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

Auditor's report,
Consolidated financial statements at 31 December 2023
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 31 December 2023, the income statement, statement of recognized profit or loss, statement of changes in equity, statement of cash flows 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 31 December 2023, 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 financial statements 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.

PricewaterhouseCoopers Auditores, S.L., Torre PwC, Pº de la Castellana 259 B, 28046 Madrid, España
Tel.: +34 915 684 400 / +34 902 021 111, Fax: +34 915 685 400, www.pwc.es

R. M. Madrid, hoja M-63.988, folio 75, tomo 9.267, libro 8.054, sección 3ª
Inscrita en el R.O.A.C. con el número S0242 - NIF: B-79031290

Key audit matters	How our audit addressed the key audit matters
Assessment of the recoverability of the carrying amount of the Group's intangible assets, property, plant and equipment and joint ventures considering the impacts of the energy transition and climate change	
The accompanying consolidated financial statements reflect intangible assets (including goodwill) and property, plant and equipment amounting to €2,477 million (note 11) and €25,386 million (note 12), respectively, at 31 December 2023. As disclosed in note 13, the Group also has joint ventures with a carrying amount of €2,957 million at year-end 2023. The Group allocates the assets to cash-generating units (CGUs) and analyses each CGU's assets for impairment annually using the method and the key assumptions described in notes 4.5.1 and 20. The assets' recoverable amount is determined based on the present value of future cash flows generated by the assets in accordance with the business plans approved by management and prepared using scenarios that take into consideration the energy transition and decarbonisation of the economy and the decarbonization commitments assumed by Repsol. Repsol has published its strategic update for the period 2024-2027 which continues to be based on the aim to achieve zero net CO_2 emissions (considering the Carbon Intensity metric which is detailed in note 4.5.2. to the accompanying consolidated financial statements) in 2050. In the impairment tests, as indicated in the said notes and in note 4.5.2, the Group also takes into consideration the main risks arising from climate change (transitional risks) and therefore the price paths for hydrocarbons, electricity and CO_2, the industrial margins and the demand assumptions that take into account the dynamics of energy transition, including restrictions on the use of fossil fuels and the development of new alternative technologies that will reduce demand for hydrocarbon products in the medium and long term, as reflected in the business plans.	The main audit procedures performed on this key matter are described below. We gained an understanding of management's impairment test preparation process with regard to: • The fulfilment of applicable accounting legislation by the method applied. • The design and operating effectiveness of the relevant controls put in place by management. • The allocation of assets to CGUs and the process followed to identify which CGUs require impairment testing in accordance with applicable accounting legislation. As regards the way in which management took into consideration the potential effects of the energy transition and climate change in its impairment testing, we performed the following procedures together with our climate change and energy transition experts: • We gained an understanding of the Repsol Group's energy transition and climate change commitments by interviewing management and analysing the Repsol Group's related public information (among others, Strategic Plans, documentation published in the ESG Day in October 2023, consolidated management report and consolidated statement of non-financial information), as well as by analysing and assessing how such commitments are reflected in the strategic business plans.

Key audit matters

In this context, as outlined in notes 4.5.1 and 20 to the accompanying consolidated financial statements, the Group has estimated price paths in an environment of high uncertainty, marked by the evolution of armed conflicts, the dynamics of energy transition and decarbonisation of the economy, among others. Specifically:

- Crude oil: The crude oil price path has been revised downwards in 2024 and subsequently, slightly upward, assuming the enormous investment needs required to meet both demand and declining production, within a context of very low investment levels recent years. The path considers demand reductions, due to energy transition and decarbonisation policies.

- Natural gas: the price path has been revised slightly downward for the next five years in order to adapt it to the current context of reduced tensions compared with 2022. From 2042 onwards, it has been revised slightly upwards considering a slight change in the outlook for supply where investment in natural gas production will play a crucial role in order to further increase production. Particularly in the United States, the consideration of natural gas as a transition fuel in decarbonisation processes has motivated greater investment and production compared to oil, considering that the contribution to the electricity mix will remain high.

- CO_2: The Group has revised upwards the estimated price in 2023 compared to 2022, due to the evolution of the market.

- Electricity in Spain (electricity *pool*): the path until 2032 has been amended downwards compared to 2022 and thereafter remains within ranges similar to the previous year's curve in order to take into account the lower prices of natural gas in Europe.

How our audit addressed the key audit matters

- We gained an understanding of the industry landscape (price evolution, presentation of results of other companies in the sector, analyst and agency reports, investor groups' expectations of climate change, legislative and tax developments in terms of climate change, etc.), in order to assess the consistency of the Group's strategic priorities with the reality of the global energy market and the energy transition and climate change scenarios considered globally.

- We gained an understanding of the map of risks of climate change and the energy transition identified by the Group, and we held meetings with management in order to identify the areas in which the risks of the energy transition and climate change, identified in the risk map may trigger an impact on the consolidated financial statements.

On the other hand, we assessed the assumptions and main estimates used in the calculations which include both short and long-term estimates of hydrocarbon, electricity and CO2 prices, the volume of hydrocarbon reserves and resources, production profiles, refinery margins, the evolution of hydrocarbon demand, operating costs, the necessary investments and the projections timescale and on the main assumptions we performed the following procedures.

Concerning future hydrocarbon, electricity and CO_2 prices and refinery margins:

- We compared, together with our valuation experts, management's price estimates with the information published by investment banks, consultancy firms and relevant industry organisations and agencies.

- We verified whether management has considered the context of energy transition and decarbonisation of the economy.

- We assessed the consistency of these estimates with the objectives set by the Group in this area in its strategic plans.

- We analysed, for refinery activities in Spain, the estimated refinery margin and fossil fuel demand and the consistency of the strategic plan for this business with the dynamics of energy transition and climate change.

Key audit matters	How our audit addressed the key audit matters
With respect to the breakdowns of the accounting estimates and judgements concerning climate change, decarbonisation and their impact on the impairment analyses which are included in note 4.5.2 to the accompanying consolidated financial statements, management indicates in note 1 that they have taken into account the IASB publication "*Effects of climate-related matters on financial statements"*. Note 4.5.2 outlines that the Group expects the energy transition to bring with it volatility and uncertainty regarding the evolution of prices and demand for raw materials over the coming decades and so has carried out various sensitivity analyses on variations in the main key assumptions used in impairment testing which consider, inter alia, the hydrocarbon price paths of the *Net Zero Emissions* 1,5º C scenario of the International Energy Agency published in its *World Energy Outlook 2023* report (note 20.2). As a result of these analyses, Group management has recognised impairment adjustments, net of reversals, for the amounts indicated in note 20.1. This is a key audit matter as it involves critical judgements and significant estimates by management, particularly in Exploration and Production, Refining in Spain and Chemical businesses (notes 4.5.1 and 4.5.2), concerning the key assumptions used, affected by the consideration of the impacts of climate change and the energy transition with a significant potential impact on the Group's consolidated financial statements.	For discount rates, we assessed, in collaboration with our valuation experts, the assumptions and principal estimates used in their calculations, including both short and long-term estimates of the evolution of the rates for each of the businesses assessed. In relation to the estimates of hydrocarbon reserves and resources of the assets included in the *Upstream* segment: • We gained an understanding of the process established by the Group for this purpose which includes the use of management experts and assessed the results of the work, competence, capacity and objectivity of these experts. • We verified the consistency of the volumes estimated by management experts with the data used in determining the recoverable amount of the assets analysed. We checked whether the production profiles of the hydrocarbon reserves and resources of Upstream assets and the cash flow projection timescales of the Refining in Spain and Chemicals and Mobility businesses in Spain CGUs, are consistent with the Repsol Group's strategic objective of being a company with zero net CO_2 emissions by 2050. Similarly, in relation to the assets of Upstream, Industrial and Customer segments and the identification of possible stranded assets, we verified that their value will be substantially recovered before 2040, in accordance with management's projections. We verified the mathematical calculations included in the models prepared by management and compared the recoverable amount calculated by the Group with the carrying amount of the CGUs in order to assess the existence or otherwise of impairment or reversal of impairment and if appropriate, we verified the recognition of impairment or its reversal in accordance with accounting legislation. With respect to the sensitivity analyses carried out by management: • We assessed the sensitivity calculations performed on the main assumptions considered in the impairment analyses.

Key audit matters	How our audit addressed the key audit matters
	• We checked if these sensitivity analyses consider the hydrocarbon prices included in the *Net Zero Emissions* 1,5º C scenario of the International Energy Agency published in its *World Energy Outlook 2023* report. With respect to the information and disclosures included in the consolidated financial statements: • We corroborated their consistency with the information included in the consolidated management report and consolidated non-financial information statement, which outline Repsol's objectives with respect to climate change. • We analysed the sufficiency of such information concerning the evaluation of the recoverable value of the assets analysed, as required by applicable accounting legislation. 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 evidence obtained.
Assessment of the recoverability of the carrying amount of deferred tax assets As shown in the accompanying consolidated balance sheet, at 31 December 2023 the deferred tax asset balance amounts to €4,651 million, with available tax losses, tax credits and similar benefits not yet used amounting to €4,035 million, as outlined in 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 considers, as indicated in note 22, the existence of sufficient future earnings for tax purposes that might offset the tax losses or apply existing tax credits, an assessment of earnings estimates for each entity or tax group in accordance with the Group's strategic plan and the timeframe and limit in each country for the recoverability of these assets.	Our analysis commenced with an understanding of the methodology applied and the relevant controls implemented by the Group in the analysis of the recovery of these assets. We have also checked the consistency of the assumptions used by management in the financial projections used to determine future taxable profits against the assumptions used in the impairment testing of the Group's property, plant and equipment and intangible assets. In addition, together with our tax experts, we have evaluated the corporate income tax estimate, basically in relation to the appropriateness of the tax treatment of the transactions performed and the calculations of the deferred tax assets in the light of the applicable tax regulations. Finally, we assessed the sufficiency of the disclosures in the consolidated financial statements concerning the measurement and recognition of these assets.

Key audit matters	How our audit addressed the key audit matters
Note 22.3 of the accompanying consolidated financial statements details the main variations corresponding to fiscal year 2023. This is a key audit matter due to the nature and significance of the assets recognised and because it entails the use of significant estimates (notes 4.5 and 4.5.1) of future tax profits, that affects the assessment of the recoverability of these assets.	On the basis of our work, we consider that the assumptions and estimates made by Group management concerning the recoverability of the assets analysed are consistent with the evidence obtained.
Evaluation of the recoverability of the Group's assets in Venezuela As disclosed in note 20.3 to the accompanying consolidated financial statements, the Group's financial exposure in Venezuela at 31 December 2023 amounted to €259 million. This amount mainly includes the carrying amount of the investment in the joint venture Cardón IV, S.A. (note 13), the financing granted in dollars by the Group to the joint venture Petroquiriquire, S.A. (note 8.1), and the trade receivables with Petróleos de Venezuela, S.A. (PDVSA) which are presented as Other non-current assets (note 14) and trade and other receivables from PDVSA (note 17), less the amount of provisions for liabilities and charges (note 13). As detailed in note 20.3, in 2023 the outlook for Venezuela improved primarily as a result of an improvement in the country's political and social situation and the recent easing of coercive measures by the US government. Specifically, on October 18, 2023 the Office of Foreign Assets Control (OFAC) granted General License 44 by which the US Government authorizes any company in the oil and gas sector to carry out operations in Venezuela for a six-month period. The General License is contingent on the Venezuelan Government fulfilling, among other things, its commitments to ensure democratic and free presidential elections in 2024. If the Venezuelan Government keeps its commitments, the license would be extended upon expiry in April 2024. In this context, on December 18, 2023, Repsol and PDVSA signed a new management agreement for the Petroquiriquire, S.A. joint venture in order to increase production and facilitate the recovery of the debt linked to these assets, without the need for additional investments by Repsol.	Our analysis has begun with the understanding of the processes that the Group has established to carry out the value analysis of the assets in Venezuela, 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. Similarly, we obtained and understood General License 44 issued by the OFAC in 2023. In relation to the financial information of the joint venture Cardón IV, S.A. included in the consolidated financial statements, we have assessed the competence and objectivity of this component's auditor and have obtained and evaluated the auditor's reports, including its overall findings, conclusions and opinion. We have also evaluated the financial information of the joint venture Petroquiriquire, S.A., which has been included in the Group's consolidated financial statements. In relation to the analysis of impairment losses on non-current assets in the above companies, we have performed audit procedures such as those described in the key audit matter *"Assessment of the recoverability of the carrying amount of the Group's intangible assets, property, plant and equipment and joint ventures considering the impacts of the energy transition and climate change"* referred to above. We have also analysed the reasonableness of the provision for liabilities and charges. In addition, to analyse the credit risk of the loans granted to the joint ventures and the receivables from PDVSA, we have performed the following audit procedures, among others:

Key audit matters	How our audit addressed the key audit matters
Nonetheless, the country's general situation continues to be impacted by a very significant fall in GDP in the recent years, a fixed exchange rate regime, high inflation rates and the continuous devaluation of the local currency, an oil sector where production has declined markedly in recent years and political instability, among other things. On 30 January 2024 the U.S. government announced that, in absence of progress, the United States will not renew GL 44 when it expires on April 18. 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. In the context described above, the Group analysed the recoverability of its investments in Venezuela and the credit risk associated with its accounts receivable with PDVSA and recognised impairment of €329 million in 2023 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 from PDVSA, the Group hired an independent expert to validate Management's judgements. This matter requires a high level of judgement and estimation (notes 4.5 and 20.3) that management should make when assessing the recoverability of its assets in Venezuela and so has been considered a key audit matter.	• We have obtained and assessed the loan contract with Petroquiriquire, S.A. and other relevant contractual information, including the new framework agreement signed on December 18, 2023. • We have analysed the reasonableness of the expected credit losses model prepared by management. • We have analysed the information contained in the report of the independent expert engaged by the Group to assess management's judgements on the Venezuela credit risk and have assessed this expert's competence and objectivity, to satisfy ourselves that the expert was suitably qualified to carry out this assignment. Finally, we have assessed the sufficiency of the information disclosed in the consolidated financial statements regarding the situation in Venezuela, the Group's presence in that country and the assumptions underlying the valuation of these assets. Based on the work carried out, we consider that the assumptions and estimates employed by Group management with respect to the recoverability of the assets analysed are consistent with the evidence obtained.

Key audit matters	How our audit addressed the key audit matters
Analysis of the effects of the settlement of the arbitration proceedings in relation to the acquisition of Talisman Energy UK Limited (TSEUK), currently Repsol Resources UK Limited (RRUK).	
As indicated in note 15 of the accompanying notes to the 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. (now Repsol Oil & Gas Canada Inc. – ROGCI) and Talisman Colombia Holdco Limited (TCHL) in relation to the purchase of 49% of the shares of RRUK in 2012 by Addax and Sinopec. This transaction took place before the Talisman Group was acquired by the Repsol Group in 2015. On 29 January 2020, the Singapore Arbitration Court issued a partial award addressing only liability for the Reserves matter. In that partial award, the Arbitration Court decided that ROGCI and TCHL were liable to Sinopec and Addax for that matter. On 20 April 2021, the Arbitration Court issued a new partial award, completing the liability phase, in which TCHL and ROGCI were declared liable for the Production matter and the claims made by Addax and Sinopec for liabilities in relation to the other matters were rejected. Following this award, it was expected that the arbitration proceeding would continue in the quantification phase. In view of the findings in the partial awards, the Group estimated the liability which could result from this arbitration, and, with the support of its lawyers and external advisors, the Group recognised in previous years the necessary provision to cover the risks of the arbitration process. However, on 28 April 2023 Repsol and Sinopec agreed that Repsol would acquire from Sinopec its 49% interest in the shares of RRUK and settle the arbitration proceedings. On 9 October 2023 the parties declared that the conditions had been met and so on 31 October 2023 the shares were transferred, and the arbitration proceedings were concluded.	Our audit procedures relating to this matter included the following, among others: • We obtained and assessed the agreement between Repsol and Sinopec in order to settle the arbitration and the acquisition of 49% of RRUK and other documentation relating to the agreement. • Meetings with Group management to understand their analysis and assessment of the effects of the agreement. • We obtained and analysed Group management's calculations with respect to the allocation of the overall consideration under the agreement between the acquisition cost of 49% of RRUK shares and the cost of the indemnity for the settlement of the arbitration. In relation to the indemnity: • We compared the resulting amount of the analysis indicated in the previous procedure with the provision recognised at the agreement date and verified whether the difference is recognised in the consolidated income statement. • We verified whether the amount to be paid for indemnity is recognised in "Current financial liabilities" in the accompanying balance sheet (note 7.1). On the other hand, in relation to the business combination: • We obtained and analysed the breakdown of fair value of the new assets acquired, prepared by Group management and with the collaboration of our valuation experts, we carried out audit procedures in order to analyse the key assumptions employed in the allocation of value (reserves and prices of hydrocarbons, production profiles, decommissioning costs, tax impacts and discount rates).

