri B.V.	Talisman International Holdings, B.V.	Netherlands	Oil and gas exploration and production [11]	F.C.	100.00	100.00	—	—
Repsol Transgasindo, S.á.r.l. [33]	Fortuna International (Barbados), Inc.	Spain	Portfolio company	F.C.	100.00	100.00	(38)	24
Talisman UK (South East Sumatra) Ltd.	Paladin Resources, Ltd.	United Kingdom	Oil and gas exploration and production [11]	F.C.	100.00	100.00	19	—
Talisman Vietnam Ltd.	Fortuna International Petroleum Corporation	Barbados	Oil and gas exploration and production	F.C.	100.00	100.00	8	—
Talisman Vietnam 07/03 B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	3	—
Talisman Vietnam 07/03-CRD Corporation LLC	Talisman International Holdings, B.V.	United States	Oil and gas exploration and production	F.C.	100.00	100.00	5	—
Talisman Vietnam 135-136 B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	1	—
Talisman Vietnam 146-147 B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	—	—
TNO (Tafnefteotdacha)	AR Oil & Gaz, B.V.	Russia	Oil and gas exploration and production	E.M.(J.V.)	99.57	48.79	47	—
Transportadora Sulbrasileira de Gas, S.A.	Tucunaré Empreendimentos e Participaçoes, Ltda.	Brazil	Gas pipeline construction and operation	E.M.(J.V.)	25.00	25.00	—	10
Transworld Petroleum (U.K.)	Repsol Sinopec North Sea Ltd.	United Kingdom	Oil and gas exploration and production	E.M.(J.V.)	100.00	51.00	—	—
Triad Oil Manitoba Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production [11]	F.C.	100.00	100.00	5	—
YPFB Andina, S.A. [15]	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	E.M.(J.V.)	48.33	48.33	714	144
YPFB Transierra, S.A. [16]	YPFB Andina, S.A.	Bolivia	Transport of oil and gas by pipeline	E.M.	44.50	21.51	—	—
504744 Alberta Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production [11]	F.C.	100.00	100.00	(6)	—

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7308051 Canada Ltd	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	98	267
8441251 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	14	14
8787352 Canada Ltd.	Repsol Oil & Gas Canada, Inc.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	2	2
Vung May 156-159 Vietnam B.V.	Repsol Exploración, S.A.	Netherlands	Oil and gas exploration and production	F.C.	100.00	100.00	—	—
INDUSTRIAL								
Asfaltos Españoles, S.A.	Repsol Petróleo, S.A.	Spain	Asphalts	F.C. (4)	50.00	49.99	35	9
Cogeneración Gequisa, S.A. (14)	General Química	Spain	Production of electricity and steam	E.M.	39.00	19.50	6	2
Compañía Auxiliar de Remolcadores y Buques Especiales, S.A.	Repsol Petróleo, S.A.	Spain	Provision for maritime services	F.C.	100.00	99.19	6	—
Dynasol Altamira, S.A. de C.V. (14)	Dynasol Elastómeros, S.A. de C.V.	Mexico	Provision of services	E.M.(J.V.)	100.00	50.00	5	—
Dynasol China, S.A. de C.V. (14)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Provision of services	E.M.(J.V.)	99.99	49.99	17	18
Dynasol Elastómeros, S.A. de C.V. (14)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Production and marketing of chemical products	E.M.(J.V.)	100.00	50.00	98	30
Dynasol Elastómeros, S.A.U. (14)	Dynasol Gestión, S.L.	Spain	Production and marketing of chemical products	E.M.(J.V.)	100.00	50.00	115	17
Dynasol Gestión Mexico, S.A.P.I. de C.V. (14)	Repsol Química, S.A.	Mexico	Portfolio and shared services company	E.M.	50.00	50.00	208	171
Dynasol Gestión, S.L.	Repsol Química, S.A.	Spain	Portfolio and shared services company	E.M.	50.00	50.00	198	42
Dynasol, Llc. (14)	Dynasol Gestión, S.L.	United States	Marketing of petrochemical products	E.M.(J.V.)	100.00	50.00	21	9
Energia Distribuida del Norte, S.A. (5)	Petróleos del Norte, S.A.	Spain	Construction and operation of an oil refinery	F.C.	100.00	100.00	—	—
General Química, S.A.U. (14)	Dynasol Gestión, S.L.	Spain	Manufacture and sale of petrochemical products	E.M.(J.V.)	100.00	50.00	70	6
Grupo Repsol del Perú, S.A.C.	Repsol Perú B.V.	Peru	Portfolio and shared services company	F.C.	100.00	100.00	2	—
Iberian Lube Base Oil Company, S.A.	Repsol Petróleo, S.A.	Spain	Development and production of lubricant base oils	(4)	30.00	29.99	241	180
Industrias Negromex, S.A. de C.V. (14)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Production of synthetic oil cloths	E.M.	99.99	49.99	85	46
Insa Altamira, S.A. de C.V. (14)	Dynasol Gestión Mexico, S.A.P.I. de C.V.	Mexico	Supply of permanent staff	E.M.(J.V.)	99.99	49.99	2	—
Insa Gpro (Nanjing), Synthetic Rubber Co., Ltd. (14)	Dynasol China, S.A. de C.V.	China	Production, development, sale of synthetic rubber	E.M.(J.V.)	50.00	24.99	6	1
Liaoning North Dynasol Synthetic Rubber Co., Ltd. (14)	Dynasol Gestión, S.L.	China	Production, development, sale of synthetic rubber	E.M.(J.V.)	50.00	25.00	17	96
Petróleos del Norte, S.A.	Repsol Exploración Caribe, S.L. (29)	Spain	Construction and operation of an oil refinery	F.C.	85.98	85.98	1,223	121
Petronor Innovación, S.L.	Petróleos del Norte, S.A.	Spain	Research activities	F.C.	100.00	85.98	—	—
Polidux, S.A.	Repsol Química, S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	19	17
Refinería La Pampilla, S.A.A.	Repsol Perú B.V.	Peru	Hydrocarbon refining and marketing	F.C.	92.42	92.42	462	605
Repsol Canada, Ltd. General Partner	Repsol Exploración S.A.	Canada	Regasification of LNG	F.C.	100.00	100.00	1	2
Repsol Chemie Deutschland, GmbH	Repsol Química, S.A.	Germany	Marketing of chemical products	F.C.	100.00	100.00	2	—
Repsol Comercial, S.A.C.	Refinería La Pampilla S.A.A.	Peru	Marketing of fuel	F.C.	100.00	92.42	69	68
Repsol Customer Centric, S.L. (24)	Repsol S.A. (25)	Spain	Production and marketing of oil derivatives	F.C.	100.00	100.00	2,492	—
Relkia Distribuidora de Electricidad, S.L.	Repsol Petróleo, S.A.	Spain	Distribution and supply of electricity	F.C.	100.00	99.97	11	—
Repsol Energy Perú, S.A.C.	Repsol Comercial, S.A.C.	Peru	gaseous fuels and related products (11)	F.C.	100.00	92.42	1	—
Repsol Exploración Caribe, S.L.	Repsol S.A. (30)	Spain	Portfolio company	F.C.	100.00	100.00	6,127	—
Repsol Marketing, S.A.C.	Repsol Perú B.V.	Peru	Fuel and specialized products marketing	F.C.	100.00	100.00	14	3
Repsol Perú, B.V.	Repsol S.A.	Netherlands	Portfolio company	F.C.	100.00	100.00	358	316
Repsol Petróleo, S.A.	Repsol Exploración Caribe, S.L. (29)	Spain	Import of products and operation of refineries	F.C.	99.97	99.97	3,692	218
Repsol Polímeros, Unipessoal, LDA	Repsol Química, S.A.	Portugal	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	225	62

					December 2020			
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Name	**Parent company**	**Country**	**Corporate purpose**	**Method of conso.** (1)	**Control Int.** (2)	**Total Group Interest**	**Equity** (3)	**Share Capital** (3)
Repsol Química, S.A.	Repsol Exploración Caribe, S.L.(29)	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	1,235	60
Repsol St. John LNG, S.L.	Repsol LNG Holding, S.A.	Spain	Sector studies (11)	F.C.	100.00	100.00	1	—
Repsol Trading Perú, S.A.C.	Repsol Trading, S.A.	Peru	Trading and transport	F.C.	100.00	100.00	6	8
Repsol Trading Singapore Pte., Ltd.	Repsol Trading, S.A.	Singapore	Trading and transport	F.C.	100.00	100.00	(43)	—
Repsol Trading USA Corporation	Repsol USA Holdings Corporation	United States	Trading and transport	F.C.	100.00	100.00	(160)	—
Repsol Trading, S.A.	Repsol Exploración Caribe, S.L.(29)	Spain	Supply, Marketing, Trading and Transport	F.C.	100.00	100.00	438	—
Saint John LNG Development Company, Ltd.	Repsol St. John LNG, S.L.	Canada	Liquefaction plant investment project (11)	F.C.	100.00	100.00	—	3
Servicios de Seguridad Mancomunados, S.A.	Repsol Petróleo, S.A.	Spain	Safety	F.C.	100.00	99.98	1	—
COMERCIAL Y RENOVABLES								
Abastecimentos e Serviços de Aviaçao, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	E.M.	50.00	50.00	—	—
Agrícola Comercial del Valle de Santo Domingo, S.A.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	20.00	20.00	1	—
Air Miles España, S.A. (14)	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Wind power project	F.C.	26.67	25.78	12	—
Alectoris Energía Sostenible 1, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	6	—
Alectoris Energía Sostenible 3, S.L.	Repsol Renovables, S.L.U	Spain	Production and sale of storage batteries	E.M.	100.00	100.00	5	—
Ampere Power Energy, S.L.	Repsol Energy Ventures, S.A.	Spain	Sun power project	F.C.	7.18	7.18	5	1
Aragonesa de Infraestructuras Energéticas Renovables, S.L.U (5)	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Arco Energía 1, S.L.U.	Repsol Renovables, S.L.U	Spain	Sun power project	F.C.	100.00	100.00	—	—
Arco Energía 2, S.L.U.	Repsol Renovables, S.L.U	Spain	Sun power project	F.C.	100.00	100.00	—	—
Arco Energía 3, S.L.U.	Repsol Renovables, S.L.U	Spain	Sun power project	F.C.	100.00	100.00	—	—
Arco Energía 4, S.L.U.	Repsol Renovables, S.L.U	Spain	Sun power project	F.C.	100.00	100.00	—	—
Arco Energía 5, S.L.U.	Repsol Renovables, S.L.U	Spain	Travel Club Program. Loyalty service	E.M.	100.00	100.00	—	—
Arteche y García, S.L. (14)	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	100.00	96.68	—	—
Autoservicio Sargento, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Installation and operation of service stations	E.M.(J.V.)	50.00	50.00	1	—
Bardahl de México, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	40.00	40.00	59	—
Begas Motor, S.L.	Repsol Energy Ventures, S.A.	Spain	Manufacture, transformation and sale of motor vehicles, manufacture of electrical equipment and electronics, parts and accessories for motor vehicles.	E.M.	18.89	18.89	4	1
Belmont Technology Inc.., S.L.	Repsol Energy Ventures, S.A.	Spain	Software platform and virtual assistance in geoscience and reservoir engineering based on artificial intelligence.	E.M.	9.87	9.87	(1)	6
Benzirep-Vall, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	100.00	96.68	—	—
Boalar Energías, S.L.U (5)	Repsol Renovables, S.L.U	Spain	Solar power project	F.C.	100.00	100.00	—	—
Caiageste - Gestao de Areas de Serviço, Lda.	GESPOST	Portugal	Operation and management of service stations	E.M.	50.00	50.00	—	—
Campsa Estaciones de Servicio, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Operation and management of service stations	F.C.	100.00	96.68	93	8
Carburants i Derivats, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Andorra	Distribution of oil derivative products	E.M.	33.25	32.15	2	—
CI Repsol Aviación Colombia, S.A.S.	Repsol Downstream Internacional, S.A.	Colombia	Distribution and marketing of oil products	F.C.	100.00	100.00	—	—
Combustibles Sureños, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	50.00	50.00	—	—
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	91.85	3	1
Desarrollo Eólico Las Majas VII, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Desarrollos Eólicos El Saladar, S.L.U (5)	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—

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Desarrollo Eólico Las Majas VIII, S.L.[5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Desarrollo Eólico Las Majas XIV, S.L.[5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Desarrollo Eólico Las Majas XV, S.L.[5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Desarrollo Eólico Las Majas XXVII, S.L.U[5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Desarrollo Eólico Las Majas XXXI, S.L.U[5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Distribuidora Andalucía Oriental, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Fuel marketing	E.M.(J.V.)	50.00	48.34	2	1
Distribuidora de Petróleos, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Fuel marketing	F.C.	85.00	82.18	—	—
Endomexicana Renta y Servicios, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	40.00	40.00	1	—
Energías Renovables de Cilene, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Dione, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Lisitea, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Polux, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Gladiateur 18, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Hidra, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energías Renovables de Kore, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Energy Express S.L.U. [14]	Societat Catalana de Petrolis, S.A.	Spain	Operation and management of service stations	F.C.	100.00	91.89	6	1
Estación de Servicio Bahía Asunción, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	50.00	50.00	1	—
Estación de Servicio Barajas, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	F.C.	96.00	92.81	3	1
Solar Fotovoltaica Villena, S.L.[17]	Repsol Renovables, S.L.U[18]	Spain	Development of solar power projects	F.C.	100.00	96.68	—	—
Eólica del Tatal SpA [5]	Repsol Chile, S.A.	Chile	Wind power project	P.E.(N.C.)	15.00	15.00	—	—
Estación de Servicio Montsia, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of service stations	E.M.(J.V.)	50.00	48.34	—	—
Ezzing Renewable Energies S.L.	Repsol Energy Ventures S.A.	Spain	Development of solar power projects	E.M.	22.22	22.22	1	—
Finboot Ltd.	Repsol Energy Ventures S.A.	United Kingdom	Blockchain technology for energy, retail and automotive	E.M.	8.41	8.41	—	—
Fuerzas Energéticas del Sur de Europa XI, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Fuerzas Energéticas del Sur de Europa XII, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Fuerzas Energéticas del Sur de Europa V, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Fuerzas Energéticas del Sur de Europa VI, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Fuerzas Energéticas del Sur de Europa XIII, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Fuerzas Energéticas del Sur de Europa XIV, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Fuerzas Energéticas del Sur de Europa XVIII, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Fuerzas Energéticas del Sur de Europa XX, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Generación Eólica El Vedado, S.L.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Generación y Suministro de Energía, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	1	—
Gestão e Admin. de Postos de Abastecimento, Unipessoal, Lda. GESPOST	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	F.C.	100.00	100.00	8	2
Gestión de Puntos de Venta GESPEVESA, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Service stations management	E.M.(J.V.)	50.00	48.34	51	39
Gutsa Servicios, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Service stations management	E.M.	50.00	50.00	—	—
Hispánica de Desarrollos Energéticos Sostenibles, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	3	—
Iberen Renovables, S.A.	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	4	4
Ibil, Gestor de Carga de Vehículo Eléctrico, S.A.	Repsol Customer Centric, S.L.U [26]	Spain	Operation of electric vehicle charging points	E.M.(J.V.)	50.00	50.00	1	3
Klikin Deals Spain, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Customer and oil product marketing management	E.M.	100.00	96.68	3	1