Key audit matters	How our audit addressed the key audit matters
The overall consideration under the agreement amounts to US$2,100 million. Following the transfer of 49% of the shares in RRUK to Repsol, the Group holds 100% of the capital of RRUK and so has acquired control of the latter and the business combination has been accounted for in the terms indicated in note 13, resulting in a provisional goodwill of US$36 million. This is a key audit matter as it involves critical judgements and significant estimates (notes 4.5, 13 and 15.2) by management in the calculations performed by Repsol Group management.	• We analysed together with the component auditor, the main assumptions concerning the recognition in the business combination of deferred tax assets and the provision for asset decommissioning. • We verified whether Repsol has remeasured the interest in RRUK prior to the business combination at fair value and recognised the difference between that fair value and carrying amount in the consolidated income statement. • We verified whether the amounts recognised in the consolidated financial statements regarding net assets acquired agree with the results of the calculations indicated above. Finally, we considered the sufficiency of the information disclosed in the consolidated financial statements regarding this matter. Based on the procedures carried out, we consider that management's approach and conclusions are consistent with the available evidence.

Other information: Consolidated management report

Other information comprises only the consolidated management report for the 2023 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 financial statements.

Our audit opinion on the consolidated financial statements 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 certain information included in the Annual Corporate Governance Report and the Annual Report on Directors' Remuneration, as referred to in the Auditing Act, have 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 financial statements 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 financial statements for the 2023 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 IFRS-EU and other provisions of the financial reporting framework applicable to the Group in Spain, and for such internal control as the aforementioned 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 aforementioned 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 and 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 aforementioned 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

European single 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 financial year 2023 that comprise an XHTML file which includes the consolidated financial statements 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 financial year 2023 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 financial statements included in the aforementioned digital files completely agrees with that of the consolidated financial statements that we have audited, and whether the format and markup of these accounts and of the aforementioned files has been affected, 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 financial statements, 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 audit and control committee of the Parent company

The opinion expressed in this report is consistent with the content of our additional report to the audit and control committee of the Parent company dated 22 February 2024.

Appointment period

The General Ordinary Shareholders' Meeting held on 25 May 2023 appointed us as auditors of the Group for a period of one year, for the year ended 31 December 2023.

Previously, we were appointed by resolution of the General Ordinary Shareholders' Meeting for a period of three years and we have audited the accounts continuously since the year ended 31 December 2018.

Services provided

Services provided to the Group for services other than the audit of the accounts are disclosed in note 29.3 to the consolidated financial statements.

PricewaterhouseCoopers Auditores, S.L. (S0242)

Juan Manuel Anguita Amate (20367)

22 February 2024

2023

REPSOL Group

Consolidated financial statements

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

TABLE OF CONTENTS

FINANCIAL STATEMENTS

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

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

Balance sheet at December 31, 2023 and 2022

	Note	€ Million 12/31/2023	€ Million 12/31/2022
Intangible assets	11	2,477	1,976
Property, plant and equipment	12	25,386	22,470
Investments accounted for using the equity method	13	2,957	4,302
Non-current financial assets	8	1,562	1,437
Deferred tax assets	22	4,651	2,757
Other non-current assets	14	1,143	839
NON-CURRENT ASSETS		**38,176**	**33,781**
Inventories	16	6,623	7,293
Trade and other receivables	17	7,974	9,027
Other current assets		240	293
Other current financial assets	8	4,491	3,058
Cash and cash equivalents	8	4,129	6,512
CURRENT ASSETS		**23,457**	**26,183**
TOTAL ASSETS		**61,633**	**59,964**

	Note	€ Million 12/31/2023	€ Million 12/31/2022
Shareholders' equity		26,150	24,611
Other cumulative comprehensive income		47	683
Non-controlling interests		2,873	679
EQUITY	6	**29,070**	**25,973**
Non-current provisions	15	4,943	3,553
Non-current financial liabilities	7	8,350	10,130
Deferred tax liabilities and other tax items	22	3,304	2,194
Other non-current liabilities	14	743	1,196
NON-CURRENT LIABILITIES		**17,340**	**17,073**
Current provisions	15	1,559	1,579
Current financial liabilities	7	3,314	3,546
Trade and other payables	18	10,350	11,793
CURRENT LIABILITIES		**15,223**	**16,918**
TOTAL EQUITY AND LIABILITIES		**61,633**	**59,964**

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

Income statement for the years ending December 31, 2023 and 2022

	Note	€ Million 2023	2022
Sales		58,538	74,828
Income from services rendered and other income		410	325
Changes in inventories of finished goods and work in progress		(252)	595
Supplies		(42,888)	(56,178)
Amortization and depreciation of non-current assets		(2,436)	(2,339)
(Charges of)/Reversal of impairments		(310)	(2,673)
Personnel expenses		(2,010)	(1,967)
Transport and freights		(1,891)	(1,781)
Supplies		(667)	(858)
Gains/(Losses) on disposal of assets		4	77
Other operating income / (expenses)		(4,204)	(4,169)
OPERATING INCOME / (LOSS)	19	**4,294**	**5,860**
Interest income		425	157
Interest expenses		(279)	(238)
Change in fair value of financial instruments		(132)	941
Exchange gains/(losses)		242	(434)
(Provision for)/Reversal of impairment provisions of financial instruments		(114)	49
Other financial income and expenses		(105)	(144)
FINANCIAL RESULT	21	**37**	**331**
Net income from investment accounted for using the equity method [1]	13	34	989
NET INCOME / (LOSS) BEFORE TAX		**4,365**	**7,180**
Income tax	22	(1,081)	(2,835)
CONSOLIDATED NET INCOME / (LOSS) FOR THE PERIOD		**3,284**	**4,345**
Net income attributable to non-controlling interest		(116)	(94)
NET INCOME ATTRIBUTABLE TO THE PARENT		**3,168**	**4,251**

EARNINGS PER SHARE ATTRIBUTABLE TO THE PARENT	23	**Euros / share**	
Basic		2.46	2.96
Diluted		2.46	2.96

[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, 2023 and 2022

	€ Million	
	2023	**2022**
CONSOLIDATED NET INCOME / (LOSS) FOR THE PERIOD	**3,284**	**4,345**
Due to actuarial gains and losses	(27)	18
Investments accounted for using the equity method	—	6
Equity instruments with changes through other comprehensive income	(9)	(29)
Tax effect	—	(1)
OTHER COMPREHENSIVE INCOME / (LOSS). ITEMS NOT RECLASSIFIABLE TO NET INCOME	(36)	(6)
Cash flow hedges:	**240**	**(336)**
Valuation gains / (losses)	400	(490)
Amounts transferred to the income statement	(160)	154
Translation differences:	**(795)**	**835**
Valuation gains / (losses)	(697)	848
Amounts transferred to the income statement	(98)	(13)
Investments in joint ventures and associates:	**3**	**11**
Valuation gains / (losses)	6	11
Amounts transferred to the income statement	(3)	—
Tax effect	**(68)**	**119**
OTHER COMPREHENSIVE INCOME / (LOSS). ITEMS RECLASSIFIABLE TO NET INCOME	(620)	629
TOTAL OTHER COMPREHENSIVE INCOME / (LOSS)	**(656)**	**623**
TOTAL COMPREHENSIVE INCOME / (LOSS) FOR THE PERIOD	**2,628**	**4,968**
a) Attributable to the parent	2,555	4,896
b) Attributable to non-controlling interests	73	72

Repsol S.A. and Investees comprising the Repsol Group

Statement of changes in equity corresponding to the years ending December 31, 2023 and 2022

	Equity attributable to the parent and other equity instrument holders							
	Shareholders' equity							
€ Million	Share capital	Share premium, reserves & dividends	Treasury shares and own equity investments	Other equity instruments	Net income for the period attributable to the parent	Other cumulative comprehensive income	Non-controlling interests	**Equity**
Closing balance at 12/31/2021	**1,527**	**16,655**	**(641)**	**2,280**	**2,499**	**94**	**380**	**22,794**
Total recognized income/(expenses)	**—**	**23**	**—**	**—**	**4,251**	**622**	**72**	**4,968**
Transactions with partners or owners:								
Share capital increase/(reduction)	(200)	(2,267)	2,467	—	—	—	—	—
Dividends and shareholder remuneration	—	(944)	—	—	—	—	(66)	(1,010)
Transactions with treasury shares and own equity investments (net)	—	36	(1,829)	—	—	—	—	(1,793)
Increases/(reductions) due to changes in scope	—	735	—	—	—	32	299	1,066
Other transactions with partners or owners	—	—	—	—	—	—	—	—
Other changes in equity:								
Transfers between equity-line items	—	2,499	—	—	(2,499)	—	—	—
Subordinated perpetual debentures	—	(60)	—	2	—	—	—	(58)
Other changes	—	73	—	4	—	(65)	(6)	6
Closing balance at 12/31/2022	**1,327**	**16,750**	**(3)**	**2,286**	**4,251**	**683**	**679**	**25,973**
Total recognized income/(expenses)	**—**	**(22)**	**—**	**—**	**3,168**	**(591)**	**73**	**2,628**
Transactions with partners or owners:								
Share capital increase/(reduction)	(110)	(1,451)	1,561	—	—	—	—	—
Dividends and shareholder remuneration	—	(934)	—	—	—	—	(89)	(1,023)
Transactions with treasury shares and own equity investments (net)	—	(33)	(1,566)	—	—	—	—	(1,599)
Increases/(reductions) due to changes in scope	—	916	—	—	—	30	1,919	2,865
Other transactions with partners or owners	—	—	—	—	—	—	286	286
Other changes in equity:								
Transfers between equity-line items	—	4,251	—	—	(4,251)	—	—	—
Subordinated perpetual debentures	—	(60)	—	2	—	—	—	(58)
Other changes	—	68	—	—	—	(75)	5	(2)
Closing balance at 12/31/2023	**1,217**	**19,485**	**(8)**	**2,288**	**3,168**	**47**	**2,873**	**29,070**

Repsol S.A. and investees comprising the Repsol Group

Statement of cash flows corresponding to the years ending December 31, 2023 and 2022

	Note	€ Million 2023	2022
Income before tax		**4,365**	**7,180**
Adjustments to income:		**3,401**	**4,026**
Amortization and depreciation of non-current assets	11 and 12	2,436	2,339
Other (net)		965	1,687
Changes in working capital		**878**	**(1,375)**
Other cash flows from operating activities:		**(2,133)**	**(1,999)**
Dividends received		426	753
Income tax refunded/(paid)		(1,968)	(2,398)
Other proceeds from/(payments for) operating activities		(591)	(354)
CASH FLOWS FROM OPERATING ACTIVITIES	24	**6,511**	**7,832**
Payments for investments:	11 and 12	**(8,352)**	**(5,096)**
Group companies and associates		(898)	(193)
Property, plant and equipment, intangible assets and investment property		(4,289)	(3,535)
Other financial assets		(3,165)	(1,368)
Proceeds from divestments:		**2,238**	**962**
Group companies and associates		659	124
Property, plant and equipment, intangible assets and investment property		37	473
Other financial assets		1,542	365
Other cash flows from investing activities		**261**	**31**
CASH FLOWS FROM INVESTING ACTIVITIES	24	**(5,853)**	**(4,103)**
Proceeds from and (payments for) equity instruments:	6	**(1,283)**	**(1,714)**
Acquisition		(1,775)	(1,884)
Disposal		492	170
Transactions with non-controlling interests:	6	**2,174**	**1,117**
Proceeds from/(payments for) transactions with non-controlling interests		2,290	1,155
Dividends paid to non-controlling interests		(116)	(38)
Proceeds from and (payments for) financial liability instruments:	7	**(2,010)**	**(1,148)**
Issuance		9,256	13,500
Repayment and redemption		(11,266)	(14,648)
Payments on shareholder remuneration and other equity instruments	6	**(979)**	**(989)**
Other cash flows from financing activities:		**(955)**	**(98)**
Interest paid		(333)	(365)
Other proceeds from/(payments for) financing activities		(622)	267
CASH FLOWS FROM FINANCING ACTIVITIES	24	**(3,053)**	**(2,832)**
EXCHANGE RATE FLUCTUATIONS EFFECT		**12**	**20**
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS	24	**(2,383)**	**917**
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**6,512**	**5,595**
CASH AND CASH EQUIVALENTS AT END OF PERIOD:	8	**4,129**	**6,512**
Cash and banks		2,743	2,676
Other financial assets		1,386	3,836

GENERAL INFORMATION

(1) About these Financial Statements

These consolidated Financial Statements of Repsol, S.A. and its investees, comprising the Repsol Group, present fairly the Group's equity, financial position and its results, as well as the equity and the cash flows for the period ending December 31, 2023.

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), and other provisions of the applicable regulatory framework. Compliance with accounting regulations requires the Company to apply criteria and policies (see Note 4.4); preparing the information contained in these Financial Statements also requires accounting estimates and judgments to be made that may be significant (see Note 4.5).

Repsol has a strategy to be a net zero emissions company by 2050[1], in line with the objectives of the Paris Climate Summit[2] and the United Nations Sustainable Development Goals. These Financial Statements include information that reflects the impacts of climate change and the dynamics of energy transition (see Notes 4.5.2 and Appendix III). In addition, that established in the IASB publication "*Effects of Climate-Related Matters on Financial Statements*" on the impact of climate change on the application of IFRSs in financial reporting was taken into account in preparing these Financial Statements.

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 21, 2024 and they will be submitted for approval at the Annual General Meeting; it is expected that they will be approved without any modifications. The 2022 consolidated Financial Statements were approved at Repsol's Annual General Meeting held on May 25, 2023.

The Group's 2023 consolidated Management Report, which includes financial and non-financial information and, in particular, the consolidated Statement of Non-Financial Information and other information on sustainability, including environmental, social and governance (ESG) matters, is published together with the consolidated Financial Statements. The Management Report includes appendices with the Annual Corporate Governance Report and the Annual Report on Directors' Remuneration. In addition, as supplementary information, Repsol has published the Information on the 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) About Repsol

2.1 Parent company

The parent company of the Repsol Group is Repsol, S.A., 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. It is registered in the Madrid Companies Register on sheet no. M-65289; its tax ID number (C.I.F.) is A-78/374725 and its National Classification of Economic Activities (C.N.A.E.) no. is 70.10. Its website can be found at www.repsol.com.

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).

[1] The Carbon Intensity Indicator (CII; gCO2/MJ) is the key metric used to establish the decarbonization target toward reaching the Company's emission neutrality by 2050. For more information, see Note 4.5.2 and section 7.2.1.4 on Metrics and targets of the 2023 consolidated Management Report.
[2] The Paris Agreement has had a significant impact on the development of new climate policies and the approval of new regulations. The European Union (EU), after having assumed the commitment of climate neutrality by 2050 ("The European Green Deal"), which constitutes the new growth strategy of the EU, has approved different regulations on this matter. Spain is also issuing different legislative packages in this regard, so the regulations on climate change and energy transition are evolving continuously. For more information, see Appendix III.

2.2 Repsol Group

The Repsol Group (hereinafter "Repsol", "Company", "Repsol Group" or "Group") is a group of companies with a presence worldwide 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[3].

The Group comprises approximately 500 companies, subsidiaries, joint ventures, and associates incorporated in 36 countries (mainly in Spain and the United States) that occasionally carry out activities abroad through branches, permanent establishments, etc. The Group's main companies and the summarized corporate organization chart are presented in section 2.3 of the 2023 consolidated Management Report. In 2023, the main changes in the corporate structure relate to acquisitions and dilution agreements in assets linked to renewable electricity generation and divestments in the Upstream segment. For more information on the Group's composition, see Appendices IIA and IIB, and on the main changes in its corporate structure, see Appendix IIC.

(3) Information by business segment[4]

3.1 Definition of business segments

The segment reporting disclosed by the Group in this Note 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 and their level of significance, as well as on the organizational structure and the way in which Repsol's management and directors analyze the main operating and financial aggregates in order to make decisions about resource allocation and to assess the Company's performance.

Repsol's reporting segments are as follows:

- Exploration and Production (Upstream or "E&P"): activities for the exploration and production of crude oil and natural gas reserves, as well as the development of low-carbon geological solutions (geothermal, carbon capture, storage and use, etc.).
- Industrial: activities involving oil refining, petrochemicals, and the trading, transport and sale of crude oil, natural gas and fuels, including the development of new growth platforms such as hydrogen, biomethane, sustainable biofuels and synthetic fuels.
- Customer: businesses involving mobility (gas stations) and the sale of fuel (gasoline, diesel, aviation kerosene, liquefied petroleum gas, biofuels, etc.), electricity and gas, and lubricants and other specialties.
- Low-Carbon Generation (LCG): low-emissions electricity generation (CCGTs[5]) and renewable sources.

Corporate and other includes (i) corporate overhead expenses and, specifically, those expenses related to managing the Group, (ii) the financial result, and (iii) intersegment consolidation adjustments.