					December 2020			
					%		€ Million	
Name	**Parent company**	**Country**	**Corporate purpose**	**Method of conso.** [1]	**Control Int.** [2]	**Total Group Interest**	**Equity** [3]	**Share Capital** [3]
LGA – Logística Global de Aviação, LDA. [5]	Repsol Portuguesa, S.A	Portugal	Transport of aviation oil products	E.M.	20.00	20.00	—	1
Nanogap Sub n-m Powder S.A.	Repsol Energy Ventures S.A.	Spain	Development of nanoparticles and nanofibers for application in materials, energy and biomedicine	E.M.	12.52	12.52	4	2
Natural Power Development, S.L.U [5]	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
OGCI Climate Investments, Llp.	Repsol Energy Ventures S.A.	United Kingdom	Technology Development	E.M.	9.09	9.09	136	207
Palmira Market, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Management of supermarkets and stores	E.M.(J.V.)	50.00	50.00	1	—
Perseo Biotechnology S.L.U. [5]	Repsol Energy Ventures S.A.	Spain	Manufacture, distribution and sale of biofuels	E.M.	24.99	24.99	—	—
PT Pacific Lubritama Indonesia	United Oil Comany Pte. Ltd	Singapore	Production and distribution of lubricants	E.M.	95.00	38.00	19	7
Recreus Industries S.L.	Repsol Energy Ventures S.A.	Spain	Distribution of oil derivative products	E.M.	16.67	16.67	1	—
Régsiti Comercializadora Regulada, S.L.U.	Repsol Electricidad y Gas, S.A.	Spain	Marketing of electricity	F.C.	100.00	100.00	(4)	1
Renovacyl, S.A.	Iberen Renovables, S.A.	Spain	Wind power project	F.C.	100.00	100.00	—	1
Repsol Butano, S.A.	Repsol Customer Centric, S.L.U [26]	Spain	Marketing of LGP	F.C.	100.00	100.00	200	59
Repsol Chile, S.A.	Repsol Renovables, S.L.U)(19)	Chile	Portfolio company	F.C.	100.00	100.00	23	20
Repsol Comercial de Productos Petrolíferos, S.A.	Repsol Customer Centric, S.L.U [26]	Spain	Marketing of oil products	F.C.	99.79	96.68	1,114	335
Repsol Comercializadora de Electricidad y Gas, S.L.U.	Repsol Customer Centric, S.L.U [26]	Spain	Marketing of electricity	F.C.	100.00	100.00	105	1
Repsol Directo, Lda.	Repsol Portuguesa, S.A.	Portugal	Distribution and marketing of oil products	F.C.	100.00	100.00	3	2
Repsol Directo, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of oil products	F.C.	100.00	96.68	5	—
Repsol Downstream México, S.A. de C.V	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	F.C.	100.00	99.97	47	91
Repsol Energy Ventures, S.A.	Repsol Technology and Ventures, S.L.U.	Spain	Development of new energy products	F.C.	100.00	100.00	26	2
Repsol Exploration Advanced Services, AG	Repsol Exploración S.A.	Switzerland	Human resources service provider	F.C.	100.00	100.00	1	—
Repsol Gas Portugal, Unipessoal, LDA	Repsol Butano, S.A.	Portugal	Marketing of LGP	F.C.	100.00	100.00	27	3
Repsol Generación Eléctrica, S.L.U.	Repsol Electricidad y Gas, S.A.	Spain	Generation of electricity	F.C.	100.00	100.00	849	523
Repsol Ibereólica Renovables Chile SpA [5]	Repsol Chile, S.A.	Chile	Wind power projects	E.M.	50.00	50.00	—	—
Repsol Italia, SpA	Repsol S.A.	Italy	Marketing of oil products	F.C.	100.00	100.00	(4)	2
Repsol Lubricantes y Especialidades, S.A.	Repsol S.A. [30]	Spain	Production and marketing of oil derivatives	F.C.	100.00	99.97	81	5
Repsol Lubrificantes e Especialidades Brasil Participaçoes, Ltda.	Repsol Lubricantes y Especialidades, S.A.	Brazil	Production and marketing of lubricants	F.C.	100.00	100.00	—	2
Repsol Mar de Cortés, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and marketing of lubricants	E.M.(J.V.)	50.00	50.00	17	1
Repsol Mar de Cortés Estaciones de Servicio, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and marketing of lubricants	E.M.(J.V.)	50.00	50.00	1	—
Repsol Marketing France, S.A.S.U.	Repsol Downstream Internacional, S.A.	France	Marketing of oil products.	F.C.	100.00	100.00	—	—
Repsol Maroc, S.A. [6]	Repsol Butano, S.A.	Morocco	Marketing of LGP	E.M.	99.96	99.96	—	1
Repsol Electricidad y Gas, S.A. [23]	Repsol S.A.	Spain	Production, distribution and sale of biofuels	F.C.	100.00	100.00	1,337	1
Repsol Portuguesa, Lda	Repsol S.A.	Portugal	Distribution and marketing of oil products	F.C.	100.00	100.00	181	118
Repsol Renovables, S.L.U	Repsol Electricidad y Gas, S.A.	Spain	Development of new energy projects	F.C.	100.00	100.00	76	—
Rocsole OY	Repsol Energy Ventures S.A.	Finland	Technology development	E.M.	13.93	13.93	1	7
Servicios Logisticos Combustibles de Aviacion, S.L.	Repsol Lubricantes y Especialidades, S.A.	Spain	Transport of aviation oil products	E.M.(J.V.)	50.00	49.29	18	4
Sociedade Abastecedora de Aeronaves, Lda.	Repsol Portuguesa, S.A.	Portugal	Marketing of oil products	E.M.	25.00	25.00	—	—
Societat Catalana de Petrolis, S.A. (PETROCAT)	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and marketing of oil products	F.C.	94.94	91.89	—	6
Solgas Distribuidora de Gas, S.L.	Repsol Butano, S.A.	Spain	Marketing of LGP	F.C.	100.00	100.00	1	1
Solred, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Management of payment methods at service stations	F.C.	100.00	96.68	54	26

					December 2020			
					%		€ Million	
Name	Parent company	Country	Corporate purpose	Method of conso. (1)	Control Int. (2)	Total Group Interest	Equity (3)	Share Capital (3)
Soluciones Tecnológicas de Energías Verdes, S.L.U (5)	Repsol Renovables, S.L.U	Spain	Wind power project	F.C.	100.00	100.00	—	—
Sorbwater Technology, A.S.	Repsol Energy Ventures S.A.	Norway	Water treatment technology management in E&P	E.M.	30.78	30.78	—	9
Terminales Canarios, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Supply and distribution of oil products	E.M.(J.V.)	50.00	48.34	22	20
Tramperase, S.L.	Repsol Renovables, S.L.U	Spain	Development of solar power projects	F.C.	100.00	100.00	2	—
United Oil Comany Pte. Ltd	Repsol Downstream Internacional, S.A.	Singapore	Production and distribution of lubricants	E.M.	40.00	40.00	25	9
Valdesolar Hive, S.L.	Repsol Renovables, S.L.U	Spain	Development of solar power projects	F.C.	100.00	100.00	6	—
WIB Advance Mobility, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	City car sharing rentals	E.M.(J.V.)	50.00	48.34	2	—
Windplus, S.A.	Repsol Renovables, S.L.U	Portugal	Technology development for wind generation	E.M.	14.82	13.63	4	2
CORPORATION								
Albatros, S.à.r.L.	Repsol S.A.	Luxembourg	Portfolio company	F.C.	100.00	100.00	3,909	—
AR Oil & Gaz, B.V.	Repsol Exploración S.A.	The Netherlands	Portfolio company	E.M.(J.V.)	49.00	49.00	460	—
Edwards Gas Services LLC	Repsol Oil & Gas USA LLC.	United States	Portfolio company	F.C.	100.00	100.00	85	108
Fortuna International (Barbados) Inc. (13)	Talisman International (Luxembourg), S.a.r.l.	Barbados	Portfolio company	F.C.	100.00	100.00	38	62
Fortuna International Petroleum Corporation	Repsol Exploración, S.A.	Barbados	Portfolio company	F.C.	100.00	100.00	150	148
Gaviota RE, S.A. (7)	Albatros, S.a.r.l.	Luxembourg	Insurance and reinsurance	F.C.	100.00	100.00	325	1
Greenstone Assurance, Ltd.	Gaviota RE, S.A.	Bermuda	Insurance and reinsurance ("run-off" company) (11)	F.C.	100.00	100.00	2	9
Oleoducto de Crudos Pesados, Ltd.	Repsol OCP de Ecuador, S.A.	Cayman Islands	Portfolio company	E.M.	29.66	29.66	131	82
Oleum Insurance Company Ltd.	Repsol Oil & Gas Canada Inc.	Barbados	Insurance and reinsurance ("run-off" company) (11)	F.C.	100.00	100.00	1	—
Repsol Bolivia, S.A.	Repsol Exploración Jamaica, S.A. (28)	Bolivia	Portfolio company	F.C.	100.00	100.00	316	13
Repsol Downstream Internacional, S.A.	Repsol Customer Centric, S.L.U (26)	Spain	Portfolio company	F.C.	100.00	100.00	275	—
Repsol Gestión de Divisa, S.L.	Repsol S.A.	Spain	Financial	F.C.	100.00	100.00	456	—
Repsol International Finance, B.V.	Repsol S.A.	The Netherlands	Financing and holding of shares	F.C.	100.00	100.00	671	301
Repsol Oil & Gas RTS Sdn.Bhd.	Repsol Exploración, S.A.	Malaysia	Shared services company	F.C.	100.00	100.00	1	17
Repsol Oil & Gas SEA Pte. Ltd.	Repsol Exploración, S.A.	Singapore	Shared services company	F.C.	100.00	100.00	5	4
Repsol Services Company	Repsol USA Holdings Corporation	United States	Service provisions	F.C.	100.00	100.00	21	36
Repsol Sinopec Brasil, B.V. (35)	Repsol Exploraçao Brasil, Ltda. (31)	The Netherlands	Portfolio company	E.M.(J.V.)	60.00	60.00	—	—
Repsol Technology and Ventures, S.L.U	Repsol S.A.	Spain	Shared services company	F.C.	100.00	100.00	26	—
Repsol Tesorería y Gestión Financiera, S.A.	Repsol S.A.	Spain	Financial	F.C.	100.00	100.00	359	—
Talisman International (Luxembourg), S.a.r.l.	Repsol Oil & Gas Canada Inc.	Luxembourg	Portfolio company	F.C.	100.00	100.00	1,203	62
Talisman International Holdings B.V.	Repsol Exploración, S.A.	The Netherlands	Portfolio company	F.C.	100.00	100.00	221	596
Talisman Perpetual (Norway) Ltd.	TE Holding S.a.r.l.	United Kingdom	Portfolio company (11)	F.C.	100.00	100.00	—	1
TE Holding S.ar.l.	Albatros, S.À.R.L.(21)	Luxembourg	Portfolio and finance company	F.C.	100.00	100.00	3,525	3,781

(1) Method of consolidation:
F.C.: Full consolidation
E.M.: Equity method. Joint Ventures are identified as "JV".
(2) Percentage corresponding to direct and indirect interest of the parent company immediately above the subsidiary.
(3) Corresponds to Equity and Share Capital data used in the Group´s consolidation process, prior to the adjustments related thereto. Companies whose functional currency is not the euro have been translated at the closing exchange rate. Amounts have been rounded (less than half a million has been rounded down to zero).
(4) Interests in joint operations (see Appendix Ic) which are structured through a company and this vehicle does not limit its rights to the assets or obligations for the liabilities related to the arrangement.
(5) Companies incorporated into the Repsol Group in 2020 (see Appendix Ib).
(6) Company in the process of liquidation.
(7) This company holds a non-controlling interest in Oil Insurance, Ltd (5.54%), domiciled in Bermudas.
(8) This company, legally incorporated in the Bahamas, is registered for tax purposes in the United Kingdom.
(9) These companies, legally incorporated in the British Virgin Islands, are registered for tax purposes in the United Kingdom.

(10) This company is the parent company for Repsol Groundbirch Partnership, registered in the United States.
(11) Inactive company.
(12) This company was formerly known as Puma Energy Perú, S.A.C.
(13) These companies, legally incorporated in Barbados, are registered for tax purposes in the Netherlands.
(14) Share Capital and Equity data correspond to 2019.
(15) Equity relates to the value of the consolidated subgroup.
(16) Equity value included in its parent.
(17) This Company was formerly known as Estaciones de Servicio El Robledo, S.L.U. The change took place in July 2020.
(18) The parent of this company was previously Repsol Comercial de Productos Petrolíferos, S.A. The change took place in July 2020.
(19) The parent of this company was previously Repsol, S.A. The change took place in August 2020.
(20) The parent of this company was previously TE Holding, S.a.r.l.. The change took place in August 2020.
(21) The parent of this company was previously Repsol Oil & Gas Canada, Inc. The change took place in August 2020.
(22) This company was formerly known as Talisman Sakakemang, B.V. The change took place in October 2020.
(23) This company was formerly known as Talisman Andaman, B.V. The change took place in October 2020.
(24) This company was formerly known as Bios Avanzados Tratados del Mediterráneo, S.L. The change took place in November 2020.
(25) The parent of this company was previously Repsol Petróleo, S.A. The change took place in November 2020.
(26) The parent of these companies has changed to Repsol Customer Centric, S.L.U. The change took place in December 2020.
(27) The parent of these companies has changed to Repsol Exploración 17, B.V. The change took place in December 2020.
(28) The parent of these companies has changed to Repsol Exploración Jamaica, S.A. The change took place in December 2020.
(29) The parent of these companies has changed to Repsol Exploración Caribe, S.L. The change took place in December 2020.
(30) The parent of these companies has changed to Repsol, S.A. The change took place in December 2020.
(31) The parent of this company was previously Repsol Sinopec Brasil, S.A. The change took place in November 2020.
(32) This company was formerly known as Occidental de Colombia LLC. The change took place in October 2020.
(33) Talisman Transgasindo Ltd. (a company incorporated in Barbados with tax residence in the Netherlands) has moved (corporate and tax) to Luxembourg, now known as Repsol Transgasindo S.à.r.l."
(34) Talisman Corridor Ltd. (a company incorporated in Barbados with tax residence in the Netherlands) has moved (corporate and tax) to Spain, now known as Repsol Corridor, S.A.
(35) The equity value is also included with Repsol Sinopec Brasil, S.A. (see Note 13).