In 2023, as a result of its business performance and changes in its organizational structure, Repsol has revised the definition of its reporting segments. The business segment previously known as "*Commercial and Renewables*" is now divided into "*Customer*" (commercial businesses with a customer-focused multi-energy offering) and "*Low-Carbon Generation*" (low-emissions electricity generation and renewables business). Repsol has restated the information for 2022 to ensure that the information can be followed and compared.

[3] For more information, see section 2.1 Value chain and business segments of the 2023 consolidated Management Report.
[4] Some of the figures presented in this Note are classified as Alternative Performance Measures (APMs) in accordance with the Guidelines of the European Securities Market Association (ESMA) (for more information, see Appendix II Alternative Performance Measures of the consolidated Management Report or www.repsol.com). All of the figures shown in accordance with the business segment reporting model referred to in this Note have been reconciled with the EU-IFRS financial statements in Appendix I.
[5] Acronym for combined cycle gas turbine electricity generators.

3.2 Presentation model of the results by segments

Repsol presents the results and other financial aggregates of its business segments (Upstream, Industrial, Customer and LCG) in its segment reporting model, taking into consideration the operating and financial aggregates of its joint ventures, in accordance with the Group's interest in each joint venture, using the same methodology and with the same level of detail as for fully consolidated companies[6].

Using this approach, the results are broken down into several components (adjusted income, inventory effect, special items, non-controlling interests) until the net income is obtained, which reflects the income obtained by the Group attributable to the parent.

– A measure of segment profit is used known as ***Adjusted Income***, which corresponds to net income from continuing operations at replacement cost ("*Current Cost of Supply*" or CCS), net of taxes and without including certain income and expenses ("*Special items*") or income attributable to non-controlling interests ("*Non-controlling interests*"), which are presented separately. The financial result and the intersegment consolidation adjustments are assigned to "*Income*" under *Corporate and other*.

  Specifically, the current cost of supply (CCS) considers the cost of volumes sold to correspond to the procurement and production costs for the period itself. This is the criterion commonly used in the sector to present the results of businesses in the Industrial or Customer segments that must work with significant inventories subject to constant price fluctuations, thus facilitating comparability with other companies and the monitoring of businesses, regardless of the impact of price variations on their inventories. However, this measure of income is not accepted in European accounting standards and, therefore, is not applied by Repsol, which uses the weighted average cost method to determine its income in accordance with European accounting standards. The difference between the income at CCS and the income at weighted average cost is reflected in the ***Inventory effect***, which is presented separately, net of tax and not taking into account the income attributable to non-controlling interests.

– ***Special items*** includes 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 costs, asset impairment losses (provisions/reversals), 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 tax and not taking into account the income attributable to non-controlling interests.

– Since 2023, following the entry of minority shareholders in our E&P and LCG businesses, the share of minority shareholders in consolidated net income has been isolated from Adjusted Results, Inventory Effect and Special Items, so that these fully reflect the income managed by the Company. The share of minority shareholders in the Group's income is reflected in a separate line item ***Non-controlling interests***, net of taxes, immediately before ***Net income***.

The Group therefore considers that the nature of its businesses and the way in which results are analyzed for decision-making purposes is adequately reflected, and facilitates comparison with other companies in the sector. In any case, Repsol provides reconciliations between the measures included in the business segment reporting model, which constitute alternative performance measures in accordance with the Guidelines on Alternative Performance Measures of October 2015 published by the European Securities Market Association (ESMA) and the measures used in these financial statements prepared in accordance with EU-IFRS. This information can be found in Appendix II Alternative Performance Measures of the consolidated Management Report or at www.repsol.com).

[6] Except in the case of the renewable electricity generation businesses (LCG segment) where, due to the way in which the results of these projects are analyzed and management decisions are made, the economic aggregates of the Chilean joint venture are accounted for using the equity method.

3.3 Financial information by business segment

The financial information by business segment is included in this note and Appendix I Segment reporting and reconciliation with EU-IFRS financial statements. For more information, see the 2023 consolidated Management Report that is published together with these consolidated Financial Statements.

Business segment results	€ Million	
	2023	**2022**
Upstream	1,779	3,029
Industrial	2,734	3,241
Customer	614	421
LCG	75	144
Corporate and other	(191)	(61)
ADJUSTED INCOME	**5,011**	**6,774**
Inventory effect	(453)	78
Special items	(1,274)	(2,507)
Non-controlling interests	(116)	(94)
NET INCOME	**3,168**	**4,251**

Other aggregates of the business segments	**Operating income**		**Revenue from ordinary activities**		**Cash flow from operations**		**Operating investments** [(1)]		**Capital employed**	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Upstream	2,936	5,705	5,199	7,486	3,179	5,706	2,627	2,127	12,716	12,282
Industrial	3,626	4,315	28,674	37,332	3,611	2,639	1,161	1,025	10,929	11,108
Customer	819	564	27,164	32,696	913	614	423	258	2,788	2,762
LCG	134	245	516	1,210	95	155	1,876	667	3,897	1,905
Corporate and other	(265)	(181)	—	—	(734)	(192)	80	105	836	172
TOTAL	**7,250**	**10,648**	**61,553**	**78,724**	**7,064**	**8,923**	**6,167**	**4,182**	**31,166**	**28,229**

(1) Includes investments accrued during the period.

3.4 Main developments in the year[7]

In this section we briefly mention some of the main developments during the year in order to contextualize the information in these Financial Statements. Together with these Financial Statements, Repsol publishes its 2023 consolidated Management Report, which includes an explanation of the performance of its businesses and the following main developments of the period.

In 2023 the global economy has shown to be resilient but has been marked by high uncertainty (for more information, see section 3 of the 2023 consolidated Management Report). The complex, volatile environment has unevenly affected the activities and results of the Company's businesses. The decline in crude oil prices and the sharp drop in gas prices have reduced the revenue of the Upstream segment; Refining margins have cooled significantly throughout the period, although remained strong; and the margins of the Mobility businesses in Spain have recovered since the discounts established by the government in 2022 to cope with the rise in fuel prices are no longer being applied (see section 4 of the 2023 consolidated Management Report).

In 2023 the Company made progress towards meeting its strategic objectives, carrying out actions such as the following:

- In the Upstream segment, a 25% interest in the business segment was sold to the EIG group for $3,350 million (see Notes 6, 8 and 24). In addition, the Company pulled out of the E&P business in Canada (see Note 19.7) and Repsol Oil & Gas Canada Inc. (ROGCI) was liquidated (see Note 11).
- In the Industrial segment, the transformation of large industrial complexes continued, focusing on the future sustainability of the industry: construction of the Advanced Biofuels Plant (C43) located in Cartagena, the first plant in Spain to produce renewable fuels from waste; start of the expansion of the Sines Industrial Complex (Portugal); start-up of the Company's first electrolyzer at the Petronor refinery; the new maritime terminal at the Outer Port of A Coruña, which facilitates the logistics of new products and raw materials and contributes to the initiative to create a renewable energy hub in A Coruña.

[7] For a detailed description of the main events, see section 1. 2023 Overview of the 2023 consolidated Management Report .

- In the Customer segment, the "Connected energy plans" program was launched to raise the Company's multi-energy profile, which benefits customers who contract various energy products with Repsol through the Waylet digital platform. Digital customers have increased to 7.9 million as of December 31. Electricity and gas customers also increased, exceeding 2.1 million.
- In the LCG business, projects have been started up in Spain, the US and Chile, reaching an installed capacity of renewable electricity generation in operation of 2,781 GW. With regard to inorganic growth, the acquisition of 100% of Asterion Energies, which manages a renewable asset portfolio of 7,700 MW located in Spain (mostly), Italy and France (see Note 11) and the signing of the agreement (expected to be completed in the first quarter of 2024) to acquire 100% of ConnectGen for $782 million, which manages a portfolio of 20 GW located in the US, are noteworthy of mention. Furthermore, in accordance with the policy of asset rotation, a 49% interest in an asset portfolio of 618 MW in Spain was sold to Pontegadea for €363 million (see Note 6.5).
- Agreements were reached to settle two important lawsuits (see Note 15.2). In the US, the lawsuit related to Maxus, a company acquired by YPF in 1995, has been settled. In the United Kingdom, Repsol and Sinopec, shareholders of the Repsol Sinopec Resources UK (RSRUK, currently RRUK) joint venture, ended the arbitration proceedings initiated by Sinopec in relation to the process of acquiring the 49% interest in RRUK from the Talisman Group in 2012, which culminated in the acquisition by Repsol of Sinopec's interest in RRUK (see Note 13).
- The share price has experienced high volatility, with the average share price in 2023 up 9% on 2022. Shareholder remuneration in 2023 consisted of a dividend payment of €0.70 gross per share (up 11% on that paid in 2022) for a total amount of €901 million.

After meeting most of the objectives set for the 2021-2025 Strategic Plan early, a strategic reflection process has been carried out, culminating in the publication of a strategic update for the 2024-2027 period. For more information, see section 2.5 of the 2023 consolidated Management Report.

(4) Criteria for the preparation of these Financial Statements

4.1 General principles

The consolidated Financial Statements 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, 2023, and other provisions of the applicable regulatory framework.

They have been prepared based on the accounting records of Repsol, S.A. and its subsidiaries (including Repsol's 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.

They are presented in millions of euros, which is also the functional currency of the parent, except when another unit is mentioned.

4.2 Comparative information

The new developments in the accounting standards applied by the Group as of January 1, 2023[8] did not have a significant impact given their nature and scope, beyond certain disclosure requirements in additional notes.

4.3 New standards issued for mandatory application in future years

The standards issued by the IASB that will be mandatory in future reporting periods are listed below[9]:

Pending adoption by the European Union	Date of first application
Amendments to IAS 7 and IFRS 7 - *Supplier finance arrangement* (1)	January 1, 2024
Amendments to IAS 21 - *Lack of Exchangeability* (2)	January 1, 2025

(1) Amendments issued on May 25, 2023.
(2) Amendments issued on August 15, 2023.

8 The following standards have been applied as of January 1, 2023 with no significant impact on the Group's financial statements, beyond certain related disclosures:(i) IFRS 17 Insurance Contracts, including Amendments to IFRS 17 issued on December 9, 2021; (ii) Amendments to IAS 12 Deferred Tax related to Assets and Liabilities arising from a Single Transaction; (iii) Amendments to IAS 1 Disclosure of Accounting Policies; (iv) Amendments to IAS 8 Definition of Accounting Estimates; (v) Amendments to IAS 12 International Tax Reform - Pillar Two Model Rules.

9 In addition to the amendments contained in this Note, the IASB issued Amendments to IFRS 10 and IAS 28 *Sale or contribution of assets between an investor and its associate or joint venture* without a mandatory date of first-time application since its Equity Method project has yet to be completed and a decision on these amendments has yet to be taken.

Adopted by the European Union	Date of first application
Amendments to IFRS 16 - *Lease Liability in a Sale and Leaseback Transaction* (1)	January 1, 2024
Amendments to IAS 1 - *Classification of Liabilities as Current and Non-Current* (2)	January 1, 2024
Amendments to IAS 1 - Non-Current *Liabilities with Covenants* (3)	January 1, 2024

(1) Amendments issued on September 22, 2022.
(2) Includes the deferral of the first application of the Amendments to IAS 1 issued on July 15, 2020.
(3) Amendments issued on October 31, 2022.

The Group is analyzing the potential impacts that these regulatory changes could have on its consolidated financial statements, although to date none of significance are expected, beyond the new disclosure requirements introduced by some of these changes.

4.4 Accounting policies

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 that, due to their more cross-cutting or general nature, are detailed below:

4.4.1 Consolidation principles

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

- Subsidiaries: those over which Repsol exercises control and are consolidated under the full consolidation method.
- Joint arrangements: those in which strategic operational and financial decisions require the unanimous consent of the parties sharing control (joint control) and are classified as: a) joint operations arranged through a *Joint Operating Agreement* (JOA) or similar vehicle that does not limit the risks and rewards of the venturer and that are included in the financial statements of the parties based on their share of the assets, liabilities, revenue and expenses arising from the agreement; or b) *Joint Ventures* (JVs) that represent an interest in the net assets of the agreement and that are accounted for using the equity method.
- 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.

4.4.2 Functional currency

The items included in these consolidated Financial Statements relating to the Group companies are measured using their functional currency, which is the currency of the main economic environment in which they operate; when this differs from the presentation currency of the financial statements, 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)*".

4.4.3 Business combinations

Business combinations in which the Group obtains control over one or several businesses through the merger or spin-off of several companies or by acquiring all assets and liabilities of all or part of a company that constitutes one or more businesses are accounted for using the acquisition method in accordance with that set out in IFRS 3 "Business Combinations". The acquisition method involves, except for the recognition and measurement exceptions established in IFRS 3, recognizing at the acquisition date the identifiable assets acquired and liabilities assumed at their fair value at that date, provided this value can be measured reliably. Within the liabilities assumed in the business combination, any identified contingent liability is also recognized at the acquisition date, even if it has not been recognized in accordance with the general accounting policies for recognizing provisions because the outflow of economic benefits is not probable, provided that it corresponds to a present obligation arising from past events and its fair value can be measured reliably. Acquisition costs are recognized as expenses in the income statement.

The difference between the cost of the business combination and the value of the identifiable assets acquired less that of the liabilities assumed is recognized as goodwill, if positive, or as income in the income statement, if negative.

The measurement period of the business combination begins on the acquisition date and ends when Repsol concludes that no further information can be obtained on the facts and circumstances that existed at the acquisition date. Under no circumstances will this period exceed one year from the acquisition date. During the measurement period, the business combination is considered to be provisional.

In the case of acquisitions of renewable projects, the classification as business combinations or asset acquisitions depends to a large extent on the stage of the acquired asset at the acquisition date. In general, those that have not reached, at least, the "ready to build" milestone, which ends the pre-development phase and is prior to the phase of development or construction, are not classified as a business. Notwithstanding the above, each transaction requires a specific analysis for its classification as a business combination, or as an asset acquisition.

4.4.4 Hydrocarbon exploration and production activities

Repsol recognizes hydrocarbon exploration and production activities using mainly *successful-efforts* accounting. Under this method, the various costs incurred are treated as follows for accounting purposes:

- The costs of acquiring new interests (including bonds, legal costs, etc.) 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 (see next section), their recognition depends on the following:

  - 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.

  - 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 (along with the associated exploration and G&G licenses - *"Investments in exploration")* 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 extracting, processing or storing hydrocarbon 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:

  - Investments made for the acquisition, discovery, development and production of proven and probable reserves (including exploration costs reclassified to investments in areas with reserves), are amortized based on the relationship between production for the year and the reserves that are expect to be produced without needing to incur additional investment.

  - 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 expected to be obtained of proven reserves most likely to be developed (see next section).

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

4.5 Accounting estimates and judgments

The preparation of financial statements in accordance with applicable accounting principles makes it necessary to make judgments 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 results could differ significantly depending on the estimates made.

The accounting policies and areas that require the highest degree of judgment and estimates in the preparation of these financial statements are: (i) crude oil and natural gas reserves and resources (see Note 4.5.1); (ii) the recoverable amount of the assets (see Note 4.5 and Note 20); (iii) business combinations (see Notes 4.4.3, 11 and 13); (iv) provisions for litigation, decommissioning and other contingencies, such as those caused by environmental damage (see Note 15); (v) income tax, tax credits and contingencies, and deferred tax assets (see Note 22); (vi) market value of derivative financial instruments (see Notes 7, 8 and 9); (vii) expected loss on financial instruments (see Notes 10.3 and 20.3); and (viii) assessment of investments in Venezuela (see Notes 13 and 20.3). In any case, it should be noted that several of the above estimates must include the uncertainties related to the energy transition and decarbonization policy scenarios in which our businesses are carrying out their activities.

The main accounting estimates and judgments made by Repsol's management and directors in preparing the consolidated financial statements are described below. Lastly, those aspects of the estimates that are specifically related to the expected effects of climate change and the energy transition are described.

4.5.1 Calculating the recoverable amount of the assets

Methodology

The methodology used by the Group to estimate the recoverable amount of the 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)[10], whereby they use sector forecasts, prior results and the outlook for the performance of the business and development of the market. The estimates take into consideration the scenarios of the energy transition and decarbonization of the economy, which are consistent with the objectives of the Paris Agreement and with the decarbonization commitments assumed by Repsol, as well as with the objetives of the update of the strategic plan presented en February 2024 (2024-27 Strategic Plan).

[10] 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. The recoverability of the Group's investments in associates or joint ventures is assessed by comparing their recoverable amount with their carrying amount (see Notes 13 and 20)). 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 CGUs.

Main macroeconomic assumptions

The macroeconomic variables used to measure the assets are consistent with those used in the preparation of the budgets and business plans of the assets:

– 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, which are compared with the scenarios given by international agencies and other market players. The paths are developed on the basis of available macroeconomic, financial and market information and the forecasts provided by analysts.