APPENDIX IB: Main changes in the scope of consolidation

For the year ended December 31, 2020

a) *Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:*

					2020		
Name	Country	Parent company	Item	Date	Method of consolidation (1)	% voting rights acquired	% total voting rights in entity following acquisition (2)
LGA – Logística Global de Aviação, LDA.	Portugal	Repsol Portuguesa, S.A	Acquisition	January-20	E.M.	20.00 %	20.00 %
Aragonesa de Infraestructuras Energéticas Renovables, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Boalar Energías, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollos Eólicos El Saladar, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas VIII, S.L.	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas XIV, S.L.	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas XV, S.L.	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas XXVII, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas XXXI, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Energías Renovables de Cilene, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Energías Renovables de Gladiateur 18, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Energías Renovables de Hidra, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Energías Renovables de Kore, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XIII, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XIV, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XVIII, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XX, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Generación y Suministro de Energía, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Hispánica de Desarrollos Energéticos Sostenibles, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Natural Power Development, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Soluciones Tecnológicas de Energías Verdes, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	February-20	F.C.	100.00 %	100.00 %
Finboot Ltd.	UK	Repsol Energy Ventures, S.A.	Share increase	March-20	E.M.	0.07 %	8.41 %
Klikin Deals Spain, S.L.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Share increase	April-20	E.M.	0.73 %	70.73 %
Energia Distribuida del Norte, S.A.	Spain	Petróleos del Norte, S.A.	Incorporation	April-20	F.C.	100.00 %	100.00 %
Rocsole OY	Finland	Repsol Energy Ventures S.A.	Share increase	May-20	E.M.	1.43 %	13.93 %
Energías Renovables de Dione, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	June-20	F.C.	100.00 %	100.00 %
Energías Renovables de Lisitea, S.L.U	Spain	Repsol Renovables, S.L.U	Acquisition	June-20	F.C.	100.00 %	100.00 %
Energías Renovables de Polux, S.L.U,	Spain	Repsol Renovables, S.L.U	Acquisition	June-20	F.C.	100.00 %	100.00 %
Repsol Ibereólica Renovables Chile SpA	Chile	Repsol Chile, S.A.	Acquisition	October-20	E.M.	50.00 %	50.00 %
Eólica del Tatal SpA	Chile	Repsol Chile, S.A.	Acquisition	October-20	E.M.	15.00 %	15.00 %
Klikin Deals Spain, S.L.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Share increase	December-20	F.C.	29.27 %	100.00 %
Perseo Biotechnology S.L.U.	Spain	Repsol Energy Ventures S.A.	Acquisition	December-20	E.M.	24.99 %	24.99 %

(1) Method of consolidation:
F.C.: Full consolidation
E.M.: Equity method. Joint Ventures are identified as "JV".
(2) Corresponds to the percentage of equity in the acquired company.

b) *Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:*

					2020			
Name	**Country**	**Parent company**	**Item**	**Date**	**Method of consolidation (1)**	**% voting rights disposed or derecognized**	**% total voting rights in entity following disposal**	**Profit/ (Loss) (€ Million)**
Repsol Exploración East Bula, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	January-20	F.C	100.00 %	0.00 %	0
Repsol Exploración Seram, B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	January-20	F.C	100.00 %	0.00 %	0
Foreland Oil, Ltd.	British Virgin Islands	Rift Oil, Ltd.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Repsol Oil & Gas Papua Pty, Ltd.	Australia	Repsol Oil & Gas Niugini Pty Ltd.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Repsol Oil & Gas Niugini Pty, Ltd.	Australia	Talisman International Holdings, B.V.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Repsol Oil & Gas Niugini Kimu Alpha Pty, Ltd.	Australia	Repsol Oil & Gas Niugini Ltd.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Repsol Oil & Gas Niugini Kimu Beta, Ltd.	Papua New Guinea	Repsol Oil & Gas Niugini Ltd.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Repsol Oil & Gas Niugini, Ltd.	Papua New Guinea	Repsol Oil & Gas Papua Pty, Ltd.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
Rift Oil, Ltd.	UK	Talisman International Holdings, B.V.	Sale	January-20	F.C	100.00 %	0.00 %	Nota (2)
CSJC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Partial reduction	February-20	E.M	0.58 %	70.20 %	1
CSJC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Partial reduction	April-20	E.M	1.00 %	69.20 %	3
Repsol Louisiana Corporation	USA	Repsol USA Holdings Corporation	Liquidation	April-20	F.C	100.00 %	0.00 %	0
Repsol Exploration Australia Pty, Ltd.	Australia	Repsol Exploración S.A.	Liquidation	April-20	F.C	100.00 %	0.00 %	0
Nanogap Sub n-m Powder S.A.	Spain	Repsol Energy Ventures S.A.	Partial reduction	May-20	E.M	0.10 %	12,52%	0
Principle Power, Inc.	USA	Repsol Energy Ventures S.A.	Partial reduction	May-20	E.M	4.49 %	16.08 %	0
Repsol Exploración Cendrawasih III, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	May-20	F.C	100.00 %	0.00 %	0
Talisman (Block K 9) B.V.	Netherlands	Talisman Global Holdings, B.V.	Liquidation	June-20	F.C	100.00 %	0.00 %	0
Begas Motor, S.L.	Spain	Repsol Energy Ventures, S.A.	Partial reduction	June-20	E.M	4.23 %	23.70 %	0
Gas Natural West África S.L.	Spain	Repsol LNG Holding, S.A.	Liquidation	July-20	E.M	60.00 %	0.00 %	0
Repsol Angola 35, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	July-20	F.C	100.00 %	0.00 %	0
Begas Motor, S.L.	Spain	Repsol Energy Ventures, S.A.	Partial reduction	July-20	E.M	4.81 %	18.89 %	0
Principle Power, Inc.	USA	Repsol Energy Ventures S.A.	Partial reduction	September-20	E.M	0.18 %	15.90 %	0
Windplus, S.A.	Portugal	Repsol Renovables, S.L.U	Partial reduction	October-20	E.M	5.77 %	13.63 %	0
Repsol Angola 22, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	October-20	F.C	100.00 %	0.00 %	0
Repsol Angola 37, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	October-20	F.C	100.00 %	0.00 %	0
Repsol Aruba, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Repsol Exploración Cendrawasih I, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Repsol Corridor B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Talisman Banyumas B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Repsol Exploración Cendrawasih IV, B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Repsol Bulgaria, B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0
Talisman (Algeria), B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0

Principle Power (Europe), Ltd.	UK	Producción de electricidad	Sale	December-20	E.M	20.57 %	0.00 %	Nota (3)
Principle Power Portugal Unipessoal, Lda.	Portugal	Producción de electricidad	Sale	December-20	E.M	20.57 %	0.00 %	Nota (3)
Principle Power, Inc.	USA	Holding de grupo de empresas	Sale	December-20	E.M	15.90 %	0.00 %	Nota (3)
CSJC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Partial reduction	December-20	E.M	0.90 %	69.20 %	1
Repsol Exploration Namibia Pty, Ltd.	Namibia	Repsol Exploración S.A.	Liquidation	December-20	F.C	100.00 %	0.00 %	0

(1) Method of consolidation:

F.C.: Full consolidation

E.M.: Equity method. Joint Ventures are identified as "JV".

(2) Reflects the scope of the sale of the Group's interest in seven onshore blocks in Papua New Guinea, which generated a profit after tax of €63 million.

(3) Reflects the scope of the sale of the Group's interest in Principle Power, which generated a profit after tax of €5 million.

For the year ended December 31, 2019

a) *Business combinations, other acquisitions and acquisitions of interest in subsidiaries, joint ventures and/or associates:*

					2019		
Name	Country	Parent company	Item	Date	Method of consolidation (1)	% voting rights acquired	% total voting rights in entity following acquisition (2)
Agrícola Comercial Valle de Santo Domingo, S.A	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	20.00 %	20.00 %
Autoservicio Sargento, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Combustibles Sureños, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Estación de Servicio Bahía Asunción, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Gutsa Servicios, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Palmira Market, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Repsol Mar de Cortés Estaciones de Servicio, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Repsol Mar de Cortés, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A	Acquisition	January-19	E.M.(J.V.)	50.00 %	50.00 %
Sorbwater Technology, A.S.	Norway	Repsol Energy Ventures, S.A.	Shares increase	January-19	E.M.	9.35 %	20.64 %
Ampere Power Energy, S.L.	Spain	Repsol Energy Ventures, S.A.	Acquisition	February-19	E.M.	7.89 %	7.89 %
Begas Motor, S.L.	Spain	Repsol Energy Ventures, S.A.	Acquisition	February-19	E.M.	36.19 %	36.19 %
Refinería La Pampilla, S.A.	Peru	Repsol Perú B.V.	Shares increase	March-19	F.C.	10.04 %	92.42 %
Alectoris Energía Sostenible 1, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Alectoris Energía Sostenible 3, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Arco Energía 1, S.L.U.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Arco Energía 2, S.L.U.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Arco Energía 3, S.L.U.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Arco Energía 4, S.L.U.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Arco Energía 5, S.L.U.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Desarrollo Eólico Las Majas VII, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa V, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa VI, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XI, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Fuerzas Energéticas del Sur de Europa XII, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Generación Eólica El Vedado, S.L.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Iberen Renovables, S.A.	Spain	Repsol Renovables, S.L.U. (4)	Acquisition	June-19	F.C.	100.00 %	100.00 %
Renovacyl, S.A.	Spain	Iberen Renovables, S.A.	Acquisition	June-19	F.C.	100.00 %	100.00 %
Repsol Greece Ionian, S.L.	Spain	Repsol Exploración, S.A.	Incorporation	June-19	F.C.	100.00 %	100.00 %
Bios Avanzados Tratados del Mediterráneo, S.L.	Spain	Repsol Petróleo, S.A.	Incorporation	July-19	F.C.	100.00 %	100.00 %
Finboot Ltd.	UK	Repsol Energy Ventures, S.A.	Acquisition	July-19	E.M.	8.34 %	8.34 %
Repsol Exploración Aru, S.L.	Spain	Repsol Exploración, S.A.	Incorporation	July-19	F.C.	100.00 %	100.00 %
Repsol Exploración West Papúa IV, S.L.	Spain	Repsol Exploración, S.A.	Incorporation	July-19	F.C.	100.00 %	100.00 %
Principle Power Inc.	USA	Repsol Energy Ventures, S.A	Incorporation	July-19	E.M.	0.05 %	23.03 %
Belmont Technology Inc.	Spain	Repsol Energy Ventures, S.A	Incorporation	August-19	E.M.	11.18 %	11.18 %
Repsol Renovables, S.L.U.	Spain	Repsol Electricidad y Gas, S.A (3)	Incorporation	September-19	F.C.	100.00 %	100.00 %
Repsol Oil & Gas Gulf of Mexico, LLC	USA	Repsol E&P USA Holdings, Inc.	Acquisition	November-19	F.C.	100.00 %	100.00 %
United Oil Company Pte. Ltd	Singapore	Repsol Downstream Internacional, S.A	Acquisition	November-19	E.M.	40.00 %	40.00 %
PT Pacific Lubritama Indonesia	Indonesia	United Oil Company Pte. Ltd	Acquisition	November-19	E.M.	95.00 %	95.00 %
Nanogap Sub n-m Powder S.A.	Spain	Repsol Energy Ventures S.A.	Shares increase	December-19	E.M.	3.84 %	12.62 %
Repsol Technology and Ventures, S.L.U	Spain	Repsol, S.A.	Incorporation	December-19	F.C.	100.00 %	100.00 %
Tramperase, S.L.	Spain	Repsol Renovables, S.L.U	Acquisition	December-19	F.C.	100.00 %	100.00 %
Sorbwater Technology, A.S.	Norway	Repsol Energy Ventures, S.A.	Shares increase	December-19	E.M.	10.14 %	30.78 %
Edwards Gas Services LLC	USA	Repsol Oil & Gas USA LLC.	Shares increase	December-19	F.C.	63.00 %	100.00 %

(1) Method of consolidation:
F.C.: Full consolidation
E.M.: Equity method. Joint Ventures are identified as "JV".
(2) Corresponds to the percentage of equity in the acquired company.
(3) Company formerly known as Repsol Nuevas Energias, S.A. The name was changed on September 2019.
(4) Change from the Repsol Electricity and Gas Matrix to the Repsol Renewables Matrix. The change in the matrix took place in November 2019.

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

					2019			
Name	**Country**	**Parent company**	**Item**	**Date**	**Method of consolidation [1]**	**% voting rights disposed or derecognized**	**% total voting rights in entity following disposal**	**Profit/ (Loss) (€ Million)**
Repsol Energy Canadá, Ltd. [2]	Canada	Repsol Exploración, S.A.	Absorption	January-19	F.C.	100.00 %	0.00 %	0
TEGSI (UK), Ltd.	UK	TE Holding, S.a.r.l.	Liquidation	January-19	F.C.	100.00 %	0.00 %	0
Talisman South Mandar, B.V.	Netherlands	Talisman International Holdings, B.V.	Liquidation	February-19	F.C.	100.00 %	0.00 %	0
Talisman Sadang, B.V.	Netherlands	Talisman International Holdings, B.V.	Liquidation	February-19	F.C.	100.00 %	0.00 %	0
Gastream México, S.A. de C.V.	Mexico	Repsol, S.A.	Liquidation	February-19	F.C.	100.00 %	0.00 %	0
Repsol Exploración Cendrawasih II, B.V.	Netherlands	Repsol Exploración S.A.	Liquidation	April-19	F.C.	100.00 %	0.00 %	0
Begas Motor, S.L.	Spain	Repsol Energy Ventures, S.A.	Partial reduction	April-19	E.M.	8.26 %	27.93 %	0
Repsol Exploración Liberia, B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	June-19	F.C.	100.00 %	0.00 %	0
Repsol Exploración Liberia LB-10, B.V.	Netherlands	Repsol Exploración, S.A.	Liquidation	June-19	F.C.	100.00 %	0.00 %	0
CSJC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Partial reduction	August-19	E.M.(J.V.)	0.35 %	71.16 %	1
TV 05-2/10 Holding B.V.	Netherlands	Talisman International Holdings, B.V.	Liquidation	August-19	F.C.	100.00 %	0.00 %	0
Talisman (Block K 44), B.V.	Iraq	Repsol Exploración, S.A.	Liquidation	September-19	F.C.	100.00 %	0.00 %	0
Repsol Company of Portugal, Ltd. [3]	Portugal	Repsol, S.A.	Absorption	September-19	F.C.	100.00 %	0.00 %	0
Ampere Power Energy, S.L.	Spain	Repsol Energy Ventures, S.A.	Partial reduction	November-19	E.M.(J.V.)	0.71 %	7.18 %	0
CSJC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Partial reduction	December-19	E.M.(J.V.)	0.39 %	70.78 %	1
Belmont Technology Inc., S.L.	Spain	Repsol Energy Ventures, S.A.	Partial reduction	December-19	E.M.	1.31 %	9.87 %	0
Principle Power Inc.	USA	Repsol Energy Ventures, S.A	Partial reduction	December-19	E.M.	2.46 %	20.57 %	0
Saint John Gas Marketing Company	USA	Repsol St. John LNG, S.L.	Liquidation	December-19	F.C.	100.00 %	0.00 %	0
Talisman (Pasangkayu) Ltd	Canada	Repsol Oil & Gas Canada Inc.	Liquidation	December-19	F.C.	100.00 %	0.00 %	0
Talisman (Vietnam 46/02) Ltd	Canada	Repsol Oil & Gas Canada Inc.	Liquidation	December-19	F.C.	100.00 %	0.00 %	0
Repsol E&P Canada ,Ltd.	Canada	Repsol Exploración S.A.	Liquidation	December-19	F.C.	100.00 %	0.00 %	0

[1] Method of consolidation:
F.C.: Full consolidation
E.M.: Equity method. Joint Ventures are identified as "JV".
[2] Company absorbed by Repsol Oil & Gas Canada, Inc.
[3] Company absorbed by Repsol Portuguesa, S.A.

APPENDIX IC: Joint operations of the Repsol group at December 31, 2020

The Repsol Group's main Joint Operations (see Note 3.4) are shown below (including those in which the Group is involved through a joint arrangement)[38]:

Name	Interest (1)	Operator	Activity
Angola			
Block - 35	25.00%	ENI	Exploration
Argelia			
El Merk (EMK) Field Unit Agt	9.10%	Groupement Berkine	Development/Production
Greater MLN	35.00%	Pertamina	Development/Production
Menzel Ledjmet Sud-Est /405a	35.00%	Pertamina	Development/Production
Ourhoud Field / 404,405,406a	1.92%	Organisation Ourhoud	Development/Production
Reggane Nord	29.25%	Groupement Reggane	Development/Production
Tin Fouye Tabenkort	22.62%	Groupement TFT	Development/Production
Australia			
JPDA 06-105 PSC	25.00%	ENI	Development/Production
Bolivia			
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
Carohuaicho 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%	YPF B Andina, S.A	Development/Production
Iñiguazu	37.50%	Repsol	Exploration
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	48.33%	YPF B Andina, S.A	Development/Production
Margarita-Huacaya	37.50%	Repsol	Development/Production
Monteagudo	39.67%	Repsol	Development/Production
Palacios	48.33%	YPF B Andina, S.A	Development/Production
Patuju	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 Antonio - Sabalo	24.17%	Petrobras	Development/Production
San Alberto	24.17%	Petrobras	Development/Production
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%	Equinor	Development/Production
BM-S-51 (S-M-619)	12.00%	Petrobras	Exploration
BM-S-50 (S-M-623) Sagitario	12.00%	Petrobras	Exploration
BM-S-9 Concesion Sapinhoá	15.00%	Petrobras	Development/Production
BM-S-9 PSC Sapinhoá	15.00%	Petrobras	Development/Production
BM-S-9A Lapa	15.00%	Total	Development/Production
C-M-821	40.00%	Repsol	Exploration
C-M-823	40.00%	Repsol	Exploration
C-M-825	60.00%	Repsol	Exploration
C-M-845	40.00%	Chevron	Exploration
S-M-764	40.00%	Chevron	Exploration
S-M-766	40.00%	Chevron	Exploration

[38] 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	Interest [1]	Operator	Activity
Bulgaria			
1-14 Khan Kubrat	20.00%	Shell	Exploration
Canada [2]			
Chauvin Alberta	62.00%	Repsol	Development/Production
Chauvin Saskatchewan	92.00%	Repsol	Development/Production
Edson	79.00%	Repsol	Development/Production
Groundbirch No Montney Rights	35.00%	Others	Development/Production
Misc. Alberta	54.00%	Repsol	Exploration
Misc. British Columbia	88.00%	Repsol	Exploration
Misc. Saskatchewan	87.00%	Repsol	Exploration
Northwest Territories	4.00%	Others	Exploration
Nunavut	2.00%	Others	Exploration
Wild River Region	55.00%	Repsol	Development/Production
Yukon	1.05%	Others	Exploration
Colombia			
CPO-9 Akacias Production Area	45.00%	Ecopetrol	Development/Production
Caguan 5	50.00%	Frontera Energy	Exploration
Caguan 6	40.00%	Frontera Energy	Exploration
Catleya	50.00%	Ecopetrol	Exploration
Chipirón	8.75%	Ecopetrol	Development/Production
COL-4	50.01%	Repsol	Exploration
CPE-8	50.00%	Repsol	Exploration
CPO-9 - Exploration Area	45.00%	Ecopetrol	Exploration/Production
Cravo Norte	5.63%	Oxycol	Development/Production
Gua Off 1	50.00%	Repsol	Exploration
Mundo Nuevo	30.00%	Equion	Exploration
Cosecha	17.50%	Oxycol	Development/Production
Rondón	6.25%	Oxycol	Development/Production
Ecuador			
Block 16	35.00%	Repsol	Service Contract
Tivacuno	35.00%	Repsol	Service Contract
Spain			
Albatros	82.00%	Repsol	Development/Production
Angula	53.85%	Repsol	Development/Production
Boquerón	61.95%	Repsol	Development/Production
Casablanca - Montanazo Unificado	68.67%	Repsol	Development/Production
Casablanca No Unificado	67.35%	Repsol	Development/Production
Montanazo D	72.44%	Repsol	Development/Production
Rodaballo	65.42%	Repsol	Development/Production
Barracuda	60.21%	Repsol	Development/Production
United States [2]			
<u>*Alaska*</u>			
North Slope Horseshoe project (49 blocks)	49.00%	Oil Search	Exploration
North Slope Pikka	49.00%	Oil Search	Exploration
North Slope Exploration 37,24% (40 blocks)	37.24%	Oil Search	Exploration
North Slope Exploration 49% (82 blocks)	49.00%	Oil Search	Exploration
<u>*Gulf of Mexico*</u>			
Alaminos Canyon Blacktip project (4 blocks)	8.50%	Shell	Exploration
Alaminos Canyon Blacktip North project (3 blocks)	8.50%	Shell	Exploration
Alaminos Canyon Bobcat project (2 blocks)	8.50%	Shell	Exploration
Alaminos Canyon Lucille project (3 blocks)	8.50%	Shell	Exploration
Garden Banks Blacktail project (4 blocks)	50.00%	Repsol	Exploration
Green Canyon - Shenzi (6 blocks)	28.00%	BHP	Development/Production
Keathley Canyon Leon (4 blocks)	50.00%	Llog	Exploration
Keathley Canyon Buckskin (7 blocks)	22.50%	Llog	Development/Production

Name	Interest [1]	Operator	Activity
Keathley Canyon Moccasin	30.00%	Llog	Exploration
Keathley Canyon Noel (2 blocks)	50.00%	Llog	Exploration
Walker Ridge Monument project (6 blocks)	20.00%	Equinor	Exploration
Eagle Ford			
Eagle Ford Texas	85.69%	Repsol	Development/Production
Marcellus			
Marcellus New York (*) Exploration Unconventional	99.70%	Repsol	Exploration
Marcellus New York	86.17%	Repsol	Development/Production
Marcellus Pennsylvania	83.11%	Repsol	Development/Production
Greece			
Aitoloakarnania	60.00%	Repsol	Exploration
Ioannina	60.00%	Repsol	Exploration
Ionian Block	50.00%	Repsol	Exploration
Guyana			
Kanuku	37.50%	Repsol	Exploration
Indonesia			
Andaman III	51.00%	Repsol	Exploration
Corridor PSC	36.00%	Conoco	Development/Production
East Jabung	51.00%	Repsol	Exploration
South Sakakemang	80.00%	Repsol	Exploration
Sakakemang	45.00%	Repsol	Exploration
South East Jambi	40.00%	Repsol	Exploration
Ireland			
FEL 3/04 (Dunquin)	33.56%	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
Malasia			
PM-03 CAA	35.00%	Repsol	Development/Production
PM-305	60.00%	Repsol	Development/Production
PM-314	60.00%	Repsol	Development/Production
2012 Kinabalu Oil Fields	60.00%	Repsol	Development/Production
Morocco			
Tanfit	37.50%	Repsol	Exploration
Mexico			
Bloque 10	40.00%	Repsol	Exploration
Bloque 11	60.00%	Repsol	Exploration
Bloque 14	50.00%	Repsol	Exploration
Bloque 29	30.00%	Repsol	Exploration
Norway			
PL 019 G	61.00%	Aker BP	Development/Production
PL 019B	61.00%	Repsol	Development/Production
PL 025	15.00%	Equinor	Development/Production
PL 038C	70.00%	Repsol	Development/Production
PL 052	27.00%	Equinor	Development/Production
PL 053B	33.84%	Wintershall DEA	Development/Production
PL 055	33.84%	Wintershall DEA	Development/Production
PL 055B	33.84%	Wintershall DEA	Development/Production
PL 055D	33.84%	Wintershall DEA	Development/Production
PL 055E	33.84%	Wintershall DEA	Development/Production
PL 092	7.65%	Equinor	Development/Production
PL 120	11.00%	Equinor	Development/Production

Name	Interest [1]	Operator	Activity
PL 120 CS	11.00%	Equinor	Development/Production
PL 121	7.65%	Equinor	Development/Production
PL 185	33.84%	Wintershall DEA	Development/Production
PL 187	15.00%	Equinor	Development/Production
PL 316	55.00%	Repsol	Development/Production
PL 316B	55.00%	Repsol	Development/Production
PL 972	40.00%	Repsol	Exploration
PL 976	30.00%	Lundin	Exploration
Peru			
Bloque 56	10.00%	Pluspetrol	Development/Production
Bloque 57	53.84%	Repsol	Development/Production
Bloque 88	10.00%	Pluspetrol	Development/Production
Iraq			
Topkhana	80.00%	Repsol	Development/Production
United Kingdom			
P534 (98/06a-Wareham)	2.55%	Perenco	Development/Production
P534 (98/06a-Wych Farm UOA)	2.53%	Perenco	Development/Production
PL089 (SZ/8, SY/88b, SY/98a)	2.55%	Perenco	Development/Production
P201 (16/21a)	7.65%	Premier	Development/Production
P201 (16/21d)	7.65%	Premier	Development/Production
P344 (16/21b_F1*-Balmoral Field Area)	8.06%	Premier	Development/Production
P344 (16/21c_f1*)	7.81%	Premier	Development/Production
P344 (16/21c_f1*-Balmoral)	8.06%	Premier	Development/Production
P019 (22/17n)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P020 (22/18n)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P073 (30/18_E)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P111 (30/3a Blane Field)	30.75%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P111 (30/3a Upper)	15.55%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P116 (30/16n)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P185 (30/11b inc. Fulmar field)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P219 (16/13a)	19.47%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P220 (15/17n-F2- Piper+ rest of Block)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P237 (15/16a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P240 (16/22a- non Arundel Area)	18.86%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P241 (21/1c)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P241/P244 (21/1c/21/2a- Cretaceus Area West)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P244 (21/2a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P249 (14/19n Residual)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P249 (14/19n_F1- Claymore)	47.16%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P249 (14/19n_F2- Scapa/Claymore)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P250 (14/19s- F1)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P250 (14/19s- Rest of Block)_Develop	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P256 (30/16s)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P263 (14/18a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P266 (30/17b)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P291 (22/17s)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P291 (22/22a)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P291 (22/23a)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P292 (22/18a)	30.08%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P295 (30/16a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P295 (30/16b)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P295 (30/16c)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P295 (30/16t Auk field area)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P297 (13/28a Ross)	35.28%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P307 (13/29a Ross)	35.28%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P324 (14/20b)	25.50%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P324 (14/20b-Claymore Extension)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P324 (14/20b-f1+f2)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P324 (15/16b)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production

Name	Interest [1]	Operator	Activity
P324 (15/23a)_Developm.	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P344 (16/21b Rest of Block)	30.60%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P344 (16/21c*- Rest of block excluding Stirling)	30.60%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P729 (13/29b - Blake Ext Non Skate_Devel.)	40.80%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P729 (13/29b - Ross Unitised Field UUOA interests)	35.28%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P810 (13/24b Blake Area)	34.53%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P810 (13/24b North)	35.28%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P973 (13/28c)	35.28%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P255 (30/14 Flyndre Area)	3.83%	NEO Energy Production UK Limited	Development/Production
P255 (30/19a Affleck)	16.98%	NEO Energy Production UK Limited	Development/Production
P073 (30/18_W)	51.00%	Repsol Sinopec Resources UK, Ltd.	Exploration
P079 (30/13a - Contract Area C East)	31.88%	Repsol Sinopec Resources UK, Ltd.	Exploration
P101 (13/24a Blake)	34.53%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P185 (30/11b)	30.60%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P185 (30/12b inc. Halley field)	30.60%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P250 (14/19a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P297 (13/28a)	33.02%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P307 (13/29a)	36.55%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P324 (15/23a)	51.00%	Repsol Sinopec Resources UK, Ltd.	Exploration
P593 (20/05c)	51.00%	Repsol Sinopec Resources UK, Ltd.	Development/Production
P983 (13/23b)	25.50%	Repsol Sinopec Resources UK, Ltd.	Exploration
P534 (98/07a)	2.55%	Perenco	Exploration
P225 (16/27a- Contract Area 3)	13.50%	JX Nippon	Exploration
P225 (16/27a- Contract Area 3 Andrew Field Area)	5.03%	BP	Development/Production
Russia			
Alkanovskoe	49.00%	AROG	Development/Production
Avgustovskoe	49.00%	AROG	Development/Production
Bazhkovskoe	49.00%	AROG	Development/Production
Borschevskoe	49.00%	AROG	Development/Production
Karabashskiy 1	50.03%	Eurotek Yugra	Exploration
Karabashskiy 2	50.03%	Eurotek Yugra	Exploration
Karabashskiy 3	50.03%	Eurotek Yugra	Exploration
Karabashskiy 9	50.03%	Eurotek Yugra	Exploration
Kileyskiy	50.03%	Eurotek Yugra	Exploration
Kochevnenskoe	49.00%	AROG	Development/Production
Kovalevskoe	49.00%	AROG	Development/Production
Kulturnenskoe	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	48.79%	AROG	Development/Production
Sverdlovsky 4	50.03%	Eurotek Yugra	Exploration
West-Avgustovskoe	49.00%	AROG	Development/Production
West-Kochevnenskoe	49.00%	AROG	Development/Production
Elginskoe	48.79%	AROG	Development/Production
Elginskoe (Exploration)	48.79%	AROG	Exploration
Cheremushskiy	49.00%	AROG	Exploration
East-Kulturnenskiy	49.00%	AROG	Exploration
West-Borschevskoe	48.79%	AROG	Development/Production
Karabashskiy 10	50.01%	ASB Geo	Exploration
Novenkoe	49.00%	AROG	Development/Production
Petrovskoe	49.00%	AROG	Development/Production
Pushkarihinskiy	49.00%	AROG	Exploration
Verblyuzhe	49.00%	AROG	Development/Production
Taininskoe	49.00%	AROG	Development/Production
Skrytoe	49.00%	AROG	Development/Production