  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 of crude oil and gas fields, the current CAPEX, the financial sustainability of companies in the sector to certain price environments, and the dynamics in OPEC countries in terms of tax sustainability.

  • 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), the International Energy Agency (IEA) and the US Energy Information Administration (EIA) are taken into account.

  • The source that provides a sufficiently detailed analysis of long-term forecasts is the IEA, a benchmark agency that also carries out detailed studies of supply, demand and price forecasts under different scenarios.

  With all these elements, econometric models of prices are made, which are compared with external forecasts, both public and private[11].

– The most relevant CO_2 price path for the Group in the impairment test corresponds to emission allowance prices in the current EU ETS mechanism. The path used for the impairment test (see Note 20) is consistent with the internal carbon price for making investment decisions on new projects. For other countries with emission allowances or CO_2 taxes, specific assumptions are used.

– Forecasts for electricity prices in Spain are calculated using the Company's own model that weights the influence of the different factors on the wholesale market. Although the model is used mainly for natural gas prices and CO_2 emission allowances, it also reflects the impact of new future developments on renewable generation capacity, as well as economic forecasts that may influence changes in demand. The conclusions obtained are compared with external forecasts that the Company obtains from specialized agencies.

– Regarding the expected demand scenarios for land transport used in the estimated cash flows of Repsol's industrial and commercial businesses, a scenario was used that is consistent with the "Fit for 55" package of measures announced by the European Commission, and the new Repower EU roadmap for decarbonization, which accelerates the energy transition in Europe and envisages significant decreases in the demand for fuel, mainly as of 2030.

To complete the information, given the inherent uncertainty of the long-term assumptions used, sensitivities (positive and negative) to reasonable variations in the main assumptions used in the impairment test (crude oil and gas prices, discount rates, etc.) are provided in Note 20.2.

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

[11] The comparison is made to position the internal paths with respect to the averages and standard deviations calculated based on market consensus, which includes, among others, the "Stated Policies" and "Announced Pledges" scenarios of the World Energy Outlook 2023 published by the IEA (for more information https://www.iea.org).

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 treasury bond and for cash flows in euros it is the German 10-year sovereign bond, adjusted when rates are negative;
- 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 country;
- A different credit risk premium is used depending on the currency (EUR and USD); and
- Business risk premiums *(Betas)* are specifically calculated on the basis of 5-year historical series from comparable companies, for each of the businesses.

Estimated cash flows

To estimate the cash flows[12] of the assets, the expected performance of the key variables is calculated in accordance with the forecasts used in the annual budget and in the business plans, which are prepared using scenarios that consider the energy transition and decarbonization of the economy, and that are consistent with the decarbonization targets assumed by Repsol (see Note 4.5.2).

However, cash flows only take account of the current state of assets when the estimate is carried out. In particular, future investments for improvements in asset performance or for technological changes are not taken into account, not even those that can be anticipated today and that may represent a valid asset transformation strategy in the foreseeable context of the energy transition.

Hydrocarbon exploration and production assets

Valuations of the production assets of the Upstream segment 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 and consistent with the climate and environmental regulations of each country. The maturity of the cash flows ranges between 2025 and 2072. Conventional assets in production do not go past the year 2050, while non-conventional assets, located in the US, have a longer productive life. Approximately 95% of the value of the cash flows of these assets will be recovered before 2040, which demonstrates the Group's low exposure to "*stranded*" assets.

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 the productive life of existing wells and the development plans in place for each productive field. 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-Society of Petroleum Engineers)". The price paths used in this estimation are the same as in the asset impairment test.

  The estimate of oil and gas reserves[13] and resources is a key component of the Company's decision-making process[14]. The volume of oil and gas reserves and resources is used to calculate depreciation and amortization charges, and to assess the recoverability of the investments in assets and calculate decommissioning provisions in the Upstream segment.

[12] The CGUs include the rights of use associated with lease agreements (IFRS 16), with the subsequent exclusion of fixed lease payments when calculating the value in use.

[13] Reserves are classified as (i) Proven: the quantities of crude oil, natural gas and natural gas liquids that, with the information available to date, it is estimated can be recovered with reasonable certainty (there should be at least a 90% probability that the recovered quantities will equal or exceed the 1 P estimate), (ii) Probable: additional reserves, which, added to the proven reserves, make up the 2P scenario (there should be at least a 50% probability that the quantities recovered will equal or exceed the 2P estimate; this scenario reflects the best estimate of reserves), and (iii) Contingent resources: 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. Proven or probable reserves can be developed (expected to be recovered from existing wells and facilities) or undeveloped (expected to be recovered through future investments.)

[14] Independent engineering firms periodically audit registered volumes (at least 95% of the reserves are audited externally in a three-year cycle.)

Changes in volumes of reserves and resources could have a significant impact on the Group's results. For information on the Group's reserves, see the document *"Information on the oil and gas exploration and production activities."*

- 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 plans.
- Taxes. The taxes applicable to each contract are considered in accordance with current legislation when the cash flows are calculated.

Assets of the Industrial segment

Cash flows are estimated on the basis of the outlook for their key variables (demand for oil products, unit contribution margins, investments, taxes and levies, and fixed costs). The main particular features of the most significant businesses are described as follows:

- With regard to the Refining business in Spain, projections were made up to 2040, foreseeing a drop in activity in fossil fuel distillation of around 80% (demand for oil products is expected to fall significantly both in Spain and in Europe). In this scenario, less investments will be made in the refining sector, which will partly offset the effect of the drop in demand. It should be noted that this reduction in investments in traditional crude oil refining assets does not include new investments in the transformation of industrial complexes in the context of the energy transition and in accordance with the Repsol Group's strategic vision (for example, investments in biofuels and synthetic fuels, circularity, hydrogen, etc.).

- In the Chemicals business, five-year projections are made, with the cash flow corresponding to the fifth year being extrapolated to subsequent years without applying a growth rate. Chemical products play a key role in facilitating the energy transition and decarbonization, as they are present throughout the value chain of almost all industries, and therefore growth in demand for chemical products is expected to remain robust in an energy transition scenario. The use of chemical products and solutions can help address several of the challenges related to this transition, and many low-carbon technologies rely on innovations in chemistry to become more efficient, affordable and scalable (e.g. materials for photovoltaic panels, vehicle lightweighting, 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:
  - Gas and LNG prices. The international benchmark prices used are: HH, Algonquin and TTF (Title Transfer Facility), adjusted in accordance with references in the corresponding market if the prices do not reflect market circumstances.
  - 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 expected activity, all in accordance with the annual budget and business plan. Margins factor in historical data, the price forecasts detailed in the previous point and the outlook for margins going forward.

Assets of the Customer segment

For the fuel retail businesses, as a general rule, ten-year projections are made (up to 2033). Reductions in demand for fossil fuels forecast within the framework of European and Spanish decarbonization policies are taken into account, whereas perpetual income is not taken into account nor a period greater than ten years because, as this is sufficient to demonstrate the recoverability of the carrying amount of current assets, it is unnecessary to assess long-term scenarios subject to high uncertainty under the European regulatory framework.

Assets of the Low-Carbon Generation segment

Forecasts for the electricity generation assets were made in accordance with the expected life of the plants or the limit of the concession term (hydraulic power plants), in a range between 9 to 43 years depending on the technology (from lowest to highest: combined cycles, wind and photovoltaic and hydraulic power plants), applying where applicable the electricity sale prices included in the power purchase agreements (PPAs)[15] for energy commitments with third parties and the estimated market prices for the rest.

[15] Power Purchase Agreements (PPAs): Long-term purchase and sale agreements for renewable energy at a specific price that are recognized as: (i) a supply contract; or (ii) as a cash flow hedging financial instrument (see Note 9), as appropriate (see Note 25).

Investments in 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 on an individual basis, taking into consideration the same assumptions described above.

4.5.2 Estimates and accounting judgments related to the risks and implications of climate change, decarbonization and the energy transition

In December 2019, Repsol made public its commitment to be part of the solution in the fight against climate change by focusing its strategy toward being a company with net zero greenhouse gas emissions by 2050, in line with the objectives of the Paris Agreement to limit global warming, and with the United Nations Sustainable Development Goals (SDGs). This objective is maintained as the basis for the new strategic update (2024-2027 Strategic Plan).

Repsol considers that this decarbonization target is the strategy for adapting to foreseeable changes in the economic environment and, in particular, in the energy sector, that best responds to the interests of its shareholders, customers and employees, specifically, that which guarantees the Company's long-term sustainability and maximizes the profitability of its businesses and the value of its investments in the context of the energy transition.

The metric used to monitor the intermediate decarbonization targets set to reach emission neutrality by 2050 is the reduction of the Carbon Intensity Indicator (CII)[16] measured in gCO2e/MJ. The intermediate CII reduction objectives, with respect to the base year 2016, are: 15% by 2025, 28% by 2030 and 55% by 2040. The CII for 2023 (69.5 gCO2e/ MJ) has decreased by -9.6% compared to 2016.

The relevant investments to meet the decarbonization objective are known as "*Low-carbon investments*"[17], which reached close to 40% of the total in 2023.

The main risks associated with climate change are classified as "transitional" risks, associated with the energy transition, and "physical" risks[18], associated with natural events that could be exacerbated by the advance of climate change. In the case of Repsol, the former have a more significant impact than the latter, given the nature and location of its activities.

For more information on the strategy, the expected future capital allocation and on the risks and opportunities of decarbonization, see section 7.2.1 Climate Change of the 2023 consolidated Management Report, prepared following the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)[19], which Repsol has adopted voluntarily.

The main accounting estimates and judgments made in the preparation of the consolidated financial statements that are most closely related to the effects of climate change and the energy transition are described below.

Recoverable amount of the assets.

In accordance with IFRS standards, Repsol's financial statements are based on reasonable and sound assumptions that represent the Directors' best current estimate of the range of economic conditions that may exist in the foreseeable future in relation to climate change and energy transition (see Note 4.5.1).

Both the price paths and the demand, etc. used for the valuation of the assets in the impairment test take account of the commitments to decarbonize the economy and, therefore, assume restrictions on the use of fossil fuels and the development of new alternative technologies to drive the energy transition, which will lead to a reduction in the demand for hydrocarbon

[16] The CII numerator takes into account the emissions generated by the Company's activity (scope 1 and 2, i.e., direct and indirect emissions from exploration and production, refining and chemical operations and from electricity generation) and emissions associated with the use of fuel products resulting from our primary energy production — oil and natural gas — (scope 3 including category 11, category 12 — for the incineration of chemical products —, and category 1 — for the purchase of hydrogen from third parties —). The CII denominator includes energy that Repsol makes available to society in the form of end products resulting from the production of primary energy from oil and gas and from low-carbon energy sources. For more information, see section 7.2.1.4 Metrics and targets of the 2023 consolidated Management Report and www.repsol.com.

[17] They include those aimed at energy efficiency, generation and sale of renewable electricity, production and sale of biofuels, renewable hydrogen, synthetic fuels, chemical products (long-life polymers), circular economy projects, carbon capture and storage (CCS), distributed generation, renewable electric mobility, and investments in R&D and corporate venturing in low-carbon technologies.

[18] Transitional risks may be regulatory and legal, technological, market and reputational. With regard to regulations related to climate change and the decarbonization of the economy, see Appendix III. Physical risks refer to floods or droughts, forest fires, tropical storms, etc. For more information on transitional and physical risks, see section 7.2.1.3 of the 2023 consolidated Management Report.

[19] G-20 finance ministers and central bank governors asked the Financial Stability Board (FSB) to review how the financial sector could deal with climate-related issues. The Financial Stability Board established a working group on disclosure of climate-related financial information (Task Force) that has prepared recommendations with the following central elements: governance, strategy, risk management, metrics and objectives. More information at https://www.fsb-tcfd.org.

products in the medium and long term. Specifically, the assumptions used by Repsol consider energy transition scenarios, driven by decarbonization policies that are in line with the objectives of reducing greenhouse gas emissions set out in the Paris Agreement. As mentioned above, the Company's strategy in these scenarios is oriented toward the objective of "net zero emissions" by 2050 (see section 7.2.1 of the Group's consolidated Management Report).

It is foreseeable that the energy transition will bring with it volatility and uncertainty regarding the evolution of prices and demand for raw materials over the coming decades. Some price paths prepared by third parties foresee a lower structural price for raw materials during the transition period, while other paths foresee higher structural prices as a result of changes in both supply and demand. Consequently, section 7.2.1.2 of the 2023 consolidated Management Report includes an analysis assessing the Company's resilience and its ability to achieve its net zero emissions goals by 2050 in different long-term decarbonization scenarios (2030-2050). This responds to the TCFD recommendations: "*Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.*"

In response to the demands of some information users, Note 20.2 reports the additional impacts that would result from using the NZE scenario of the International Energy Agency published in its World Energy Outlook 2023 report[20]in the impairment test. In this scenario, the additional impairment losses would not exceed 9% of the carrying amount of the Group's total assets — without taking into account possible adaptations to operating plans that would mitigate the negative impact of such a scenario —.

The Group's assets with the greatest exposure to climate change are:

- Exploration and production activities in which the Group has significantly reduced its exposure in recent years. The capital employed in this business segment decreased from €21,515 million in December 2018 to €12,716 million at December 31, 2023 (-41%). This reduction is explained by divestments in non-priority assets, by a gradual decrease in the investment effort in exploration, and by significant impairment losses recognized, in particular those of 2019 (approximately €6,000 million, mainly as a result of the changes in forecasts for crude oil, and gas prices in energy transition and decarbonization scenarios consistent with the objectives of the Paris Agreement). It should also be taken into account that most of the Group's hydrocarbon reserves are gas (64%), a necessary fuel to facilitate the energy transition. E&P assets are measured considering scenarios of reduced demand and prices, with cash flows assuming that the assets currently in production generate 95% of their cash flows no later than 2040.
- The Refining business in Spain could be affected by regulatory measures associated with decarbonization policies or by a faster drop in demand for fossil fuels, in particular after 2030. Assuming more accelerated energy transition scenarios in Europe, in 2022, the Refining business revised downward its medium- and long-term forecasts as a result of the new European measures to accelerate the energy transition, the approved tax measures and the negative impact (beyond the short term) of market dynamics driven by the war in Ukraine. As indicated above, a drop in fossil fuel distillation of 80% by 2040 has been forecast to measure current refining assets, which leads to a reduction in investments in traditional oil refining assets. In line with Repsol's strategy, the refining plants are being transformed into multi-energy plants that will produce low-carbon energy products, including renewable fuels and hydrogen, and raw materials for the chemical and lubricants business.
- Mobility businesses could also be affected by the reduction in the consumption of fossil fuels. In this regard, only cash flow projections for the next ten years have been considered for the businesses in Spain (the main assets of which are gas stations), without needing to recognize any impairment loss.

Useful lives of property, plant and equipment.

The energy transition and the rate at which it progresses may impact the remaining useful life of certain assets.

Assets assigned to the Upstream segment (see Notes 11 and 12) are generally amortized using a production unit methodology where amortization depends on the relationship between production (see Note 4.4.4) and the reserves that are expected to be produced without making additional investments. Expected production and reserve calculations take into account future demand and price impacts from decarbonization. It is estimated that 45% of the expected production will have been extracted by 2030 and 82% by 2040.

In relation to the depreciable assets on the Iberian Peninsula in the industrial complexes of the refining business (related to the production of fuel from oil and gas) and petrochemical business, it is estimated that more than 90% of the carrying amount of the current assets would be fully depreciated for accounting purposes in 2040. In 2022, the useful life of units of the refining plants in Spain most affected by the energy transition was reviewed and the date scheduled for starting their

[20] The IEA's NZE scenario is not intended to simulate demand for hydrocarbons based on market factors. Therefore, the price scenario that it proposes does not include, for asset valuation purposes, a realistic evolution of prices or demand. It describes a pre-specified future, presenting a picture of the world achievable (or avoidable) only through certain actions and, therefore, the scenario becomes an argument for taking those actions.

decommissioning was brought forward. This change in useful lives has not had a significant impact due to amortization on the Group's income statement.

Regarding the assets of the Mobility business on the Iberian Peninsula (see Notes 11 and 12), it is estimated that 90% of the carrying amount of the current assets would be fully depreciated in 2040.

Decommissioning provisions.

The assumptions initially used in the valuation of decommissioning provisions (both in the initial recognition of the present value of estimated future costs and the recognition of subsequent adjustments to reflect the passage of time) are subject to changes due to technological advances, regulatory changes, economic, political and environmental security factors, variations in the calendar or in the conditions of operations, etc. The energy transition may bring forward decommissioning of the current assets of the Upstream and Industrial segments. For the purposes of calculating the corresponding provisions, it is considered that most of these assets will begin to be dismantled in the next two decades. The risk from the calendar of decommissioning and restoration activities for the Upstream and Industrial areas is limited thanks to expected production plans.

The calendar of decommissioning and restoration activities is also reflected in the discount rate, in line with the average remaining useful life of the assets concerned. For more information, see Note 15.1.