Name	Interest [1]	Operator	Activity
North-Kakamelikskoe	49.00%	AROG	Development/Production
Sablerovskiy	49.00%	AROG	Exploration
Trinidad & Tobago			
5B Manakin	30.00%	BP Amoco	Development/Production
East Block	30.00%	BP Amoco	Development/Production
S.E.C.C. Ibis	10.80%	EOG	Development/Production
West Block	30.00%	BP Amoco	Development/Production
Venezuela			
Barua Motatán	40.00%	Petroquiriquire	Development/Production
Carabobo	11.00%	Petrocarabobo	Development/Production
Cardón IV Oeste	50.00%	Cardon IV	Development/Production
Mene Grande	40.00%	Petroquiriquire	Development/Production
Quiriquire	40.00%	Petroquiriquire	Development/Production
Quiriquire Gas	60.00%	Quiriquire Gas	Development/Production
Yucal Placer Norte	15.00%	Ypergas	Development/Production
Yucal Placer Sur	15.00%	Ypergas	Development/Production
Vietnam			
Bloque 07/03[3]	51.75%	Repsol	Development/Production
Block 135 & 136/03[3]	40.00%	Repsol	Exploration
Block 133 & 134	49.00%	Repsol	Exploration
Block 146 & 147	80.00%	Repsol	Exploration
Block 46-CN	70.00%	Repsol	Development/Production
Block 15-2/01	60.00%	Thang Long JOC	Development/Production
Block 16-1 (TGT- Unitization)	1.64%	Hoang Long JOC	Development/Production
DOWNSTREAM			
Canada			
Canaport LNG Ltd Partnership	75.00%	Repsol	Regasification GNL
Spain			
Asfaltos Españoles, S.A.	50.00%	Repsol	Asphalts
Iberian Lube Base Oils Company, S.A.	30.00%	SK Lubricants	Lubricants and specialized products

(1) Corresponds to the Group company's interest in the joint arrangement.
(2) Mining domain rights in Canada and the United States are articulated over a large number of Joint Operating Agreements (JOAs). They have been grouped by geographical areas and Repsol's interest.
(3) Assets whose activity is suspended and for which there is an agreement with *PetroVietnam* to transfer them (see Note 14).

APPENDIX II: Segment reporting and reconciliation with EU-IFRS financial statements[39]

Income statement figures

The reconciliation between adjusted net income and EU-IFRS net income at December 31, 2020 and 2019, is as follows:

€ Million

	Adjusted net income		ADJUSTMENTS: Reclassifications of joint ventures		Special items		Inventory effect		Total adjustments		Net income under EU-IFRS	
Results	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Operating income	1,135	3,661	682	(529)	(3,017)	(6,343)	(1,354)	(40)	(3,689)	(6,912)	(2,554)	(3,251)
Financial result	(238)	(390)	60	111	37	(22)	—	—	97	89	(141)	(301)
Net income from equity affiliates	6	22	(618)	324	3	5	—	—	(615)	329	(609)	351
Income before tax	**903**	**3,293**	**124**	**(94)**	**(2,977)**	**(6,360)**	**(1,354)**	**(40)**	**(4,207)**	**(6,494)**	**(3,304)**	**(3,201)**
Income tax	(299)	(1,227)	(124)	94	63	536	344	9	283	639	(16)	(588)
Income from continuing operations	**604**	**2,066**	**—**	**—**	**(2,914)**	**(5,824)**	**(1,010)**	**(31)**	**(3,924)**	**(5,855)**	**(3,320)**	**(3,789)**
Income attributed to minority interests	(4)	(24)	—	—	3	1	32	(4)	35	(3)	31	(27)
Net income from continuing operations	**600**	**2,042**	**—**	**—**	**(2,911)**	**(5,823)**	**(978)**	**(35)**	**(3,889)**	**(5,858)**	**(3,289)**	**(3,816)**
Net income from discontinued operations	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL NET INCOME ATTRIBUTED TO THE PARENT	**600**	**2,042**	**—**	**—**	**(2,911)**	**(5,823)**	**(978)**	**(35)**	**(3,889)**	**(5,858)**	**(3,289)**	**(3,816)**

€ Million

	Income from ordinary activities (2)		Net income from operations		Provisions for amortization of fixed assets (3)		Impairment income / (expenses)		Net income from entities valued using the equity method		Income tax	
Segments	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019
Upstream	4,228	6,904	351	1,969	(1,668)	(2,157)	(3,189)	(5,998)	10	29	(167)	(948)
Industrial	25,384	38,524	369	1,189	(812)	(747)	128	249	—	(1)	(74)	(262)
Commercial and Renewables	16,489	23,964	650	738	(333)	(300)	(17)	(45)	1	(1)	(157)	(185)
Corporate	(11,138)	(17,359)	(235)	(235)	(67)	(85)	(3)	(2)	(5)	(5)	99	168
Adjusted figures (1)	**34,963**	**52,033**	**1,135**	**3,661**	**(2,880)**	**(3,289)**	**(3,081)**	**(5,795)**	**6**	**22**	**(299)**	**(1,227)**
Adjustments:												
Upstream	(1,265)	(2,226)	(2,431)	(6,885)	651	836	922	473	(630)	304	380	89
Industrial	(242)	(288)	(1,210)	114	12	10	—	—	12	23	179	(212)
Commercial and Renewables	(174)	(194)	(53)	(97)	10	9	—	—	1	3	26	25
Corporate	—	3	5	(44)	—	—	—	—	2	(1)	(302)	3
EU-IFRS FIGURES	**33,282**	**49,328**	**(2,554)**	**(3,251)**	**(2,207)**	**(2,434)**	**(2,159)**	**(5,322)**	**(609)**	**351**	**(16)**	**(588)**

(1) Figures drawn up according to the Group´s reporting model described in Note 4.
(2) Corresponds to the sum of "*Sales*" and "*Services rendered and other income*" (see Note 19.1). The itemization by provenance (customers or inter-segment transactions) is as follows:

€ Million

	Customers		Inter-segment		Total	
Segments	2020	2019	2020	2019	2020	2019
Upstream	3,047	5,270	1,181	1,634	4,228	6,904
Industrial	15,556	22,915	9,828	15,609	25,384	38,524
Commercial and Renewables	16,359	23,847	130	117	16,489	23,964
Corporate	1	1	—	—	1	1
(-) Adjustments and eliminations of operating income between segments	—	—	(11,139)	(17,360)	(11,139)	(17,360)
TOTAL	**34,963**	**52,033**	**—**	**—**	**34,963**	**52,033**

(3) Including depreciation of failed exploratory drilling. For more information, see Note 19.

[39] Some of these metrics presented in this Appendix are Alternative Performance Measures (APMs) in accordance with European Securities Markets Authority (ESMA) guidelines. For further information, see Appendix I of the Consolidated Management Report.

Balance sheet figures

	€ Million							
	Non-current assets		**Net operating investments** [2]		**Capital employed** [3]		**Investments accounted for using the equity method**	
Segments	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**	**2020**	**2019**
Upstream	16,248	21,115	948	2,429	12,608	17,205	184	217
Industrial	8,552	9,134	565	885	9,755	10,717	6	4
Commercial and Renewables	4,252	3,680	739	491	4,061	3,361	67	38
Corporate	623	740	56	56	893	2,009	22	—
ADJUSTED FIGURES [1]	**29,675**	**34,669**	**2,308**	**3,861**	**27,317**	**33,292**	**279**	**259**
Adjustments:								
Upstream	(4,828)	(6,593)	(230)	(499)	2,446	2,539	5,264	6,563
Industrial	(151)	(143)	(14)	(16)	1	39	202	250
Commercial and Renewables	(120)	(127)	(46)	(12)	15	5	152	164
Corporate	—	—	—	—	—	—	—	1
EU-IFRS FIGURES	**24,576**	**27,806**	**2,018**	**3,334**	**29,779**	**35,875**	**5,897**	**7,237**

[1] Figures drawn up according to the Group's reporting model described in Note 4.
[2] Excludes "*Non-current financial investments*", "*Deferred tax assets*" and "*Other non-current assets*".
[3] Includes capital employed corresponding to joint ventures, non-current non-financial assets, operating working capital and other non-financial liability headings.

Cash flow figures

The reconciliation of the cash flow from operations to free cash flow with the EU-IFRS Statement of Cash Flows at December 31, 2020 and 2019 is as follows:

	At December 31					
	Adjusted cash flow		**Reclassification of joint ventures and others**		**EU-IFRS statement of cash flow**	
	2020	**2019**	**2020**	**2019**	**2020**	**2019**
I. Cash flows from / (used in) operating activities (cash flow from operations)	3,197	5,837	(459)	(988)	2,738	4,849
II. Cash flows from / (used in) investing activities	(1,218)	(3,777)	1,440	(630)	222	(4,407)
Free cash flow (I+II)	**1,979**	**2,060**	**981**	**(1,618)**	**2,960**	**442**

APPENDIX III: Regulatory framework

The activities of Repsol, S.A. and its subsidiaries are subject to extensive regulation, the key aspects of which are described below.

Spain

The Group's main place of business is in Spain and its registered office is located at calle Méndez Álvaro, 44, Madrid.

Basic legislation

Spain currently has legislation which implements a liberalization of the Oil Industry, an example of which is the Hydrocarbons Sector Law 34/1998 of October 7 ("LSH"), 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 create a safe, cost-effective, economically-sustainable, and environmentally-friendly energy system.

Law 3/2013 of June 4, on the creation of the Spanish National Markets and Competition Commission (CNMC - "Comisión Nacional de los Mercados y la Competencia," in Spanish), created as an overseeing body, charged with the duties and tasks relating to supervision and control of regulated markets, which were previously supervised by various National Commissions, including the Energy and Competition.

Royal Decree Law 1/2019, of January 11, proceeds with returning to the CNMC the competencies that were taken away in 2014, thus bringing the competencies of the CNMC into line with to the requirements of EU law in relation to Directives 2009/72/CE and 2009/73/CE of the European Parliament and Council, of 13 July 2009, concerning common rules for the internal market in electricity and natural gas.

Controlling concentration regime in the energy sector

The aforementioned Law 3/2013 modified the regime controlling corporate transactions in the energy sector, allocating duties to the Ministry for the Ecological Transition (MITECO). It devises a new *ex post* regime with respect to certain transactions by either requiring the buyer to notify MITECO of the execution of certain transactions or by means of the imposition of conditions on the business operations of the companies acquired, in so far as energy supply in Spain is deemed threatened.

This control, in addition to the electricity and gas sectors, now extends to the liquid hydrocarbons sector including companies that pursue refining activities, pipeline transportation, and storage of oil products, or companies that hold title to said assets, which become strategic assets.

Principal operators and dominant operators

Under Royal Decree Law 5/2005, of March 11, the Spanish National Energy Commission (currently the CNMC) is required 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 holding a share of more than 10% of the benchmark market. On the other hand, a principal operator is considered an operator ranked among the top five players by market share. Designation as a dominant operator or principal operator implies certain regulatory restrictions.

Hydrocarbon exploration and production

Hydrocarbon fields and underground storage located in 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 for the area in question are granted for periods lasting six years. In turn, the concession for operating hydrocarbon fields grants the owners exclusive rights to operate the field 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 sell the hydrocarbon products they obtain.

Law 8/2015, regulating specific tax and non-tax measures related to hydrocarbon exploration, research and operation activities, fosters non-conventional extraction, or fracking and creates an incentive regime for regional and local governments that pursue such activities, as well as a scheme for land owners to share in the profits derived from the related extraction activity.

Royal Decree Law 16/2017, establishing safety provisions for hydrocarbon research and operation in the marine environment, implemented by Royal Decree 1339/2018, of October 29, transposes Directive 2013/30/EU, of 12 June 2013 on safety of offshore oil and gas operations ("Offshore Directive") into Spanish law. The purpose of the Law is to establish minimum requirements that offshore hydrocarbon research and operations must meet to prevent major accidents, to mitigate their consequences and to define action principles to ensure that offshore operations (including operations undertaken outside the EU) are performed employing a systematic risk management approach to ensure that the residual risk of serious accidents is considered acceptable.

With regard to offshore activity, Law 41/2010, of December 29, on the protection of the marine environment, regulates marine strategies as planning instruments for the five marine districts into which the Spanish marine environment is divided. The authorization of any activity that requires carrying out works or installations in marine waters, their bed or their subsoil, or the placement or deposit of materials on the seabed, or discharges regulated in Title IV of the Law, must have a favorable report from the relevant Ministry regarding its compatibility with the marine strategy. Royal Decree 79/2019, of February 22, regulates and implements the procedure for processing this report and establishes the criteria for compatibility with the marine strategies, and is applicable in the case of the modification, renewal or extension of existing actions.

Oil products

The price of oil products is deregulated, with the exception of LPG (see specific information below).

In the retail side of the business, exclusive supply contracts for the distribution of motor fuels have a maximum term of one year, and they can be automatically rolled over for additional one-year periods at the sole discretion of the distributor, for a maximum of three years. The new legislation also bans clauses that set, recommend or influence, directly or indirectly, the price at which fuel is sold to the public.

Additionally, it establishes limits on growth in the number of fuel supply facilities of wholesalers with provincial markets shares of over 30%. Law 8/2015 stipulates that this market share shall no longer be measured in terms of points of sale but rather based on sales figures for the previous year, allowing 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. This period has elapsed without the government having reviewed the above measure for the time being.

Finally, Law 8/2015 allows owners of oil product retailers to supply products to other retail distributors, simply by registering in advance with the excise tax registry.

Minimum stocks

Royal Decree 1766/2007, regulates the obligation to maintain a minimum stocks in the oil and natural gas sectors, the obligation to diversify the supply of oil and natural gas, and the activities of the Corporation of Strategic Reserves of Oil Products (CORES for its acronym in Spanish).

The obligation to maintain minimum stocks of oil products in Spain 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 must maintain stocks corresponding to 50 days of sales, while the remaining stocks are held by CORES on behalf of the various operators (strategic reserves) until the obligation established has been met.

Royal Decree Law 15/2013, of December 13, introduces an amendment to the Hydrocarbon Sector Law, indicating that via regulation, administrative procedures and obligations needed to ensure, on an ongoing basis, a minimum safety buffer equivalent to at least 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.

LPG

Under certain circumstances, LPG prices are subject to retail price ceilings. The prices of bulk LPG and bottled LPG in cylinders with capacity of under 8 kg or over 20 kg are deregulated. Law 18/2014, of October 15, has had the effect of also deregulating the prices of containers with capacity of more than 8 kg or less than 20 kg with a tare weight of no more than 9 kg, with the exception 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 sold 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 formulae does not apply to sales costs, thereby resulting in a reduction in maximum bottled LPG retail prices and piped LPG retail prices.

Additionally, Law 18/2014 consolidate users' right to home delivery of containers weighing between 8 kg and 20 kg 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 fulfill this obligation constitutes a very serious offense. The list of LPG wholesalers so obliged is determined by a resolution issued by the General Directorate of Energy Policy and Mining every 3 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 Balearic Islands, DISA in the Canary Islands and Atlas in Ceuta and Melilla.

On November 28, 2019, the Supreme Court handed down judgments dismissing two appeals for judicial review filed by Repsol Butano and Disa Gas against Ministerial Order IET/389/2015, of March 5, and indirectly against Articles 57 and 58 of Law 18/2014, of October 15, applied by the Order under appeal. This regulatory framework excludes LPG containers with a load equal to or greater than 8 kg and less than 20 kg, with a tare weight of more than 9 kg, from the deregulation introduced by Law 18/2014; it establishes an obligation for LPG wholesale operators with a greater market share in certain territories to supply residential homes and, lastly, it maintains the regulated price of containers with a tare weight of less than 9 kg for operators required to supply residential homes that do not have containers with a tare weight greater than that mentioned, in the corresponding territory. This framework particularly affects Repsol Butano, which is the majority operator on the mainland and the Balearic Islands, and whose fleet consists mainly of heavy containers with a tare weight of more than 9 kg.

Natural gas

Law 12/2007, of July 2, which amended the Hydrocarbon Sector Law, incorporated 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”), set by MITECO. 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 Natural Gas System Operator, Enagás S.A., is responsible for the coordinating and ensuring that the system works properly.

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 gas hub, the MIBGAS (which stands for Iberian Gas Market in Spanish), which ensures that all participating entities comply with the established rules.

Under the scope of the redistribution of competences regulated by Royal Decree Law 1/2019, the CNMC approved Circular 6/2020, of July 22, establishing the methodology for calculating transmission, local network and natural gas regasification fees. In particular, the methodology for determining access fees to regasification facilities, with the exception of the fee for other regasification costs, entered into force on October 1, 2020. The methodologies for the remaining fees will take effect as of October 1, 2021, and until this date the current fee structure and billing rules will continue to apply.

However, for gas year 2020-2021, the CNMC reserved the right to update the piping terms of the current transmission and distribution fees, considering the result of applying the methodologies provided for in its Circular 6/2020 and in order to ensure sufficient income for the system. In this regard, the CNMC approved its Resolution of September 22, 2020, establishing the access fees for transmission networks, local networks and regasification from October 2020 to September 2021.

The Royal Decree establishing the methodologies for calculating gas system charges, the regulated remuneration of basic underground storage facilities and the fees applied for their use is still being processed.

Electricity sector regulation in Spain

Deregulation of the Spanish electricity sector began in 1997 with the approval of Electricity Sector Law 54/1997, of November 27, amended by Law 17/2007, of July 4, and later by Electricity Sector Law 24/2013, of December 26.

Production and sale activities continue to be deregulated, governed by competition, while transmission, distribution and the system’s technical and financial management remain as regulated activities, characterized by access that requires administrative authorization, and their remuneration is established by regulations and subject to specific obligations. Power supply, for its part, is classified as a service of general economic interest.

Royal Decree 413/2014 regulates the legal and economic regime governing the production of electricity 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. 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. Royal Decree 900/2015, of October 9, regulating the administrative, technical and financial conditions was passed, which governs the permitted forms of electricity distribution and generation with self-consumption.

This Royal Decree 900/2015 has been substantially modified by Royal Decree Law 15/2018 and now by Royal Decree 244/2019, of April 5, regulating the administrative, technical and economic conditions for self-consumption in Spain. This regulation supplements the regulatory framework promoted by Royal Decree Law 15/2018, the main measure of which was to repeal the so-called “sun tax”, and represents a new energy panorama that is committed to a model based on distributed generation and renewable energies. Among the many new developments, the following are worth mentioning:

- Recognition of the figure of shared self-consumption, which provides the possibility that several users may benefit from the same generating facility.

- Simplification of bureaucratic procedures and deadlines for the legalization of facilities.

- Introduction of simplified compensation for generation surpluses**.** Selfconsumed energy from renewable sources, combined heat and power systems or waste, as well as surplus energy released into the transmission and distribution network, will be exempt from all types of charges and fees.

Ministerial Order ETU/130/2017, of February 17, updated the remuneration parameters of standard facilities applicable to certain facilities producing electricity from renewable energy sources, combined heat and power systems and waste, in order to be applied to the regulatory half period commencing on January 1, 2017.

Once the first regulatory period has ended, Ministerial Order TED/171/2020, of February 24, established the remuneration parameters for the second regulatory period, from January 1, 2020 to December 31, 2025, as well as the value of the operating subsidy, for the first six months of 2020, for standard facilities whose operating costs depend essentially on the price of the fuel. The review carried out by this Order relates to all approved standard facilities, which provides an overall view of the remuneration parameters applicable thereto.

a. *Remuneration system for generation activity*

Law 24/2013, of December 26, abandons the differentiated concepts of ordinary and special regime, without prejudice to the singular considerations that need to be established. The remuneration system for renewable energies, combined heat and power systems and waste is based on the market share of these facilities, complementing market income with a specific regulated remuneration that allows these technologies to compete on an equal footing with the rest of the technologies on the market. This additional specific remuneration must be sufficient to achieve the minimum level necessary to cover costs which, unlike conventional technologies, cannot be recouped on the market and will enable them to obtain adequate profitability with reference to the standard facility in each applicable case. The rate of return for the activity of production from renewable energy sources, combined heat and power systems and waste, for the first regulatory period, is established in Royal Decree Law 9/2013, of July 12, which adopts urgent measures to ensure the financial stability of the electricity system. For the purpose of calculating the specific remuneration, the following shall be taken into account for a standard facility: the income from the sale of the generated energy valued at the production market price, the average operating costs necessary to carry out the activity and the value of the initial investment of the standard facility.

Royal Decree 359/2017, of March 31, established a call for the granting of the specific remuneration system to new facilities producing electricity from renewable energy sources in the peninsular electricity system, and Ministerial Order ETU/315/2017, of April 6, regulated the procedure for assigning the specific remuneration system. In turn, and for 2016 calls only for biomass and wind through Royal Decree 947/2015 and Ministerial Order IET/2212/2015, and the 2nd auction in 2017 through Royal Decree 650/2017 and Ministerial Order ETU/615/2017), similar to the 1st of that year and open to all technologies.

Royal Decree Law 23/2020, of June 23, entrusts the government with the regulatory development of a remuneration framework for renewable generation, based on the long-term recognition of a fixed price for energy. For such purpose, it provides for the holding of competitive tender procedures, which may be differentiated by technology, technical characteristics, size, location, manageability and other criteria, in which the product to be auctioned is energy, installed capacity or a combination of both. In this regard, Royal Decree 960/2020, of November 3, has been approved, which regulates the aforementioned remuneration framework for renewable generation, to be granted through auctions, while at the same time creating the electronic register of the economic regime for renewable energies.

The head of the Ministry for Ecological Transition and the Demographic Challenge is responsible for regulating the auction mechanism, by means of a Ministerial Order, while the head of the Secretary of State for Energy is responsible for calling the auctions by means of a Resolution. In this regard, Ministerial Order TED/1161/2020, of December 4, regulates the first auction mechanism for granting the repeated economic regime for renewable energies and establishes the indicative timetable for the 2020-2025 period.

Returning to Royal Decree Law 23/2020, it also contains provisions relating to access and connection to the networks, stipulating deadlines and administrative milestones for processing existing projects and allowing the extension of permits to seven years. It also introduces a moratorium on new access permits, with exceptions, until the regulatory framework for access and connection is approved, so that, until the government and the CNMC implement Article 33 of Law 24/2013, new applications will not be accepted for existing access capacity at the entry into force of this Royal Decree Law or that may be subsequently released as a result of expiries, waivers or other circumstances. Similarly, the regulation enables holders of access permits, or access and connection permits, obtained between December 27, 2013 and June 25, 2020, or requested prior to June 25, 2020, to forgo their permits or applications within three months of the entry into force of this Royal Decree Law, and the financial guarantees provided will be returned.

Lastly, the Royal Decree Law of June 23 streamlines the processing of modifications to existing facilities, regulates figures such as the renewable energy community or the independent aggregator and incorporates provisions relating to hybridization and high-power charging infrastructures.

b. *Remuneration system for marketing activity*

The marketing activity is based on the principles of freedom of contract and choice of supplier by the customer. Marketing, as a deregulated activity, has a freely agreed remuneration between the parties.

Of note is Law 24/2013, subsequently developed by Royal Decree 216/2014, of March 28, which establishes the methodology for calculating voluntary prices for small electricity consumers and their legal contracting regime. These prices are defined, in line with the previously denominated last resort tariffs, as the maximum prices that reference resellers may charge to consumers who use them (consumers of less than a certain contracted power, 10 kW, who wish to use this modality as opposed to a bilateral negotiation with a free reseller). These prices will be unique throughout the entire Spanish territory. The term last resort tariffs is reserved for two groups of consumers: the so-called vulnerable consumers (which also includes the new categories of severely vulnerable and at risk of social exclusion) and those consumers who, without being entitled to voluntary prices for the small consumer, temporarily do not have a supply contract with a marketer. These voluntary prices for small consumers shall include in an additive manner, by analogy with the tariff of last resort, the concepts of electricity production cost, the corresponding access tolls and charges and the corresponding marketing costs. In addition, this Royal Decree provides as an alternative that the consumer can contract a fixed price of energy for one year with the reference reseller. It also sets out the criteria for designating reference resellers and their obligations in relation to supply to certain consumer groups.

Royal Decree 469/2016, of November 18, amending Royal Decree 216/2014, establishes the methodology for calculating the marketing costs of the reference resellers to be included in the calculation of the voluntary price for small consumers. Ministerial Order ETU/1948/2016, of December 22, established the values of the marketing costs of the reference resellers to be included in the calculation of the voluntary price for small electricity consumers in the 2014-2018 period, which result from applying the new approved methodology. In turn, Royal Decree Law 7/2016 and Royal Decree 897/2017, are the current frame of reference for everything relating to the rate subsidy and the vulnerable consumer.

In particular, Royal Decree Law 30/2020, of September 29, has expanded the consideration of vulnerable consumers in their principal residence and, therefore, extended the possibility of receiving the subsidized electricity tariff ("bono social") to consumers who are unemployed, subject to a temporary redundancy procedure, or, being entrepreneurs, have reduced their working hours as a result of having to care for others or that are enduring similar circumstances that entail a substantial loss of income.

c. *Tariff deficit*

In terms of revenue, the electricity system was not self-sufficient until 2014, generating an annual deficit, which the electricity companies have had to finance. 2014 was the first year with a surplus in the electricity system after more than a decade in which significant deficits accumulated, thanks to the comprehensive reform undertaken to put an end to the emergence of tariff deficits and allow the economic-financial balance of the system, fundamentally based on the following regulations:

- Law 15/2012, of December 27, on fiscal measures for energy sustainability introduced by the IVPEE, commonly known as the green cent, the hydroelectric royalty, etc.
- Royal Decree Law 9/2013, of July 12, establishes a number of additional remuneration principles for the transmission and distribution of electricity, and establishes the concept of reasonable return in project return, which, before taxes, will be based on the average yield in the secondary market of the ten-year government bonds applying the appropriate differential. In addition, it contemplates other measures aimed at rebalancing the balance between income and costs of the electricity system, such as imposing the financing of the rate subsidy on vertically integrated companies or the reduction of the investment incentive in exchange for doubling the time remaining to receive this incentive. Subsequently, the obligation was transferred to the marketing companies (or their corporate parent companies), an obligation that is currently in force.
- Law 24/2013, of December 26, incorporates the guiding principle of economic and financial sustainability, whereby any regulatory measure in relation to the sector that entails an increase in cost for the electricity system or a reduction in income must incorporate an equivalent reduction in other cost items or an equivalent increase in income to ensure the system's balance.
- Royal Decree 1054/2014, of December 12, regulates the procedure for assigning the rights to collect the electricity system deficit for 2013 and develops the methodology for calculating the interest rate that will accrue to the rights to collect said deficit and, where appropriate, the negative temporary misalignments in the financial years after 2013.

From 2014 onwards, any temporary mismatch between income and costs of the electricity system resulting from the closing settlements in a financial year and resulting in a deficit of income, as well as the temporary deviations between income and costs in the monthly settlements on account of the closing of each financial year that may arise, shall be financed by the subjects of the settlement system in proportion to the remuneration corresponding to them for the activity they carry out. In the event of a revenue shortfall in a financial year, the amount of the shortfall may not exceed 2% of the system's estimated revenue for that financial year. In addition, the accumulated debt due to misalignments from previous years may not exceed 5% of the system's estimated revenue for that year. Tolls, if any, or corresponding charges shall be revised by a total at least equal to the amount by which those limits are exceeded.

With regard to fees, the CNMC approved Circular 3/2020, of January 15, establishing the methodology for calculating electricity transmission and distribution fees. This Circular was later modified by CNMC Circular 7/2020, of July 22, in order to extend the transitional period until April 1, 2021. However, the Royal Decree on electricity charges is still underway.

Contributions to the national energy efficiency fund

Directive 2012/27/EU of the European Parliament and of the Council of 25 October 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. Royal Decree Law 8/2014 and Law 18/2014 transpose this EU Directive into Spanish law by establishing 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.