At December 31, 2023, the provisions for asset decommissioning costs amounted to €3,866 million, mainly for assets in the United Kingdom, Norway and Spain. It is estimated that approximately 25% of the costs related to decommissioning will have been made over the next 5 years and approximately 92% by 2050.

CO_2 emission allowances.

In 2003, the European Union Emissions Trading Scheme (EU ETS) was established through Directive 2003/87/EC, which set out its basic rules. The EU ETS has been implemented through several phases. Phase IV is currently being implemented, which, following the changes agreed by the Commission, Parliament and Council in connection with the implementation of the "Fit for 55" package, has gone from a 43% reduction to 62% by 2030 compared to 2005 for the sectors covered by this scheme. This translates into a reduction in the overall number of emission allowances at an annual rate of 2.2% in the 2021-23 period, 4.3% in 2024-27 and 4.4% in 2028-30.

In 2023, Group companies were assigned free CO_2 allowances equivalent to 7.6 million tons of CO_2. The net expense for CO_2 emissions in 2023 was €381 million (mainly due to CO_2 emissions from Industrial complexes in Spain). For further detailed information on the recognition and valuation of CO_2 allowances, see Notes 15.1 and 16.

The price path of the CO_2 emission allowances to calculate the recoverable amount of the assets (see Note 20) was revised upward in 2022 with a significant increase over the prices used in 2021, mainly as a result of the more ambitious decarbonization targets set by the European Union (up to 55% — Fit for 55 —, see Appendix III). In 2023 it was revised upward compared to 2022, at around $15 per ton, due to market developments.

Deferred taxes

The recoverability of deferred tax assets (€3,899 million, see Note 22) is measured using the same scenarios and assumptions used to calculate the recoverable amount of the assets (see Note 4.5.1) and, therefore, they include the decarbonization and energy transition processes. There are expected to be sufficient cash flows to recover the deferred tax assets recognized at December 31, 2023 (see Note 22).

Onerous contracts

The closing or early termination of certain assets or activities may convert some supply contracts into onerous contracts. At December 31, 2023, the onerous contract provisions are not significant for the Group (see Note 15.1).

Lawsuits

In the normal course of the Group's business, entities are subject to legal and regulatory proceedings arising from current and past laws, including matters related to environmental issues. At December 31, 2023, Repsol had not recognized any provisions in the Group's financial statements for lawsuits related to climate change (see Note 15).

CAPITAL STRUCTURE AND FINANCIAL RESOURCES

(5) Financial structure

Repsol has adopted a policy of financial prudence with the aim of maintaining its credit rating (for more information, see section 2.5 of the 2023 consolidated 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[21] and Capital employed[22]. Both metrics are calculated, for these purposes, in accordance with the Group's reporting model described in Note 3.2 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 Appendix I and Appendix II of the consolidated Management Report (www.repsol.com). The calculations of these ratios at December 31, 2023 and 2022, are as follows:

Financial structure	€ Million	
	2023	**2022**
Equity	29,070	25,973
Net financial debt (1)	2,096	2,256
Capital employed (1)	31,166	28,229
Leverage ratio (%)	**6.7**	**8.0**

(1) Alternative Performance Measures.

For more information, see section 4.3 Financial position of the 2023 consolidated Management Report.

(6) Equity

Equity	€ Million	
	2023	**2022**
Shareholders' equity:	**26,150**	**24,611**
Share capital	1,217	1,327
Share premium and reserves:	19,485	16,750
Share premium	4,038	4,038
Legal reserve (1)	314	314
Retained earnings and other reserves (2)	15,163	12,431
Dividends and remuneration on account	(30)	(33)
Treasury shares and own equity investments	(8)	(3)
Net income for the period attributable to the parent	3,168	4,251
Other equity instruments	2,288	2,286
Other cumulative comprehensive income	**47**	**683**
Equity instruments with changes through other comprehensive income	(22)	(15)
Hedging transactions	40	(144)
Translation differences	29	842
Non-controlling interests	**2,873**	**679**
TOTAL EQUITY	**29,070**	**25,973**

(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 (i) the transfer from income for the year attributable to the parent for 2022. (ii) a reserve for retired capital amounting to €590 million (€480 million in 2022), which is equivalent to the nominal amount of the shares retired in the capital reductions (see Note 6.3) and (iii) income from sales transactions without loss of control (see Note 6.5).

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

6.1 Share capital

The share capital at December 31, 2023 and 2022 was represented by 1,217,396,053[23] and 1,327,396,053 shares of 1 euro par value each, respectively, fully subscribed and paid up, represented by book entries and admitted to official listing on the continuous market of the Spanish stock exchanges.

According to the latest information available, the significant shareholders of the Repsol company are:

	% of voting rights attributed to shares		% of voting rights through financial instruments	% of total voting rights
Significant shareholders	**Direct**	**Indirect**		
BlackRock, Inc. (1)	—	5.306	0.169	5.475
Norges Bank	5.417	—	—	5.417
Millennium Group Management LLC.	—	—	2.003	2.003

(1) BlackRock, Inc. holds its interest through a number of controlled entities.

At December 31, 2023 Repsol, S.A.'s shares were listed on the following markets:

Number of shares listed	% of share capital listed	Stock exchanges (1)	Closing	Quarter average	Currency
1,217,396,053	100%	Spanish stock exchanges (Madrid, Barcelona, Bilbao, Valencia)	13.450	14.056	Euros
		OTCQX	14.850	15.110	Dollars

Note: For more information regarding Repsol's shares, see section 4.4 of the 2023 consolidated Management Report.
(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.

For more information on the share price, see section 4.4 of the 2023 consolidated Management Report.

6.2 Treasury shares and own equity investments

The main transactions undertaken by the Repsol Group involving treasury shares[24] were as follows:

Treasury shares and own equity investments	2023			2022		
€ Million (amount)	**No. of shares**	**Amount**	**% capital**	**No. of shares**	**Amount**	**% capital**
Opening balance	**225,565**	**3**	**0.02 %**	**64,110,571**	**641**	**4.20 %**
Market purchases (1)	146,655,088	2,107	12.05 %	148,084,074	1,990	11.16 %
Market sales (1)	(36,301,956)	(541)	2.98 %	(11,969,080)	(161)	0.90 %
Capital reduction	(110,000,000)	(1,561)	9.04 %	(200,000,000)	(2,467)	15.07 %
Closing balance	**578,697**	**8**	**0.05 %**	**225,565**	**3**	**0.02 %**

(1) In 2023 and 2022 "Market purchases" included purchases made under the Company's Treasury Share Repurchase Plan for redemption (a total of 85 million shares in 2023 and 106 million shares in 2022). In 2023 and 2022 "Market purchases" and "Market sales" also included the shares acquired and delivered within the framework of the Share Acquisition Plan and the Share Purchase Plans for the beneficiaries of the multi-year variable remuneration plans (1,301,956 shares were delivered in 2023 in accordance with that established in each of the plans described in Note 27.4), as well as 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.

At December 31, 2023, the Company also held derivatives on treasury shares (see Note 9).

[23] Share capital after carrying out the capital reduction in December through the redemption of 110 million treasury shares.
[24] The shareholders at the Annual General Meetings held on May 11, 2018 and May 6, 2022, authorized the Board of Directors to carry out the derivative acquisition of Repsol shares, directly or through subsidiaries, up to a maximum number of shares such that the sum of those 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. The current authorization (conferred by the shareholders at the Annual General Meeting of May 6, 2022) was granted for a period of 5 years from the date of the General Meeting and rendered void the unused portion of the authorization granted by the shareholders at the Annual General Meeting held on May 11, 2018.

6.3 Dividends and shareholder remuneration

The cash remuneration to the shareholders of Repsol, S.A. in 2023 was 0.70 euros per share:

- In January shareholders were paid a total of €0.35 gross per share corresponding to: (i) a dividend of €0.325 gross per share charged to voluntary reserves from retained earnings; and (ii) a dividend of €0.025 gross per share charged to profit for 2022. A total of €454 million[25] was paid out.
- In July a final cash dividend of €0.35 gross per share was paid out of 2022 profits, for a total amount of €447[25] million.

In addition, two capital reductions were carried out through the redemption of 110 million treasury shares.

- In June, the capital reduction approved at the 2023 Annual General Meeting, under item seven of the agenda, was carried out through the redemption of 50 million treasury shares with a par value of one euro each.
- In December, the capital reduction agreed by the Board of Directors on July 26, 2023, as approved at the 2023 Annual General Meeting, under item eight of the agenda, was carried out through the redemption of 60 million treasury shares with a par value of one euro each.

In 2022, shareholder remuneration in cash amounted to €0.63 per share.

Shareholder remuneration in 2024

On January 11, 2024, shareholders were paid a total of €0.40 gross per share corresponding to: (i) an amount of €0.375 gross per share charged to voluntary reserves from undistributed profits (approved at the 2023 Annual General Meeting, under item six of the agenda) and (ii) an amount of €0.025 gross per share, as an interim dividend out of 2023 profits (formally approved by the Board of Directors on December 20, 2023). The total paid amounted to EUR 487[25] million and was recognized at December 31, 2023 under "*Trade and other payables*" in the balance sheet.

At the date of authorization for issue of these Financial Statements, the Company's Board of Directors agreed to postpone at the next Annual General Meeting the payment in 2024 of supplementary remuneration charged to 2023 profits (in addition to that paid in January 2024) to shareholders of €0.50 gross per share which is scheduled to take place on July 8, 2024. The Board also agreed to implement a program to buy back treasury shares for a maximum of 35 million shares and to propose at the next Annual General Meeting a capital reduction through the redemption of 40 million treasury shares of one euro par value each.

6.4 Other equity instruments[26]

The Group has outstanding issues of subordinated bonds, which totaled a nominal amount of €2,250 million at December 31, 2023 and were recognized under "*Other equity instruments*" as it is considered that they do not qualify for recognition as financial liabilities, since their redemption and coupon payments are at the discretion of Repsol. 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 €-60 million (€-60 million in 2022).

These subordinated bond issues are detailed as follows:

- In 2021, Repsol International Finance, B.V. ("RIF") issued of a series of subordinated bonds secured by Repsol, S.A. for a total of €750 million, which were perpetual bonds or did not have a maturity date, redeemable at the request of the issuer after the sixth year, or in certain cases provided for in the terms and conditions. The bonds were placed with qualified investors and are listed on the Luxembourg Stock Exchange. Their main characteristics are as follows:

ISIN	XS2320533131
Amount	€750 million
Period for the first option to redeem	12/22/2026 - 03/22/2027
Interest (payable annually)	2.5% until March 22, 2027, and on that date a 5-year swap rate applies plus an additional spread according to the terms and conditions of the bonds.

[25] Remuneration paid for outstanding shares of Repsol, S.A. carrying dividend rights.

[26] Perpetual subordinated bonds do not contain early redemption clauses other than in the event of dissolution or liquidation.

– In 2020, RIF issued two series of subordinated bonds secured by Repsol, S.A. for a total of €1,500 million, which were perpetual bonds or did not have a maturity date, redeemable at the request of the issuer after the sixth and eighth year, or in certain cases provided for in the terms and conditions. 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
Period for the first option to redeem	03/11/2026-06/11/2026	09/11/2028-12/11/2028
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

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 www.repsol.com).

6.5 Non-controlling interests

In March 2023, the sale of a 25% interest in the Upstream business through Repsol E&P S.a.r.l. to the EIG Global Energy Partners group was carried out for a share price of $3,350 million. During the period €1,852 million was received (see Note 3.4) and the amounts receivable over the next three years were recognized (see Note 8 Financial assets). The impact of this transaction on the Group's equity amounted to €1,648 million under "*Non-controlling interests*" and €887 million under "*Retained earnings and other reserves*".

The equity attributed to non-controlling interests at December 31, 2023 and 2022 corresponds mainly to the companies or subgroups of companies detailed below:

Non-controlling interests *€ Million*	**Repsol E&P S.a.r.l. Subgroup**	**Repsol Renovables, S.L.U. Subgroup**	**Petronor, S.A.**	**Other**	**Total**
Balance at December 31,2021		**178**	**175**	**27**	**380**
Distributed dividends	—	(33)	(29)	(4)	(66)
Income for the year	—	13	76	5	94
(Investments)/Divestments(1)	—	294	—	5	299
Other changes	—	(29)	(2)	2	(28)
Balance at December 31,2022	**—**	**423**	**220**	**35**	**679**
Distributed dividends	(53)	(27)	(4)	(5)	(89)
Income for the year(2)	47	20	41	8	116
(Investments)/Divestments(1)	1,648	247	—	(4)	1,891
Other changes (3)	(59)	336	—	(1)	276
Balance at December 31,2023	**1,583**	**999**	**257**	**33**	**2,873**

Note: In Repsol E&P S.a.r.l. the minority shareholder is EIG, which had a 25% interest at December 31, 2023. In Repsol Renovables, S.A. the minority shareholders are Crédit Agricole Assurances and Energy Infrastructure Partners, which together hold a 25% interest (in addition, in accordance with the asset rotation policy, 49% of the interests in various asset portfolios in Spain were sold to Pontegadea and The Renewables Infrastructure Group ("TRIG")). In Petronor S.A. the minority shareholder is Kutxabank (through Kartera-1, S.L.), which has a 14.02% interest. For additional information on the companies in the Group, see Appendix IIA.

(1) In 2023, the non-controlling interests included (i) the carrying amount of 25% of the assets of the Upstream business after its sale to EIG, and (ii) the sale of 49% of a portfolio of renewable assets in Spain to Pontegadea for €363 million (which had an impact of €32 million on "*Retained earnings and other reserves*"). In 2022, Repsol Renovables, S.A. included the impact of non-controlling interests associated with (i) the sale of 25% of Repsol Renovables, S.A. (see Note 3.4), (ii) the sale of 49% of the interest in the Valdesolar photovoltaic park to The Renewables Infrastructure Group (TRIG), and (iii) the sale of 49% of the Kappa photovoltaic complex to Pontegadea.

(2) The income of the Repsol E&P S.a.r.l. subgroup is attributed to non-controlling interests as of the effective date of the sale. The Repsol Renovables, S.A. subgroup includes the non-controlling interests as a result of asset rotation transactions.

(3) In 2023, the Repsol Renovables, S.A. subgroup included the capital contributions made by the shareholder Janus Renewables, S.L. in the amount of €292 million.

The most relevant items related to companies with non-controlling interests that appear on the balance sheet and income statement and that are used as the basis for preparing these consolidated financial statements, i.e., prior to intercompany eliminations, are as follows:

Condensed balance sheet and income statement

(100%, before eliminations)	2023		
€ Million	**Repsol E&P S.a.r.l. Subgroup**	**Repsol Renovables, S.L.U. Subgroup**	**Petronor, S.A.**
Non-current assets	18,097	4,569	1,126
Current assets	2,095	943	1,721
Total assets	**20,192**	**5,522**	**2,847**
Non-controlling interests		**206**	**—**
Non-current liabilities	11,287	1,968	76
Current liabilities	2,549	960	958
Total liabilities	**13,836**	**3,430**	**1,034**
Operating Income	1,459	89	291
Income before tax	1,256	56	310
Income for the year	**405**	**16**	**292**

(7) Financial resources

7.1 Financial liabilities

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

Financial liabilities	€ Million	
	2023	**2022**
Non-current financial liabilities:		
Non-current financial liabilities	8,350	10,130
Non-current trade derivatives [(1)]	273	639
Current financial liabilities:		
Current financial liabilities	3,314	3,546
Current trade derivatives [(2)]	172	718
TOTAL	**12,109**	**15,033**

[(1)] Recognized under "*Other non-current liabilities*" on the balance sheet.
[(2)] Recognized under "*Trade and other payables*" on the balance sheet.

The breakdown of these financial liabilities at December 31, 2023 and 2022, is provided below:

Financial liabilities	December 31, 2023 and 2022									
	At fair value through profit or loss		At fair value through other comprehensive income		At amortized cost		**Total**		Fair value [(5)]	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	2023	2022
Bonds	—	—	—	—	4,807	5,924	**4,807**	**5,924**	4,525	5,362
Loans [(1)]	—	—	—	—	80	1,258	**80**	**1,258**	79	1,267
Lease liabilities	—	—	—	—	2,455	2,404	**2,455**	**2,404**	n/a	n/a
Bank borrowings	—	—	—	—	1,006	544	**1,006**	**544**	993	526
Derivatives	40	332	235	307	—	—	**275**	**639**	—	—
Non-current	**40**	**332**	**235**	**307**	**8,348**	**10,130**	**8,623**	**10,769**		
Bonds and ECP [(2)]	—	—	—	—	1,142	1,892	**1,142**	**1,892**	1,120	1,885
Loans [(1)]	—	—	—	—	163	225	**163**	**225**	163	225
Lease liabilities	—	—	—	—	516	519	**516**	**519**	n/a	n/a
Bank borrowings	—	—	—	—	393	593	**393**	**593**	392	593
Derivatives	276	872	57	163	—	—	**333**	**1,035**	—	—
Other financial liabilities [(3)]	—	—	—	—	939	—	**939**	**—**	—	—
Current	**276**	**872**	**57**	**163**	**3,153**	**3,229**	**3,486**	**4,264**		
TOTAL [(4)]	**316**	**1,204**	**292**	**470**	**11,501**	**13,359**	**12,109**	**15,033**		

NOTE: For the fair value hierarchy of financial liabilities measured at fair value, see Note 7.3.
[(1)] Includes loans granted by Group companies that are not eliminated in the consolidation process. In 2023, it includes the derecognition of the loan granted by RRUK in previous periods (see note 3 below).
[(2)] Euro Commercial Paper (ECP).