Successive IET/ETU 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.

In particular, Ministerial Order TED/287/2020, of March 23, establishes the aggregate savings target, as well as the allocation of savings obligations and their economic equivalence for 2020.

Royal Decree Law 23/2020, of June 23, extended the Spanish energy efficiency obligation scheme until December 31, 2030, thus complying with Directive (EU) 2018/2002 of the European Parliament and of the Council of December 11, which requires Member States to achieve new annual savings of 0.8% of annual final energy consumption from January 1, 2021 to December 31, 2030.

Energy audits

Royal Decree 56/2016, of February 12, transposing 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 optimal and having them establish the opportune energy savings and efficiency opportunities and proposals as warranted. The Group's energy management systems, which are based on the international ISO 50001 standard, are implemented in the Group's main industrial companies.

Climate change and alternative fuels

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 European Union, also a signatory of the Paris Agreement, has made a commitment to climate neutrality by 2050. To this end, in December 2019 the European Commission presented the European Green Deal, which constitutes the new EU growth strategy, and which aims to completely transform the European economy, highlighting the following proposals for 2020: (i) European climate law, (ii) increase in the EU's objectives for reducing greenhouse gas emissions by 2030, as part of the EU Emissions Trading System, and (iii) increase in renewable energies and energy efficiency, which will be reflected in the corresponding Directives. Directive 2018/2001, on the promotion of the use of energy from renewable sources, currently sets a target of 8.5% for the sale or consumption of biofuels in transport by 2020. In addition, there is a 7% restriction on the use of biofuel from food crops, which the use of waste, such as used cooking oil (UCO) or animal fats, essential to achieve compliance.

With regard to Spain, Royal Decree 639/2016, of December 9, has already established objectives to minimize the dependence of the transport industry on oil, mitigate the environmental impact of transport, and establish threshold requirements for the creation of an infrastructure for alternative fuels, including charging points for electric vehicles and natural gas and hydrogen refueling stations.

In 2020, the Strategic Energy and Climate Framework should be highlighted, which includes the following fundamental pillars: (i) the National Integrated Energy and Climate Plan (PNIEC), (ii) the future Climate Change and Energy Transition Act, currently in parliamentary processing, and (iii) the strategy for a just transition. This Act and the PNIEC constitute a commitment by the government to comply with the objectives set out in the Paris Agreement and by the European Union, which Spain has already assumed.

In addition, the Hydrogen Roadmap was published on October 7, which focuses on the development of renewable hydrogen, with a view to positioning Spain as a technological benchmark in the production and use of hydrogen, while at the same time contributing to achieving objectives such as reducing contaminating emissions and achieving climate neutrality, the use of surplus renewable energy or the decarbonization of sectors where electrification is not viable or profitable.

Along this same line, the 2050 Long-Term Decarbonization Strategy was also published on November 3, setting out a roadmap for moving towards climate neutrality by 2050, with milestones in 2030 and 2040.

Finally, through the enactment of Ministerial Order TED/627/2020, of July 3, MITECO set energy policy guidelines for the CNMC, which the Regulator must observe in its regulatory plan for 2020 and that focus on the natural gas sector.

Bolivia

The 2009 Bolivian Constitution establishes that state-owned company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) is authorized to enter into service agreements with public or private companies to undertake activities for and on its behalf in exchange for remuneration or payment for their services.

The Bolivian oil and gas industry is regulated by Law 3,058 of May 19, 2005 (the "Hydrocarbons Law") and technical and economic regulations.

On May 1, 2006, Supreme Decree no. 28,701 was enacted, which nationalized the country's hydrocarbons. Furthermore, the shares required to enable YPFB to control at least 50% plus one vote in various companies, including Empresa Petrolera Andina, S.A., (currently known as YPFB Andina), were nationalized.

On December 11, 2015, Law No. 767 was passed to promote investment in hydrocarbon exploration and production in Bolivia. Furthermore, Law No. 817 of July 19, 2016 was enacted, supplementing Article 42 of Law No. 3,058, previously amended by Law No. 767, allowing YPFB to extend the term of the Operating Contracts.

Operating Contracts and Oil Service Contracts

According to the Hydrocarbons Law and Article 362 of the Bolivian Constitution (CPE), any individual or group, national or foreign, public or private person may enter into one or more production sharing, operating or association contracts with YPFB to carry out exploration and operation activities, for a period not to exceed forty (40) years. The CPE of 2009 and Law 767 limit the type of contract to oil service contracts, which have similar characteristics as the operating contracts of Law 3058.

An operating contract and an oil service contract are those contracts by which the titleholder will execute, by its own means and at its own risk, for and on behalf of YPFB, the operations corresponding to the exploration and operation activities within the area covered by the contract, under the remuneration system, in the case of entering into operation activities. YPFB will not make any investment and will not assume any risk or liability for the investments or results obtained in relation to the contract, and it is the exclusive responsibility of the titleholder to provide all capital, installations, equipment, materials, personnel, technology and other necessary items.

YPFB remunerates the holder for the operating services in cash through the titleholder's remuneration. This payment will cover all operating and utility costs. YPFB must pay the royalties. Once production has started in an oil service contract, the titleholder is required to deliver all oil and gas produced to YPFB. The titleholder will be entitled to remuneration under the operating contract and/or the oil service contract, for the total amount produced and delivered to YPFB.

Oil contracts and amendments thereto require authorization and approval by the Plurinational Legislative Assembly, in accordance with the CPE (Legislative Power).

As a result of the Hydrocarbons Law and the Nationalization Decree, Repsol E&P Bolivia, S.A. and its subsidiary YPFB Andina, S.A. signed the operating contracts, effective as of May 2, 2007. On June 13, 2018, Repsol E&P Bolivia, S.A. entered into an oil service contract with YPFB for the exploration and operation of the Iñiguazu Area, effective as of August 26, 2019.

In addition, the natural gas and liquid hydrocarbon delivery agreements establishing the terms and conditions governing the delivery of hydrocarbons by the titleholder were entered into on May 8, 2009.

Canada

Regulation of exploration and production activities

In the Canadian provinces of British Columbia, Alberta and Saskatchewan where the majority of the Company's exploration and production interests in Canada lie, the provincial governments own the majority of the subsurface mineral rights to crude oil and natural gas. These governments grant rights to explore for and produce oil and natural gas from Crown lands under the conditions set forth in provincial legislation and regulations. In addition to Crown lands, the Company participates in leases entered into with freehold mineral owners through direct negotiation. The royalties applicable to production from Crown lands are established by government regulation and, in general, calculated as a percentage of gross production based on the productivity of the wells, geographical location, date on which the oil fields were discovered, recovery method and type and quality of substance produced. Occasionally, the provincial governments may offer incentive programs for exploration and development. Such programs seek to reduce the royalty rate or other fees or offer certain tax credits. Fees and royalties payable for production on privately owned land are established by means of negotiation between the owner and the Company.

Companies operating in the Canadian oil and natural gas industry are subject to extensive regulation and control of operations (including land ownership, water usage, exploration, development, production, refining, transport and marketing, in addition to 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. Generally speaking, oversight of such operations is undertaken by 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 Impact Assessment Agency of Canada and the Canada Energy Regulator.

Environmental and emissions regulations

Environment regulations from provincial and Canadian federal governments restrict and prohibit the release or emission of various substances that are considered harmful, such as sulfur dioxide, carbon dioxide and nitrous oxide.

Regulations also impose conditions or prohibitions on operating in certain environmentally sensitive areas and establish requirements that regulate the satisfactory abandonment and reclamation of well and facility sites. Noncompliance with the legislation, regulations, orders, directives or other applicable guidelines can result in fines or other sanctions.

In addition to the regulation and control of exploration and production activities, the provincial and Canadian federal governments have also enacted various forms of emissions regulations. In October 2019, the newly elected Alberta government introduced the Technology Innovation and Emissions Reduction Implementation Act (TIER) to replace the Carbon Competitiveness Incentive Regulation (CCIR). The CCIR and TIER are similar in their approach, however the TIER moves from the CCIR's industry-based benchmarks to benchmarks based on the average past performance of the facilities. The TIER currently mandates a CAD $30 per ton price on carbon emissions.

The TIER regulations are intended to meet federally mandated carbon standards. In December 2019 TIER was accepted under the federal Greenhouse Gas Pollution Pricing Act.

The provincial government of Alberta has also committed to reducing methane emissions from oil and gas operations by 45% by 2025 through new emissions design standards for facilities, improved measurement and reporting and new regulated standards starting in 2020.

In addition to the provincial regulations, the Canadian federal government has announced an increase in the government's carbon price to CAD $170 per ton by 2030.

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 amended legislation of the Hydrocarbons Law and the Internal Tax Regime Law, of July 27, 2010, established that all agreements for the exploration and operation of hydrocarbons must be modified to reflect the amended reformed services agreement model.

This model involves the contractor being obliged to provide services using its own economic resources and at its own risk. In exchange, the contractor will receive 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) entered into the services agreement for Block 16, which came into force on January 1, 2011.

In addition, on January 22, 2011, a services agreement was signed covering the Block 67.

United States of America

Offshore exploration and production

The two government agencies responsible for offshore exploration and production on the Outer Continental Shelf are the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) under the U.S. Department of the Interior. The BOEM is in charge of responsibly ensuring the economic and environmental development of US offshore resources. Its functions include the leasing (agreements that grant oil and gas mining rights), the review and management of oil and gas exploration, the approval of development plans and carrying out analyses pursuant to the National Environmental Policy Act and other environmental studies. The BSEE is responsible for safety and environmental supervision of offshore oil and gas operations. Its functions include the development and application of safety and environmental regulations, the authorization of offshore exploration, development and production, the performance of inspections and the response to oil spills.

Onshore exploration and production

With regard to US onshore exploration and production activities, the oil and gas industry is primarily regulated by the laws of the individual states, with the exception of certain environmental matters and operations on federal land. At present, the Company has operations in Alaska, Pennsylvania and Texas. In Alaska and Texas, exploration and production activities are regulated by the Alaska Department of Natural Resources and the Railroad Commission of Texas, respectively. Each of these states has its own environmental protection agency. In Pennsylvania, the local Department of Environmental Protection is responsible for both environmental protection activities and the regulation of exploration and production activities.

Federal authorities do have jurisdiction over certain environmental aspects that affect the gas and oil sector. The United States Environmental Protection Agency (EPA) applies laws and regulations such as the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act. The environmental impact of the projects is regulated by the National Environmental Policy Act (NEPA), which is managed by different Federal agencies depending on the type of project.

Transport

The Federal Energy Regulatory Commission (FERC) governs the transport of natural gas as part of interstate commerce and the transport of oil via oil pipelines within the same field. The states regulate other types of transport.

Liquefied natural gas

The Natural Gas Act grants the Federal Energy Regulatory Commission (FERC) the exclusive power to regulate plants that import and export liquefied natural gas arriving in the United States and leaving the country with the authorization of the Office of Fossil Energy at the US Department of Energy (DOE).

Trading of gas, crude oil and refined products

The FERC regulates the sale of natural gas as part of interstate commerce. 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) regulates refined products marketed to private consumers such as gasoline and diesel. Trading of financial derivatives is regulated by the Commodities Futures Trading Commission (CFTC).

On December 18, 2015, the 2016 Consolidated Appropriation Act was passed (Public law no. 114-113). This piece of legislation repeals Article 103 of the Energy Policy and Conservation Act (EPCA), thereby eliminating the ban on exporting crude oil produced in the US. 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 the sustained distortion of oil prices significantly above world market levels.

Biden Administration Orders

On January 20, 2021, Acting Secretary of the Interior, Scott de la Vega, issued Secretarial Order 3395 titled, "Temporary Suspension of Delegated Authority," effective for 60 days from the date of issuance or until amended, suspended, or revoked. Secretarial Order 3395 temporarily suspends the delegations of authority to Department Bureaus and Offices to take various actions, including but not limited to the authority to "issue any onshore or offshore fossil fuel authorization, including but not limited to a lease, amendment to a lease, affirmative extension of a lease, contract, or other agreement, or permit to drill." This limitation of delegated authority "does not limit existing operations under valid leases" and "also does not apply to authorizations necessary to: (1) avoid conditions that might pose a threat to human health, welfare, or safety; or (2) to avoid adverse impacts to public land or mineral resources." The authority for which delegation has been suspended is reserved to certain confirmed, Acting, and non-career officials.

On January 27, 2021, President Biden issued an Executive Order titled, "Tackling the Climate Crisis at Home and Abroad." This Executive Order provides, among other things, "To the extent consistent with applicable law, the Secretary of the Interior shall pause new oil and natural gas leases on public lands or in offshore waters pending completion of a comprehensive review and reconsideration of Federal oil and gas permitting and leasing practices in light of the Secretary of the Interior's broad stewardship responsibilities over the public lands and in offshore waters, including potential climate and other impacts associated with oil and gas activities on public lands or in offshore waters. The Secretary of the Interior shall complete that review in consultation with the Secretary of Agriculture, the Secretary of Commerce, through the National Oceanic and Atmospheric Administration, and the Secretary of Energy. In conducting this analysis, and to the extent consistent with applicable law, the Secretary of the Interior shall consider whether to adjust royalties associated with coal, oil, and gas resources extracted from public lands and offshore waters, or take other appropriate action, to account for corresponding climate costs." The Executive Order does not specify a duration for the directed pause in new oil and gas leasing.

Peru

The Constitution includes the main bases of its legal framework governing the hydrocarbons market in Peru. The Constitution states that the government promotes private initiatives, recognizing the economic pluralism, and the state having a subsidiary role in terms of business concerns. The Constitution also establishes that private and public business activity must be treated equally under the law, and that 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, that pursue hydrocarbon activities are expressly subject to the laws of the Republic of Peru, renouncing the right to any diplomatic recourse.

The most important authorities with competence over Peruvian hydrocarbon 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 the Energy and 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, S.A. 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 Hydrocarbons Law (OHL), 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 objectives, the OLH created PERUPETRO, a state-owned limited company organized as a public corporation, 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 operation contracts, with a licensee (contractor) by means of license agreements, service agreements and other forms of contracts authorized by MINEM.

Hydrocarbon refining and marketing

The OHL stipulates that any natural or legal persons, whether national or foreign, may install, operate, and maintain oil refineries, plants for processing natural gas and condensates, natural asphalt, greases, lubricants, and petrochemicals, subject to the norms specifically established by MINEM.

In Peru, the marketing of hydrocarbon derivatives is regulated by supply and demand.

Portugal

In Portugal, Decree Law No. 31/2006, of February 15, sets out the framework for the National Oil System (SPN) and has been implemented and regulated through extensive administrative regulations.