(3) Mainly includes the financial liability recognized in favor of Sinopec for the agreement to resolve the existing arbitration proceedings (see Note 15.2) and through which Repsol acquired from Sinopec its 49% shareholding in RRUK and therefore gained control of this company (see Note 13).
(4) In relation to liquidity risk, the distribution of financing by maturity at December 31, 2023 and 2022 is disclosed in Note 10.
(5) The fair value levels are: (i) Bonds (Level 1); (ii) Loans (Level 2); and (iii) Bank borrowings (Level 2). For more information on the valuation techniques and key variables used, see Note 7.3.

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

Average financing and cost	**2023**		**2022**	
€ Million	Average balance	Average cost (1)	Average balance	Average cost (1)
Bonds	6,537	1.94 %	8,267	1.53 %
Bank borrowings	1,429	4.27 %	1,494	2.68 %
Loans and other financial liabilities	751	5.23 %	1,273	3.66 %
TOTAL	**8,718**	**2.61 %**	**11,034**	**1.93 %**

NOTE: Does not include lease liabilities or derivatives.
(1) The average cost is calculated as the quotient of the interest expense of the financing and its average balance, not including lease liabilities or derivatives.

7.2 Bonds

Key issues, repurchases and redemptions carried out in 2023[27]:

The subordinated bond issued by Repsol International Finance B.V. (RIF) on March 23, 2015, with a fixed coupon of 4.5%, was repurchased and partially redeemed for a repurchased face value of €274 million.

The bond issued by Repsol International Finance B.V. (RIF) on May 25, 2021 under the EMTN Program for a face value of €300 million and a variable coupon tied to 3-month Euribor plus 70 basis points was redeemed at maturity.

Detail of bonds outstanding at December 31, 2023, all secured by Repsol, S.A.:

ISIN	**Issuer**	**Date of issue**	**Currency**	**Nominal amount (millions)**	**Average rate %**	**Maturity**	**Listed (3)**
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	726	4.500%	Mar-75	LuxSE
XS1352121724 (1)	Repsol International Finance, B.V.	Jan-16	Euro	100	5.375%	Jan-31	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
XS2361358299 (1) (4)	Repsol Europe Finance, S.à.r.l.	Jul-21	Euro	650	0.375%	Jul-29	LuxSE
XS2361358539 (1) (5)	Repsol Europe Finance, S.à.r.l.	Jul-21	Euro	600	0.875%	Jul-33	LuxSE

Note: Excludes perpetual subordinated bonds, which qualify as equity instruments, issued by RIF in June 2020 and March 2021 for an outstanding nominal amount at December 31 2023 of €1,500 million and €750 million, respectively (see Note 6.4).
(1) Issues made under the EMTN Program, secured by Repsol, S.A. and for a maximum of €13,000 million.
(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 facilities or other trading centers or non-official OTC markets are not considered.
(4) Bond linked to a target of a 12% reduction in the Carbon Intensity Indicator (CII) by 2025. If the Group fails to meet these targets, the coupon on the bonds will be increased by 0.25% (payable in 2027, 2028 and 2029).
(5) Bond linked to a target of a 25% reduction in the CII by 2030. If the Group fails to meet these targets, the coupon on the bonds will be increased by 0.375% (payable in 2032 and 2033). For information on the performance of the CII, see section 7.2.1 Energy transition and climate change of the 2023 consolidated Management Report and the CII verification report (available at www.repsol.com).

In 2023 Repsol Europe Finance, S.à.r.l. (REF) has a Euro Commercial Paper (ECP) Program, secured by Repsol, S.A., with a limit of up to €3,000 million. Under this program, several issues and redemptions took place over the course of the period, with an outstanding nominal amount of €246 million at December 31, 2023 (€1,532 million at December 31, 2022), that were issued by RIF under the Program that was in force as of that date.

Sustainable finance framework

Repsol has a sustainable finance framework (the "Framework", available at www.repsol.com). This framework incorporates both instruments aimed at financing specific projects (green and transition) and instruments linked to the Company's sustainability commitments (Sustainability-Linked Bonds, or SLBs). For more information, see section 4.3 of the 2023 consolidated Management Report.

[27] Main issues, repurchases and redemptions in 2022: (i) in May, RIF redeemed at maturity the bond issued for a face value of €500 million and a fixed annual coupon of 0.500%, (ii) between May and June, all the outstanding bonds issued by Repsol Oil & Gas Canada, Inc. (ROGCI) were repurchased and redeemed for a total face value of $412 million.

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 REF and secured by Repsol, S.A., with a face value of €4,950 million, contain certain debt acceleration and early redemption clauses (including cross-acceleration and cross-default, applicable to the issuer and the guarantor) and negative pledge clauses in relation to future bond issues. In the event of failure to comply with any of the terms and conditions of the issues, the trustee, at its sole discretion or at the request 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 redemption of the bonds. In addition, the holders of these bonds may redeem them if, as a result of a change in control of Repsol, S.A., Repsol's credit ratings are downgraded to below investment grade status.
- The subordinated bond issued by RIF and secured by Repsol, S.A. in March 2015 for a total nominal amount of €1,000 million (the balance of which amounted to €726 million at December 31, 2023) does not contain early redemption clauses other than in the event of dissolution or liquidation. These same conditions apply to the subordinated bonds issued in June 2020 and March 2021 for a nominal amount of €2,250 million, described in Note 6.4.

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, 2023 and 2022 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 Fair value of financial liabilities

Fair value of financial instruments

Financial instruments recognized at fair value are classified, based on their calculation methodology, into three levels:
Level 1: Valuations based on a quoted price in an active market for the same instrument, referring mainly to derivatives held to trade.
Level 2: Valuations based on a quoted price in an active market for similar financial assets or based on other valuation techniques that take into account observable market data.
Level 3: Valuations based on certain variables that are not directly observable in the market, such as financial investments or electricity PPAs.

The valuation techniques used for financial instruments classified in level 2 and 3 hierarchies are based, in accordance with accounting regulations, on an income approach, which consists of discounting known or estimated future flows using discount curves built from the reference interest rates in the market (in derivatives, they are estimated through market-implied forward curves, with adjustments for credit risk based on the life of the instruments, or other types of adjustments (liquidity premiums, peak coefficient factor, etc.). In the case of options, pricing models based on the Black & Scholes formulas are used.

The essential variables for the valuation of financial instruments depend on the type of instrument, but are basically: exchange rates (spot and forward), interest rate curves, counterparty risk curves, commodity prices (spot and forward) and equity prices, as well as the volatility of all the aforementioned factors. In all cases, market data is obtained from recognized information agencies or corresponds to quotes from official organizations.

The classification of financial liabilities recognized in the financial statements at their fair value, based on the methodology for calculating such fair value, is as follows:

Fair value (FV) of financial liabilities	Level 1		Level 2		Level 3 (1)		**Total**	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
At FV through profit or loss	61	366	237	461	18	377	316	1,204
At FV through other comprehensive income	5	1	1	73	286	396	292	470
TOTAL	**66**	**367**	**238**	**534**	**304**	**773**	**608**	**1,674**

(1) The breakdown of the reconciliation of opening balances to closing balances for those financial liabilities classified under level 3 is as follows:

€ Million	**2023**
Opening balance	**773**
Income and expenses recognized in profit and loss	(359)
Income and expenses recognized in equity	(110)
Closing balance	**304**

NOTE: None of the potential foreseeable scenarios for the unobservable inputs used would result in significant changes in the fair value of the instruments classified in level 3 of the fair value hierarchy.

No financial instruments were transferred between hierarchy levels in 2023 or 2022.

7.4 Bank borrowings

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

In 2023 the European Investment Bank (EIB) granted a loan of €120 million to support the construction and operation of the advanced biofuels plant in Cartagena and another loan of €575 million (not yet drawn down as at December 31, 2023) for the deployment and commissioning of wind farms and photovoltaic plants in Spain with a total capacity of 1.1 GW. In addition, the Official Credit Institute (ICO) granted a loan of €300 million linked to the transformation of our industrial facilities.

In 2022, the loans (principal and interest) arranged to finance the investment in the Saint John LNG, S.L. project in Canada and the associated financial derivatives were repaid, leading to the derecognition of bank borrowings for a total of $586 million.

7.5 Lease liabilities

The liabilities recognized[28] for lease payables at December 31, 2023 and 2022 amounted to €2,971[29] million and €2,923 million, respectively. The main lease agreements relate to gas transportation contracts in North America and the Group's gas stations in Spain, Portugal and Peru, which are described in Note 12.

(8) Financial assets

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

Financial assets	€ Million	
	2023	**2022**
Non-current assets		
Non-current financial assets	1,562	1,437
Non-current trade derivatives (1)	99	73
Current assets		
Other current financial assets (2)	4,491	3,058
Current trade derivatives (3)	252	498
Cash and cash equivalents	4,129	6,512
TOTAL	**10,533**	**11,578**

(1) Recognized under "*Other non-current assets*" on the balance sheet.
(2) The variation is due mainly to the placement of deposits during the period.
(3) Recognized under "*Trade and other receivables*" (see Note 17) in "*Other receivables*" on the balance sheet.

[28] 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 which there is no sufficient certainty to date regarding their exercise, most of which are within the 2024-2044 period, with estimated future undiscounted payments amounting to €287 million, the most significant being the five-year extensions of the lease agreement for a vessel amounting to €240 million (these amounts do not include the optional extensions of contracts with a low probability of execution, specifically the contracts described in Note 12, with Emera Brunswick Pipeline and Maritimes & North East Pipeline); and (iii) lease agreements signed and not started, with future fixed payments of €2 million in 2024 and €10 million in 2025 and subsequent years.
[29] In 2023 and 2022, 7% correspond to contracts that mature in more than 15 years.

The detail of these assets at December 31, 2023 and 2022 is as follows:

Asset details	At fair value through profit or loss		At fair value through other comprehensive income		At amortized cost [5]		Total	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Equity instruments [1]	26	26	47	56	—	—	**73**	**82**
Derivatives	39	59	69	18	—	—	**108**	**77**
Loans	—	—	—	—	752	965	**752**	**965**
Time deposits	—	—	—	—	177	355	**177**	**355**
Other financial assets [2]	29	22	—	—	522	9	**551**	**31**
Non-current	**94**	**107**	**116**	**74**	**1,451**	**1,329**	**1,661**	**1,510**
Derivatives	116	845	197	149	—	—	**313**	**994**
Loans	—	—	—	—	127	67	**127**	**67**
Time deposits	—	—	—	—	3,882	2,480	**3,882**	**2,480**
Cash and cash equivalents [3]	4	4	—	—	4,125	6,508	**4,129**	**6,512**
Other financial assets [2]	1	1	—	—	420	14	**421**	**15**
Current	**121**	**850**	**197**	**149**	**8,554**	**9,069**	**8,872**	**10,068**
TOTAL [4]	**215**	**957**	**313**	**223**	**10,005**	**10,398**	**10,533**	**11,578**

NOTE: For the fair value hierarchy of financial assets measured at fair value, see Note 8.2.
[1] Includes non-controlling financial investments in certain companies over which the Group does not have management influence.
[2] In 2023 the "*At amortized cost*" column mainly includes the balances receivable from the sale of 25% of the E&P business to EIG and 49% of a portfolio of renewable assets in Spain to Pontegadea.
[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. Includes "*Cash and banks*" for €2,743 million and "*Other financial assets*" for €1,386 million.
[4] Does not include "*Other non-current assets*" and "*Trade and other receivables*" in the balance sheet, which at December 31, 2023 amounted to €1,044 million for non-current and €7,722 million for current, while at December 31, 2022 these headings amounted to €766 million for non-current and €8,529 million for current, respectively, corresponding to trade receivables net of the related impairment losses.
[5] The items that do not bear explicit interest are recognized at their nominal amount whenever the effect of not discounting the related cash flows is not significant.

The average return[30] on the financial assets (not including "*Cash and cash equivalents*") was accrued at an average interest rate of 5,22% and 3.50% in 2023 and 2022, respectively.

8.1 Loans

In 2023 and 2022, *"Current and non-current loans"* includes mainly those loans granted to companies accounted for using the equity method, which are not eliminated in the consolidation process (see Note 13), amounting to €879 million and €1,032 million respectively.

These included 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, from which no new drawdowns other than those already taken may be made until November 2021; 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, 2023, the cumulative drawdowns (not including interest) under this credit facility amounted to $800 million, with a balance of €377 million at December 31, 2023 (a gross balance of €943 million and a provision of €566 million) and €347 million at December 31, 2022 (see Note 20.3). In 2023 Repsol and PDVSA signed a new management agreement for

[30] The average return is calculated as the quotient of the interest income of the investment and its average balance, not including cash and cash equivalents, lease assets or derivatives.

the Petroquiriquire joint venture in order to increase production and facilitate the recovery of the debt linked to these assets (see Note 20.3).

The loan granted to Cardón IV by the shareholders (ENI and Repsol) was repaid in 2023.

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

Maturity of loans	€ Million	
	2023	**2022**
2024	127	112
2025	294	200
2026	166	293
2027	1	2
2028	—	—
Subsequent years	291	358
TOTAL	**879**	**1,032**

8.2 Fair value of financial assets

The classification of the financial assets recognized in the financial statements, based on the methodology for calculating their fair value, is as follows:

Fair value of financial assets	Level 1		Level 2		Level 3 [1]		Total	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
At FV through profit or loss	33	256	121	647	61	54	215	957
At FV through other comprehensive income	129	83	136	28	48	112	313	223
TOTAL	**162**	**339**	**257**	**675**	**109**	**166**	**528**	**1,180**

[1] The breakdown of the reconciliation of opening balances to closing balances for those financial assets classified under level 3 is as follows:

€ Million	**2023**
Opening balance	**166**
Income and expenses recognized in profit and loss	6
Income and expenses recognized in equity	(63)
Reclassifications and other	
Closing balance	**109**

NOTE: None of the potential foreseeable scenarios for the unobservable inputs used would result in significant changes in the fair value of the instruments classified in level 3 of the fair value hierarchy.

No financial instruments were transferred between hierarchy levels in 2023 or 2022.

(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 has instruments to hedge its exposure to fluctuations in foreign exchange rates associated with net assets of foreign businesses. 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 $791 million (€716 million). In 2022, the notional amount was $2,598 million (€2,434 million). The changes in 2023 compared to 2022 are explained by the divestments of foreign businesses carried out during the year.

In addition, the Group arranges derivatives to hedge exposure to changes in cash flows in its transactions, which at year-end 2023 were most notably as follows:

- Interest rate hedges on debt instruments[31]. Cash flows are hedged in the form of interest rate swaps, most notably those swaps arranged in 2014 for a notional amount of €1,500 million to hedge future bond issues in late 2014 and early 2015. The Group pays a fixed interest rate (weighted average of 1.762%) and receives a variable rate (6-month Euribor).
- Gas price hedges. Cash flows from the purchase and sale of gas are hedged through swaps, futures and options tied to international indexes in the US and Europe (HH and TTF) with maturities between 2024 and 2027. At December 31, 2023, their notional amount was -304 TBtu sold (equivalent to €-1,208 million) and their fair value was €223 million (€59 million at December 31, 2022).
- Electricity price hedges. This is mainly done through sale and purchase agreements in Spain and the US (long-term financial Power Purchase Agreement (PPA))[32]. At December 31, 2023, their net notional amount was 47 million MWh sold, equivalent to €-874 million (31 million MWh sold, equivalent to €-663 million in December 2022) and their fair value was €-277 million (€-317 million in 2022).

The instruments designated as accounting hedges at December 31, 2023 and 2022 are detailed below:

Hedging instruments	Nominal amounts of hedging instruments (2)		Balances of hedging instruments on the balance sheet: Non-current assets		Current assets		Non-current liabilities		Current liabilities		Total fair value		Changes in FV of the hedging instrument (3)	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Cash flows:	**(1,909)**	**(626)**	**69**	**18**	**178**	**132**	**(235)**	**(307)**	**(57)**	**(90)**	**(45)**	**(247)**	**215**	**(355)**
Interest rate	173	326	9	4	—	7	(1)	—		—	8	11	(8)	7
Product price	(2,082)	(952)	60	14	178	125	(234)	(307)	(57)	(90)	(53)	(258)	223	(362)
Net investment:	**(716)**	**(2,434)**	—	—	**19**	**17**	—	—	—	**(73)**	**19**	**(56)**	**75**	**23**
Exchange rate	(716)	(2,434)	—	—	19	17	—	—	—	(73)	19	(56)	75	23
TOTAL (1)	**(2,625)**	**(3,060)**	**69**	**18**	**197**	**149**	**(235)**	**(307)**	**(57)**	**(163)**	**(26)**	**(303)**	**290**	**(332)**

(1) The fair value valuation methods are described in Note 7.3
(2) Instruments in US dollars are translated into euros at year-end rates. In the case of product price derivatives, they correspond to the physical units at the contract price.
(3) In 2023 and 2022, changes in the fair value of hedged items generally coincide with those of the hedging instruments, with no significant amounts due to ineffectiveness having been recognized

The changes relating to hedging instruments at December 31, 2023 and 2022 recognized under *"Other cumulative comprehensive income"* in the balance sheet are detailed below:

Hedging instruments	Cash flow hedges	Hedges of net investments	Cash flow hedges	Hedges of net investments
€ Million	**2023**		**2022**	
Opening balance at December 31	**(144)**	**(254)**	**51**	**(177)**
Gains/(Losses) for measurement allocated to other comprehensive income	400	(8)	(490)	(227)
Amounts transferred to the income statement (1)	(160)	48	154	44
Translation differences	(1)	—	(1)	—
Share of investments in joint ventures and associates	1	—	11	—
Tax effect	(59)	(8)	78	57
Non-controlling interests	(37)	—	53	—
Others (2)	40	159	—	49
Closing balance at December 31	**40**	**(63)**	**(144)**	**(254)**

(1) Includes mainly the allocation to income of cash flow hedges related to the transactions described in this section.
(2) Mainly includes the impact related to the sale of 25% of the E&P business to EIG and 49% of a portfolio of renewable assets in Spain to Pontegadea.

[31] In 2023, the swap associated with the interest rate hedge on the bond issued by RIF in May 2021 for a notional amount of €300 million was canceled at maturity (see Note 7.2) with no significant impact on the income statement.
[32] These agreements expire between 2024 and 2040 at a fixed price and are settled by differences between this price and the reference price in the electricity sales market. In the sales agreements, the volume of energy considered in most cases is less than or equal to the P90 (a statistical measure that reflects the annual production level expected to be equaled or exceeded with a 90% probability) of the estimated production of the farm. Prices range from €21.8 to €43.5/Mwh, depending on the term, technology, date of execution and geographical area.

The cumulative balances by type of hedging instrument at December 31, 2023 and 2022 are:

Accumulated balances of hedging instruments	Cash flow hedging reserve and translation reserves	
€ Million	**2023**	**2022**
Cash flow hedges:	**40**	**(144)**
- Interest rate	(23)	(39)
- Product price	49	(173)
- Share of investments in joint ventures and associates	9	7
- Tax effect	5	61
Hedges of net investments:	**(63)**	**(254)**
- Exchange rate	(102)	(365)
- Tax effect	39	111

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. In addition, futures and swap contracts are entered into to hedge the product price risk associated with future physical transactions for the sale and/or purchase of crude oil, other oil products or electricity that do not qualify as hedging instruments.

The breakdown of these derivative instruments is as follows:

Other derivative instruments	Non-current assets		Current assets		Non-current liabilities		Current liabilities		Total fair value	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Exchange rate	—	—	42	159	—	—	(143)	(239)	(101)	(80)
Interest rate	—	—	—	—	—	—	—	(4)	—	(4)
Product price	39	59	74	371	(40)	(332)	(115)	(629)	(42)	(530)
Derivatives on treasury shares	—	—	—	314	—	—	(18)	—	(18)	314
TOTAL	**39**	**59**	**116**	**844**	**(40)**	**(332)**	**(276)**	**(872)**	**(161)**	**(300)**

The breakdown, by maturity, of these derivatives at December 31, 2023 and 2022 is provided below:

Fair values at maturity	€ Million											
	2023						**2022**					
	2024	**2025**	**2026**	**2027**	**Sub. years**	**Total**	**2023**	**2024**	**2025**	**2026**	**Sub. years**	**Total**
Exchange and interest rate	**(101)**	**—**	**—**	**—**	**—**	**(101)**	**(84)**	**—**	**—**	**—**	**—**	**(84)**
Product price:	**(41)**	**(3)**	**6**	**—**	**(4)**	**(42)**	**(291)**	**(120)**	**(117)**	**—**	**(2)**	**(530)**
Purchase futures (1)	(174)	(44)	(26)	(12)	(10)	(266)	126	22	1	—	—	149
Sale futures (2)	198	43	29	11	5	286	(256)	(28)	(3)	—	—	(287)
Options	(1)	—	—	—	—	(1)	2	—	—	—	—	2
Swaps	(31)	1	2	1	2	(25)	7	(3)	2	1	—	7
Others	(33)	(3)	1	—	(1)	(36)	(170)	(111)	(117)	(1)	(2)	(401)
Derivatives on treasury shares	**(18)**					**(18)**	**314**	**—**	**—**	**—**	**—**	**314**
TOTAL	**(160)**	**(3)**	**6**	**—**	**(4)**	**(161)**	**(61)**	**(120)**	**(117)**	**—**	**(2)**	**(300)**

(1) The physical units and fair value of product and other price derivatives associated with purchase agreements are broken down below:

Purchase futures	Physical units	FV (€ Million)	Physical units	FV (€ Million)
	2023		**2022**	
EUAs/UKAs CO_2 (thousand tons)	14,111	(156)	14,656	42
Crude oil (thousand barrels)	32,472	(64)	13,671	57
Gas (TBTU)	50	1	203	18
Electricity (thousand MWh)	4,996	(39)	862	22
Products	n.a.	(8)	n.a	10
Total		**(266)**		**149**

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

Sale futures	Physical units	FV (€ Million)	Physical units	FV (€ Million)
	2023		**2022**	
EUAs/UKAs CO2 (thousand tons)	14,187	146	14,585	(52)
Crude oil (thousand barrels)	34,910	72	15,644	(149)
Gas (TBTU)	182	14	396	(10)
Electricity (thousand MWh)	1,069	26	1,126	(58)
Products	n.a.	28	n.a.	(18)
Total		**286**		**(287)**

In 2023 and 2022, the impact of the valuation of product derivatives and CO2 prices on "*Operating income*" was €197 in income and €-1,090 million in expenses respectively.

In 2023 and 2022, short-term forward contracts and currency swaps were arranged that generated a financial loss of €-141 and a gain of €603 million, respectively, recognized under "*Financial result - Change in fair value of financial instruments*" (see Note 21).

Derivatives on treasury shares[33]

In 2023, the Group had arranged options on a total of 75 million Repsol shares (50 million from the acquisition of call options at an exercise price of €8,22 per share and 25 million from the sale of put options at an exercise price of €5.75 per share). These options (jointly referred to as a reverse collar) are measured at fair value through profit or loss. The call tranche was settled by physical delivery (at Repsol's decision), while the put tranche was not exercised. The impact on the income statement for the year amounted to €13 million and was recognized under "*Change in fair value of financial instruments*".

In 2023, equity swaps were arranged on a total of 35 million shares at a contract price of €13.76 per share, with a total of 25 million shares outstanding at December 31, 2023, with contractual maturity in February and June 2024 and a contract price of €13.96 per share. Repsol has the option to settle them by physical delivery or by differences. In addition, equity swaps were canceled on a total of 10 million shares at an average cancellation price of €13.98 per share. These instruments are measured at fair value with changes under "*Change in fair value of financial instruments*" of the income statement and the impact for the period was for a loss of €6 million in 2023.

Others

Repsol (through its subsidiary Repsol Renewables North America, Inc.) has a call option on the 60% of the share capital that it does not already own of Hecate Energy Group, LLC (an associate that carries out renewable energy projects in the US). In addition, Repsol has granted a put option to the shareholder owning this 60% interest (Hecate Holdings LLC). Both options, subject to compliance with the conditions provided for in the agreement signed in June 2021, could be exercised in 2024, with the exercise price being the market value at that date, and therefore will have no impact on the financial statements at the reporting date.

(10) Financial risks

The Group's business activities are exposed to different types of financial risk, including: market risk, liquidity risk and credit risk, and which have been affected to a greater or lesser extent as a result of the current market volatility affected by the geopolitical environment. 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 that could be incurred in the event of 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

[33] At December 31, 2022, the Group had arranged options on a total of 75 million Repsol shares (50 million from the acquisition of call options and 25 million from the sale of put options). The main characteristics of these options are described in Note 9.2 to the consolidated Financial Statements for 2022.

is subject to maximum risk levels, measured in terms of Value at Risk (VaR), defined by Repsol's 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.

Exchange rate risk

The Group's income 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 has depreciated in 2023, mainly as a result of the European Central Bank tightening monetary policy and the easing of some risks for Europe. For more information, see section 3.1. of the 2023 consolidated Management Report.

The US dollar-euro exchange rate at December 31, 2023 and 2022, was as follows:

Exchange rate €/$	**December 31, 2023**		**December 31, 2022**	
	Closing rate	**Accumulated average rate**	**Closing rate**	**Accumulated average rate**
US dollar	1.11	1.08	1.07	1.05

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, 2023 due to the appreciation or depreciation of the euro against the dollar, is illustrated below:

Exchange rate sensitivity	Appreciation (+) / depreciation (-) in exchange rate	€ Million	
		2023	2022
Effect on net income after tax	10%	17	(0.4)
	(10)%	(20)	0.4
Effect on equity	10%	(76)	(110)
	(10)%	62	90

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.

In response to rising inflation, central banks have decided to tighten monetary policy and therefore raise interest rates. The US Federal Reserve, which began the tightening cycle in March 2022, raised rates to 5.25% at the end of 2023. The European Central Bank abandoned negative rates in July 2022 and the marginal deposit rate ended the year at 4%. For more information, see section 3 of the 2023 consolidated Management Report.

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 31,2023, financing (gross debt) at fixed rates amounted to €6,236 million (€6,814 million in 2022). This amount represents 72% (66% in 2022) of the gross debt, excluding leases and including interest rate derivative financial instruments (70% in 2022) Variable-rate financial investments account for 81% of the total, and their average remuneration is reported in Note 8.

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, 2023 is shown in the following table:

Interest rate sensitivity	Increase (+) / decrease (-) in interest rates (basis points)	€ Million	
		2023	2022
Effect on net income after tax	50 b.p.	23	13
	-50 b.p.	(23)	(12)
Effect on equity	50 b.p.	4	1
	-50 b.p.	(4)	(1)

In connection with the process of transitioning to new benchmark interest rates in various jurisdictions worldwide, the Group has reviewed the contracts arranged in accordance with the timetable envisaged for the reform, mainly affecting loans and credit facilities. The new contracts include reference to risk free rates and, in any case, specific clauses are included to regulate the event of permanent discontinuation. The transition has been completed for all contracts that were tied to (i) GBP Libor, which have transitioned to the new corresponding rate (SONIA), the discontinuation date of which was December 31, 2022; and (ii) USD Libor, which have transitioned to the new corresponding rate (SOFR), the discontinuation date of which was June 30, 2023. This reform has not led to any change in the Group's interest rate financial risk management policy.

Commodity price risk

The Group's results are exposed mainly to volatility in the prices of oil, derivative products, natural gas and electricity, as well as other commodities used in its activities.

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, 2023 a 10% increase or decrease in commodity prices (mainly crude oil, petrochemical products, natural gas and electricity) would have resulted in approximately the following changes in net income and in equity as a result of changes in value of the financial derivatives:

Commodities sensitivity	Increase (+) / decrease (-) in commodity prices	€ Million	
		2023	2022
Effect on net income after tax	+10%	19	(74)
	(10)%	(19)	74
Effect on equity	+10%	(213)	(136)
	(10)%	215	136

NOTE: A +/-50% change in commodity prices would have an estimated impact of €92 million and €-92 million on net income, respectively, and €-1,077 million and €1,117 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.

For more information on the impact of the current context on the exchange rate, interest rates and commodity prices, see section 3 of the 2023 consolidated Management Report.

10.2 Liquidity risk[34]

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, 2023 Repsol had cash resources and other liquid financial instruments and undrawn credit facilities that are sufficient to cover current debt maturities 3.3 times.

Liquidity at the end of the period stood at €10,626 million (including undrawn committed credit facilities) and is detailed as follows:

	€ Million	
	2023	**2022**
Cash and banks	2,744	2,676
Cash equivalents	1,385	3,836
Cash and cash equivalents	**4,129**	**6,512**
Deposits with immediate availability (1)	3,878	2,389
Undrawn credit facilities	2,619	2,674
Liquidity	**10,626**	**11,575**

(1) Repsol arranges time deposits with immediate availability, which are recognized under "*Other current financial assets*" and do not meet the accounting criteria for classification as cash and cash equivalents.

In order to facilitate the collection of payments from suppliers and creditors, the Group enters into reverse factoring arrangements with various financial intermediaries in which the payment of accounts payable to third parties is not deferred and, therefore, does not result in their derecognition for accounting purposes or a change as regards being considered trade payables (€122 million recognized under "*Trade and other payables*" were affected by this instrument at year-end). In addition, non-recourse factoring transactions are occasionally carried out, which are recognized as a reduction to "*Trade and other receivables*").

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.

In a volatile international environment, and within the framework of the Group's financial policy, Repsol has ensured the ready availability of funds so as to be able to honor its obligations and see its business plans through to completion, guaranteeing at all times the optimum level of funds and seeking absolute efficiency in the management of these funds.

The following table contains an analysis on the maturities of the financial liabilities existing at December 31, 2023 and 2022:

Maturity of financial liabilities	€ Million							€ Million						
	2023							**2022**						
	2024	2025	2026	2027	2028	Seq	**Total**	2023	2024	2025	2026	2027	Seq	**Total**
Bonds and debentures (1)	1,146	1,477	499	748	—	2,081	**5,951**	1,891	848	1,748	499	747	2,082	**7,815**
Loans, bank borrowings and other financial debts (1)	1,584	211	74	102	103	599	**2,673**	819	980	194	65	45	518	**2,621**
Lease payments (1)	576	510	430	405	377	1,595	**3,894**	571	459	401	360	339	1,751	**3,881**
Derivatives (2)	161	—	—	—	—	1	**162**	184	—	—	—	—	—	**184**
Suppliers	4,896	—	—	—	—	—	**4,896**	5,036	—	—	—	—	—	**5,036**
Other payables	5,059	—	—	—	—	—	**5,059**	5,657	—	—	—	—	—	**5,657**

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 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.

[34] For information on the definitions of the liquidity and solvency ratios and their reconciliations to the Alternative Performance Measures, see Appendix II of the 2023 consolidated Management Report. For information on the credit rating, see section 4.3 of the 2023 consolidated Management Report and www.repsol.com.

10.3 Credit risk[35]

EXPECTED LOSS:

Expected credit losses are a probability-weighted estimate of losses (in 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 owed to the entity in accordance with the contract and the cash flows that the entity expects to receive. Since expected credit losses take into account both the amount and timing of payments, there will be a credit loss if the entity expects to collect in full, but later than contractually agreed.

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 with effective interest on amortized cost net of the amount of the impairment.

(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 giving rise to losses on the Company's receivables. 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 credit risk management model using economic forecasts for the main countries where it operates, without this having a significant impact on the Group's financial statements as a result of the change in the payment behavior of its 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, 2023 for each of them, is broken down as follows:

Credit Risk	Gross balance	Average impairment	Impairment	Net balance 12/31/2023	Net balance 12/31/2022
Current financial assets and Cash (1)	8,621	—	(1)	8,620	9,570
Non-current financial assets	4,160	62 %	(2,598) (2)	1,562	1,437
Other current and non-current assets	2,637	49 %	(1,283) (2)	1,354	1,103
Trade and other receivables	8,380	5 %	(406) (2)	7,974	9,027

(1) Impairment losses 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) Includes assets impaired in Phase 3 (see "*Expected loss*" in the table above). The impairment losses at December 31, 2023 recognized under "*Non-current financial assets*" relate mainly to ongoing litigation and bankruptcy proceedings (€1,776 million) and to loans and credit facilities granted to joint ventures in Venezuela (€566 million). Impairment losses recognized at December 31, 2023 under "*Other current and non-current assets*" and "*Trade and other receivables*" correspond mainly to non-current and current accounts receivable, respectively, for the activity in Venezuela (see Notes 19.4 and 20.3).

35 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*" (mainly Petroquiriquire and Cardón IV as a result of their activity in Venezuela, see Note 13).