Sale prices are freely set on the market, without prejudice to the rules on competition and public service obligations, however, prices in the autonomous regions of the Azores and Madeira are administratively set by the regional governments.

Sales include wholesale and retail trade activity, which is freely carried out, but depends on obtaining a certificate, in addition to compliance with other obligations, especially with regard to tax and customs matters, regularity of supply, publication of prices and the provision of information to various competent administrative bodies, as well as verification of the suitability of the seller.

Minimum stocks

Portugal is required to maintain minimum stocks in the crude oil and/or oil products sectors, in accordance with Decree Law No. 165/2013, of December 16, which transposed EU legislation, corresponding to 90 days of average daily net imports of crude oil and oil products into the country over the last year, it being legally possible to hold stocks in another EU Member State, provided that all requirements have been verified and the necessary formalities have been completed.

LPG

LPG - piped, bottled and bulk - is regulated by that established in Decree Law No. 57-A/2018, of July 13, and is subject to control by the Portuguese energy sector regulator (*Entidade Reguladora do Sector Energético* - (ERSE)), which assumed the functions of the Portuguese competition authority (*Autoridade da Concorrência* - (AdC)) in terms of supervision, without prejudice to the powers of the AdC to issue recommendations and codes of conduct, carry out studies and inspections, decide on concentrations, initiate administrative proceedings for infringements of competition law and impose fines, for which it is granted extensive powers of investigation, including the power to carry out domiciliary searches.

Decree Law No. 5/2018, of February 2, establishes the obligation to sell bottled LPG in all of the country's service stations, unless they receive a prior exemption upon a reasoned request of the interested party.

With regard to the sale of LPG, Decree Law No. 31/2006 provides for the sale of bottled, piped and bulk LPG. The supplier of bulk LPG is required to give the customer, or the supplier chosen by the customer, the option of transferring ownership of the facility (storage and piping) upon expiry of the contract. With regard to bottled LPG, a legal obligation has been established to accept containers from other companies, at no cost to the customer, as detailed in Decree Law No. 5/2018, of February 2, which also makes it mandatory to sell LPG containers at all service stations in Portugal and indicates that the regulations on essential public services must be applied to the LPG container and that the "leftover product" in the container delivered by the customer must be deducted from the sale price of the container, under the terms to be defined in regulatory legislation not yet published.

Storage

Storage activities include the operation of (i) storage facilities for direct supply to end customers, (ii) storage facilities for oil products in tare, and (iii) wholesale facilities, and will be licensed by the Minister of Custody, while the licensing of other storage facilities is the responsibility of the competent licensing authorities. The procedure for obtaining licenses to operate oil product storage facilities and the conditions for tax audits are defined in Decree Law No. 267/2002.

The storage of liquid fuels, LPG and other gases derived from oil, solid fuels and other oil products is regulated by Decree Law No. 267/2002, of November 26, and Portaria (Ministerial Order) No. 1188/2003, of October 10.

The regulations establish the right of access for third parties to large storage facilities declared to be of public interest, the operators of which will be required to grant access to third parties, under non-discriminatory, transparent and objective technical and economic conditions, as well as the right of access to large storage and distribution facilities of piped LPG for sale to end customers.

Service stations

Service stations are subject to licensing, in accordance with Decree Law No. 267/2002, of November 26. Law No. 6/2015, of January 16, requires all service station operators to sell fuels without additives, known as simple fuels.

Decree Law No. 170/2005, of October 10, as amended by Decree Law No. 120/2008, of July 10, makes it mandatory to publish fuel sale prices on the monoliths of service stations and, in the case of service areas located on highways, comparative panels (the prices of the next two service areas are compared) on the highway itself.

Environmental regulation

With regard to environmental prevention, Decree Law No. 151-B/2013, of October 31, indicates that certain facilities (in particular refineries and petrochemical plants, pipelines for the transportation of oil, storage facilities for oil, petrochemical products or chemical products, and surface industrial facilities for oil extraction, among others) are subject to an inspection procedure to assess the significant impacts on the environment and to the imposition of conditioning and/or compensatory measures, while Decree Law No. 152-B/2017 stipulates that climate changes, and changes in population, human health and soil should be assessed in future procedures.

Decree Law No. 127/2013, of August 30, establishes the industrial emissions regime, with the aim of preventing and reducing emissions, and is applicable to industrial facilities in this sector, in particular refineries and petrochemical plants, establishing the obligation to obtain an environmental license that sets out a broad set of requirements and conditions that must be met by the beneficiary, in particular emission limits for pollutants and measures for waste management, among others, prior to carrying out the activity.

Decree Law No. 12/2020, of April 6, imposes the obligation on operators producing greenhouse gases to obtain a Greenhouse Gas Emissions Certificate (*Título de Emissão de Gases com Efeito de Estufa* (TEGEE)) in accordance with EU Directives and the Kyoto Protocol, while Portaria (Ministerial Order) No. 420-B/2015, of December 31, imposes additional taxes on CO_2 emissions on some oil products, based on the prices of the emission license auctions at the CELE.

The legal regime for environmental liability was approved by Decree Law No. 147/2008, of July 29, and defines the objective and subjective scope of the environmental liability of economic operators, imposing the obligation to provide one or more financial guarantees (their own and autonomous, alternative or complementary to each other) to enable operators to assume the environmental liability inherent in their activity, which may be provided through various instruments. This regime is supplemented by the Environmental Administrative Offenses Act (*Ley Quadro das Contra-Ordenações Ambientais*), published by Law No. 50/2006, of August 29, which sets fines that can reach up to €5 million.

Decree Law No. 75/2015, of May 11, established the Single Environmental Certificate, which contains all the terms and conditions for the construction, exploration and monitoring of an environmental project and all administrative certificates and permits necessary to carry out the activity, the model for which was approved by Portaria (Ministerial Order) No. 137/2017, of April 2.

Decree Law No. 68-A/2015, of April 30, establishes regulations on energy efficiency and cogeneration production, transposing Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012, applicable to companies other than SMEs (small and medium-sized enterprises), which are required to register with the Directorate General for Energy and Geology (DGEG) and record all information on their energy consumption, in order to monitor the evolution of this consumption, and they must also carry out an independent energy audit every four years.

Climate change and alternative fuels

Council of Ministers Resolution No. 53/2020, of July 10, approved the 2030 PNEC (2030 National Energy and Climate Plan), establishing objectives, among others, to decarbonize the national economy, strengthen the commitment to renewable energies and reduce the country's energy dependence, and Council of Ministers Resolution No. 63/2020, of August 14, approved the National Hydrogen Plan - EN-H2, of exclusively green origin.

The quality levels and characteristics of oil products are provided for in (i) Decree Law No. 89/2008, of May 30 (quality rules for gasoline and diesel fuels), and (ii) Decree Law No. 281/2000, of November 10, which establishes the limits on the sulfur level of certain types of petroleum-derived liquid fuels.

Decree Law No. 117/2010, of October 25, establishes (i) the sustainability criteria for the production and use of biofuels and bioliquids, regardless of their origin, (ii) the mechanisms for promoting biofuels in land transport, and (iii) the limits for the compulsory incorporation of biofuels for the 2011-2020 period, whereby the targets for the 2020-2030 period were updated by Decree Law No. 60/2020, of August 17.

Decree Law No. 60/2017, of June 9, establishes the legal framework for the creation of infrastructure for alternative fuels, defined as: electricity, hydrogen, biofuels, synthetic and paraffinic fuels, natural gas –compressed or liquefied–, and LPG. Council of Ministers Resolution No. 88/2017, of June 26, approved the National Action Framework for the development of the market for alternative fuels in the transportation sector.

Electricity sector regulation

The regime for selling electricity for electric mobility is regulated by Decree Law No. 39/2010, of April 26, amended by Law No. 82-D/2014, of December 31.

Venezuela

The Constitution of the Bolivarian Republic of Venezuela stipulates that the mines and hydrocarbon fields, irrespective of their nature, located on national territory, offshore under the sea bed, 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 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 created for the management of the oil industry.

The Hydrocarbons Organic Law (HOL) regulates all matters regarding the exploration, operation, refining, industrialization, transport, storage, sale and conservation of hydrocarbons, including related refined products and the works required to perform these activities. Pursuant to the HOL, the performance of activities involving the exploration, extraction, collection, transport and storage of hydrocarbons is reserved to the State, which may undertake them directly or through wholly-owned State companies. The State may also conduct these activities through mixed-owned companies whose equity interest is over 50%.

The mixed companies agreements referred to in the HOL 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).

Activities relating to the exploration, operation, collection, storage, use, industrialization, sale and transport of non-associated natural gas and associated gas are subject to the provisions set out in the Organic Gaseous Hydrocarbons Law and its regulations. On January 14, 2016, Decree No. 2184 was published in the Extraordinary Official Journal of the Bolivarian Republic of Venezuela No. 6,214, declaring a State of Exception and Economic Emergency throughout the entire territory of the Republic for a period of 60 days, providing the State with the power to enact exceptional and extraordinary economic, social, environmental, political and legal measures, in addition to others. This State of Exception and Emergency was successively extended on several occasions, with the most recent, Presidential Decree No. 4,396 published on December 26, 2020 in Official (Extraordinary) Gazette No. 6,606, for sixty (60) days from its publication, which may be extended for an additional sixty (60) days. The National Constituent Assembly was called by the President of the Bolivarian Republic, Nicolás Maduro, via Presidential Decree No. 2,830, published on May 1, 2017; all public authorities are subordinated under the Constituent Assembly and are obliged to comply and ensure compliance with the legal documents issued by said Assembly. The maximum term of this Assembly has been set at two years. On May 20, 2019, the National Constituent Assembly published a Constituent Decree in Official Gazette No. 41,636 by which it extended the operation of the National Constituent Assembly at least until December 31, 2020.

Official Gazette No. 41,310, of December 29, 2017, contained the publication of the Constitutional Foreign Production Investment Law, establishing the principles, policies and procedures that regulate foreign production investments in goods and services. The special legislation regulating foreign investments in specific sectors of the economy shall prevail over said law, including those addressing hydrocarbon, mining and telecommunications matters. To date, the relevant sectoral regulation has not been published.

On January 5, 2018, the term ended, established in Resolution No. 164 of the Ministry of the People's Power of Petroleum, published in the Official

Gazette of December 6, 2017, for the review and validation of all national and international contracts signed and those that are about to be signed, by PDVSA, its subsidiaries and the mixed companies where PDVSA owns shares. To date, the review process is still ongoing in the mixed companies, and the results of this process have yet to be disclosed.

In Official Gazette No. 41,825, dated February 19, 2020, Presidential Decree No. 4,131 was published, declaring an energy emergency in the hydrocarbon industry, in order to adopt the necessary measures to guarantee national energy security and protect the industry against the multi-faceted aggression, both external and internal, that is being executed to affect the country's oil production and sale. This Decree ordered the creation of the Alí Rodríguez Araque Presidential Commission for the Defense, Restructuring and Reorganization of the National Oil Industry, the purpose of which is the design, supervision, coordination and promotion of all the productive, legal, administrative, labor and marketing processes of the national public oil industry and its related activities, including PDVSA and CVP; this Commission may design and apply a set of special temporary measures aimed at increasing, improving and boosting the productive, administrative, financial and commercial management capacities of the national public oil industry and its related activities.

Subsequently, in Official Gazette No. 41,946, dated August 19, 2020, the President of the Republic, through Decree No. 4,268, extended by six (6) months the term established in Decree No. 4,131, dated February 19, 2020, which had declared the energy emergency of the hydrocarbon industry.

In the Official Gazette (Ext.) No. 6,583, dated October 12, 2020, the National Constituent Assembly published the so-called Anti-Blockade Constitutional Law for National Development and the Guarantee of Human Rights ("Anti-Blockade Law"), effective as of the date of its publication. The law aims to establish a regulatory framework that provides public authorities with legal tools to counteract, mitigate and reduce the harmful effects caused by the unilateral coercive measures and other restrictive or punitive measures imposed against Venezuela that were issued or handed down by other States or group of States, by international organizations or other foreign public or private entities, which affect human rights, infringe international law and affect the right to free and sovereign development of the Venezuelan people as enshrined in the Constitution.

The new legislation is public policy and of public interest, so its provisions will be applicable to all branches of government, and to natural and legal persons, public and private, throughout Venezuela.

Monetary regime

On February 20, 2018, the launch of the "Petro" cryptocurrency was announced, backed by reserves from field 1 of the Ayacucho Block in the Hugo Chávez Frías Orinoco Oil Belt, in order to create an alternative currency to the dollar and a digital and transparent economy for the benefit of emerging countries. Such purchase may be made in convertible currencies: yuan, Turkish lira, euro and rouble. On March 19, the President of the United States of America signed an executive order prohibiting US persons and US residents from performing transactions with any digital currency issued by the Venezuelan government as of January 9, 2018, which increases that country's sanctions regime on Venezuelan natural and legal persons. On July 25, 2018, Presidential Decree No. 3,548 was published in Official Gazette No. 41,446, establishing that from August 20, 2018 onwards, all monetary amounts expressed in national currency prior to that date, must be converted to the new monetary unit, dividing the current units by one hundred thousand (100,000).

On August 2, 2018, the National Constituent Assembly published a Decree revoking the Exchange Rate System Law in Official Gazette No. 41,452, with a view to granting both natural and legal persons, whether Venezuelan or foreign nationals, full guarantees in terms of their involvement in the country's socioeconomic development model. On September 7, 2018, the Central Bank of Venezuela ("BCV") published in Extraordinary Official Journal No. 6,405 the so-called Exchange Agreement No. 1 ("the Exchange Agreement", pending regulation by BCV), the purpose of which is to establish the free convertibility of the currency nationwide.

On May 2, 2019, the Central Bank of Venezuela published Resolution No. 19-05-01 in Official Gazette No. 41,624, which authorized the so-called foreign exchange tables.

On November 19, 2019, the Presidency of the Republic published a decree instructing natural and legal persons, public and private, to register information and economic events expressed in accounting terms in sovereign cryptoassets, without prejudice to their registration in Bolivars.

The Central Bank of Venezuela issued a circular on March 13, 2020, allowing authorized banks to sell foreign currency in cash, in accordance with Exchange Agreement No. 1. The circular entered into force on March 13, 2020 and established that universal banks and exchange offices regulated by the Law on Banking Sector Institutions (*Ley de Instituciones del Sector Bancario*) and authorized as specialized intermediaries to carry out retail exchange operations are subject to its application.

The same circular establishes that the above-mentioned subjects must request authorization from the BCV's Foreign Exchange Operations Management to sell foreign currency in cash derived from retail exchange operations. These are operations to sell foreign currency for amounts equal to or less than €8,500, or its equivalent in another currency.