Trade and other receivables

The trade receivables are shown on the balance sheet at December 31, 2023 and 2022, net of provisions for impairment, for an amount of €7,974 million and €9,027 million, respectively. The following table shows the age of the trade receivables net of impairment (including expected loss):

Maturities of trade and other receivables	**2023**			**2022**
€ Million	Debt	Impairment	Balance	Balance
Unmatured debt	7,637	(87)	7,550	8,781
Matured debt 0-30 days	236	(3)	233	158
Matured debt 31-180 days	64	(4)	60	54
Matured debt over 180 days	443	(312)	131	34
TOTAL	**8,380**	**(406)**	**7,974**	**9,027**

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 3.67%. In relation to Venezuela, it should be noted that PDVSA's debts with joint ventures and investees of Repsol are not reflected in this heading, but rather are accounted for using the equity method (Petroquiriquire, S.A. and Cardón IV, S.A., see Note 13).

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 amounting to €4,193 million at December 31, 2023 and €3,788 million at December 31, 2022. Of this balance, the trade receivables secured by guarantees stood at €1,332 million at December 31, 2023 and €1,169 million at December 31, 2022.

NON-CURRENT ASSETS AND LIABILITIES

(11) Intangible assets

The breakdown between business segments of intangible assets at December 31, 2023 and 2022 is as follows:

	Gross cost		Accumulated amortization and impairment		Net cost	
€ Millon	**12/31/2023**	**12/31/2022**	**12/31/2023**	**12/31/2022**	**12/31/2023**	**12/31/2022**
Upstream	2,196	4,504	(1,795)	(3,744)	401	760
Industrial	506	455	(274)	(242)	232	213
Customer	1,438	1,310	(715)	(655)	723	655
LGC	994	234	(30)	(24)	964	210
Corporate	495	460	(338)	(322)	157	138
TOTAL	**5,629**	**6,963**	**(3,152)**	**(4,987)**	**2,477**	**1,976**

The main categories of intangible assets (goodwill, hydrocarbon exploration permits, renewable electricity generation projects, computer software, etc.) at December 31, 2023 and 2022 are as follows:

		Other intangible assets								
	Goodwill	Upstream			Industrial, Customer and LCG			Corp.	Total	**Total**
€ Million		Exploration permits	Computer software	Other	Gas stations	Computer software	Other	Computer software and others		
Gross cost	**2,911**	1,694	268	118	332	694	486	460	**4,052**	**6,963**
Amortization and impairment	**(2,140)**	(1,441)	(199)	(85)	(193)	(414)	(193)	(322)	**(2,847)**	**(4,987)**
Net cost at 12/31/2022	**771**	253	69	33	139	280	293	138	**1,205**	**1,976**
Gross cost	**802**	1,669	189	96	370	888	1,121	494	**4,827**	**5,629**
Amortization and impairment	**(302)**	(1,400)	(128)	(83)	(215)	(497)	(189)	(338)	**(2,850)**	**(3,152)**
Net cost at 12/31/2023	**500**	269	61	13	155	391	932	156	**1,977**	**2,477**

Goodwill

The goodwill generated in the acquisition of Asterion Energies (see the section at the end of this Note) and of 49% of RRUK (see specific section in Note 13) amounting to €59 million and €36 million, respectively, was recognized in 2023. Also in 2023, following the sale of the Upstream businesses in Canada and the liquidation and dissolution of ROGCI (see Note 19.7), the goodwill from the acquisition of Talisman in 2015 was derecognized with an impact on the income statement of €370 million (€277 million excluding the portion corresponding to non-controlling interests).

Note 20.2 includes additional information on impairment losses for the period and the effect that changes in key assumptions have on the value of assets (including the goodwill allocated to each CGU).

The breakdown of goodwill, by segment and company, at December 31, 2023 is as follows:

Goodwill	€ Million
	2023
Upstream [(1)]	**56**
Customer [(2)]	**385**
Repsol Gas Portugal, S.A.	106
Repsol Comercial de Productos Petrolíferos, S.A.	105
Repsol Portuguesa, S.A.	86
Repsol Comercializadora de Electricidad y Gas, S.L.U.	49
Other companies	39
LCG	**59**
Asterion Energies, S.L.	59
TOTAL 2023 [(3)(4)]	**500**
TOTAL 2022	**771**

[(1)] Corresponds mainly to Norway and the United Kingdom.
[(2)] Corresponds to a total of nine CGUs ("Other companies" includes one CGU of the Industrial segment).
[(3)] Of the total, €500 million and €402 million in 2023 and 2022 correspond to companies carrying out their main activity in Europe.
[(4)] Includes €302 million and €2,140 million in accumulated impairment losses in 2023 and 2022, respectively.

Other intangible assets

The changes in the gross cost under "*Other intangible assets*" in 2023 and 2022 is as follows:

	Upstream			**Industrial, Customer and LCG**			**Corporate**	
€ Million	Exploration permits	Computer software	Other	Gas stations	Computer software	Other	Computer software and others	**Total**
Balance at January 1, 2022	**2,174**	**237**	**292**	**312**	**610**	**399**	**402**	**4,426**
Investments [(1)]	34	9	4	22	64	53	69	255
Disposals or reductions	(40)	(5)	—	(13)	(13)	—	(3)	(74)
Translation differences	142	12	21	7	6	3	—	191
Changes in the scope of consolidation	—	—	—	—	(1)	56	—	55
Reclassifications and other [(2)]	(616)	15	(199)	4	28	(25)	(8)	(801)
Balance at December 31, 2022	**1,694**	**268**	**118**	**332**	**694**	**486**	**460**	**4,052**
Investments [(1)]	52	16	4	38	104	89	56	359
Disposals or reductions	(3)	(100)	(10)	(15)	16	—	(22)	(134)
Translation differences	(54)	(8)	(4)	7	(1)	(2)	—	(62)
Changes in the scope of consolidation	—	—	—	—	—	621	—	621
Reclassifications and other	(20)	13	(12)	8	75	(73)	—	(9)
Balance at December 31, 2023	**1,669**	**189**	**96**	**370**	**888**	**1,121**	**494**	**4,827**

[(1)] Investments in 2023 and 2022 come from the direct acquisition of assets.
[(2)] In 2022 "*Exploration permits*" reflects the reclassification to "*Investments in areas with reserves*" from property, plant and equipment of the investment in the exploration assets of Pikka (Alaska) and Leon and Castile (Gulf of Mexico), after the final investment decision.

In 2023, the main amounts recognized under "*Investments*" relate to computer software (most notably that of the Customer business — new businesses, payment methods, customer loyalty and improved customer experience — and of Corporate — technological renovation and digitalization in cross-cutting and business support functions and the shift towards a data driven company —) and to exploratory permits for the Upstream segment acquired in the US, Mexico and Indonesia and for geothermal activities in Spain.

In 2023, the main changes recognized under "*Changes in the scope of consolidation*" relate to the rights for permits, licenses and concessions acquired in the Asterion Energies business combination (€565 million).

The changes in accumulated amortization and impairment losses in 2023 and 2022 are as follows:

	Upstream			Industrial, Customer and LCG			Corporate	
€ Million	Exploration permits [1]	Computer software [2]	Other assets	Gas stations [3]	Computer software [2]	Concessions and others	Computer software and others [2]	Total
Balance at January 1, 2022	**(1,191)**	**(175)**	**(80)**	**(175)**	**(346)**	**(138)**	**(314)**	**(2,419)**
Amortization	(38)	(19)	—	(29)	(78)	(51)	(8)	(223)
Disposals or reductions	40	5	—	12	12	—	—	69
(Provision for)/Reversal of provisions for impairment	(192)	—	—	—	—	(2)	—	(194)
Translation differences	(66)	(10)	(5)	(3)	(3)	(2)	—	(89)
Changes in the scope of consolidation	—	—	—	1	1	—	—	2
Reclassifications and other	6	—	—	1	—	—	—	7
Balance at December 31, 2022	**(1,441)**	**(199)**	**(85)**	**(193)**	**(414)**	**(193)**	**(322)**	**(2,847)**
Amortization	(18)	(21)	(1)	(31)	(82)	(8)	(17)	(178)
Disposals or reductions	3	87	—	12	1	—	1	104
(Provision for)/Reversal of provisions for impairment	(21)	—	—	—	—	(24)	—	(45)
Translation differences	48	5	3	(3)	1	(1)	—	53
Changes in the scope of consolidation	—	—	—	—	—	—	—	—
Reclassifications and other	29	—	—	—	(3)	37	—	63
Balance at December 31, 2023	**(1,400)**	**(128)**	**(83)**	**(215)**	**(497)**	**(189)**	**(338)**	**(2,850)**

[1] Exploration permits are not amortized, but rather are tested for impairment at least once a year. Once the exploration and evaluation phase is over, if no economically viable reserves are found, the amounts capitalized are recognized as an expense (see Note 4.4).
[2] Computer software is amortized on a straight-line basis and generally over a period of 3 or 6 years.
[3] Trademark representation and image costs of the gas stations are amortized on a straight-line basis over the shorter of the technical life of the installed asset and the best estimate of the affiliation period of the gas station (in Spain, the average period is between 1 and 10 years). The costs incurred in exclusive supply contracts with the gas stations are amortized on a straight-line basis over the affiliation period of each contract (in Spain the average term is between 1 and 3 years).

Accumulated impairment losses at December 31, 2023 and 2022 amounted to €651 million and €645 million, respectively.

<u>Acquisition of Asterion Energies</u>

On February 20, 2023 the Company purchased all of the shares of Asterion Energies, S.L. (the parent of the Asterion Energies group) from the European infrastructure fund Asterion Industrial Intra Fund I FCR (AIF), a platform created by AIF in 2019 to develop solar projects (ground-mounted, residential rooftop PV and industrial) and wind projects (onshore) located mainly in Spain, France and Italy.

Taking into consideration the adjustments after the reporting date, which are customary in this type of transaction, the present value of the purchase price is estimated at €544 million in cash. At the date of authorization for issue of these consolidated Financial Statements, Repsol Renovables, S.A. and AIF have not yet reached an agreement on the amount of these adjustments.

In accordance with accounting standards, the purchase price of this business combination has been allocated to the assets acquired and liabilities assumed based on their estimated fair values at the acquisition date.

- The fair value of the electricity generation assets (intangible assets and property, plant and equipment) was calculated following an income approach (discounted cash flows considering the status of the project and its probability of success). The assets acquired consist of a portfolio of renewable projects in operation and, mainly, under development of 7.7 GW, mostly located in Spain and Italy. The assets and liabilities acquired are reflected in the balance sheet at a net value of €485 million.
- Goodwill is the difference between the acquisition price of the businesses acquired and the fair value of the assets and liabilities recognized, including any deferred taxes arising from differences between the fair value of the assets acquired and their tax value. The value of the goodwill is justified by the value of the businesses acquired, the know-how of the development team, and the portfolio of unidentified projects that do not meet the definition of an asset according to the accounting standard. The goodwill amounted to €59 million.

Repsol requested an independent valuation report to review the allocation of the acquisition price of this business combination to the assets acquired and liabilities assumed based on their fair value. The conclusion of this report has been considered in the valuation of the assets and liabilities acquired.

The detail of the net assets acquired and the goodwill generated after this acquisition is as follows:

	€ Million
	Fair value
Intangible assets	565
Property, plant and equipment	161
Deferred tax assets	5
Other non-current assets	9
Other current assets	26
Cash and cash equivalents	24
Total assets	**790**
Current and non-current provisions	1
Current and non-current financial debt	106
Deferred tax liabilities	144
Other current liabilities	54
Total liabilities	**305**
NET ASSETS ACQUIRED	**485**
NET ACQUISITION COST	**544**
GOODWILL	**59**

During the period since the acquisition date, the businesses acquired generated €6 million in operating income with a net loss of €-1 million.

Transaction costs incurred during the period amounted to €2 million and were recognized under "*Other operating expenses*" in the income statement.

(12) Property, plant and equipment

The breakdown between business segments of property, plant and equipment at December 31, 2023 and 2022 is as follows:

	Gross cost		**Accumulated depreciation and impairment**		**Net cost**	
€ Million	**12/31/2023**	**12/31/2022**	**12/31/2023**	**12/31/2022**	**12/31/2023**	**12/31/2022**
Upstream	29,294	29,367	(16,992)	(17,998)	12,302	11,369
Industrial	23,225	22,402	(15,804)	(15,595)	7,421	6,807
Customer	5,998	5,784	(3,832)	(3,656)	2,166	2,128
LCG	3,209	1,756	(154)	(51)	3,055	1,705
Corporate	953	1,043	(511)	(582)	442	461
TOTAL	**62,679**	**60,352**	**(37,293)**	**(37,882)**	**25,386**	**22,470**

The main categories for property, plant and equipment at December 31, 2023 y 2022 is as follows:

	Upstream			**Industrial, Customer and LCG**				**Corporate**	
€ Million	Investments in areas with reserves	Investments in exploration	Others	Land, buildings and other constructions	Machinery and plant	Others	Property, plant and equipment in progress	Headquarters, land, constructions and others	**Total**
Gross cost	26,314	1,953	1,099	2,233	23,407	2,011	2,292	1,043	**60,352**
Amortization and impairment	(16,020)	(1,601)	(376)	(1,035)	(17,067)	(1,200)	—	(583)	**(37,882)**
Net cost at 12/31/2022	**10,294**	**352**	**723**	**1,198**	**6,340**	**811**	**2,292**	**460**	**22,470**
Gross cost	25,951	1,928	1,410	2,346	24,352	2,008	3,730	954	**62,679**
Amortization and impairment	(15,171)	(1,516)	(307)	(1,086)	(17,406)	(1,295)	—	(512)	**(37,293)**
Net cost at 12/31/2023	**10,780**	**412**	**1,103**	**1,260**	**6,946**	**713**	**3,730**	**442**	**25,386**

The main assets of property, plant and equipment are as follows:

- In the Upstream segment, investments in areas with hydrocarbon reserves in the production phase (most notably assets in the US, the UK, Peru and Norway) and the exploration phase (mainly in Colombia, the US, Mexico and Indonesia).
- In the Industrial business, the five refineries in Spain (Tarragona, A Coruña, Bilbao, Cartagena and Puertollano) and the one in Peru (La Pampilla) and chemical plants in Spain and Portugal, as well as the rights of use on ships and gas pipelines for trading activities.
- In the Customer business, the rights to the facilities of the gas stations in Spain and, to a lesser extent, Portugal.
- In the LCG business, to renewable energy generation assets in Spain (hydro, solar and wind generation), the US (solar generation) and Chile.
- The Corporate segment most notably includes the corporate headquarters in Madrid (Campus) and the Repsol Technology Center (CTR) in Móstoles.

In accordance with industry practice, 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 level of coverage is, in general, appropriate for the risks inherent to its business.

The changes in the gross cost under "Property, plant and equipment" in 2023 and 2022 are as follows:

	Upstream			**Industrial, Customer and LCG**				**Corporate**	
€ Million	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	Headquarters, land, construction and others	**Total**
Balance at January 1, 2022	**24,428**	**2,313**	**897**	**2,151**	**22,775**	**1,728**	**1,212**	**1,025**	**56,529**
Investments	1,587	144	150	—	7	6	1,605	21	3,520
Disposals or reductions	(2,305)	(53)	(9)	(8)	(206)	(69)	(13)	(4)	(2,667)
Translation differences	1,354	140	47	14	180	38	4	—	1,777
Changes in the scope of consolidation	—	—	—	4	—	(45)	68	—	27
Reclassifications and other [(1)]	1,250	(591)	14	72	651	353	(584)	1	1,166
Balance at December 31, 2022	**26,314**	**1,953**	**1,099**	**2,233**	**23,407**	**2,011**	**2,292**	**1,043**	**60,352**
Investments	1,188	77	423	—	26	5	2,300	16	4,035
Disposals or reductions	(1,057)	(7)	(99)	(14)	(247)	(21)	(8)	(108)	(1,561)
Translation differences	(926)	(65)	(46)	(7)	(89)	(25)	(26)	—	(1,184)
Changes in the scope of consolidation	248	(44)	41	72	90	6	156	—	569
Reclassifications and other [(1)]	184	14	(8)	62	1,165	32	(984)	3	468
Balance at December 31, 2023	**25,951**	**1,928**	**1,410**	**2,346**	**24,352**	**2,008**	**3,730**	**954**	**62,679**

[(1)] In 2023 and 2022, it included reclassifications from "*Property, plant and equipment in progress*" mainly to "*Machinery and plant*" as a result of various improvement, repair and remodeling projects at the Group's refineries, and the entry into operation of the projects involving investments in the wind and solar projects that Repsol is carrying out in Spain and the US. It also includes additions of rights of use associated with leases (see the section at the end of this Note) and the adjustments to decommissioning provisions for assets. In 2022, "*Investments in areas with reserves*" for the Upstream segment included reclassifications from "*Exploration permits*" (after the final decision to invest in the exploratory assets in Alaska and in Leon and Castile in the Gulf of Mexico) and from "*Other assets*" under intangible assets (investments in the gas assets of the American gas company Rockdale Marcellus).

In 2023, "*Investments*" in property, plant and equipment (€4,035 million) mainly relate to:

- In the Upstream segment, assets in the US (most notably the new production wells in Eagle Ford and Marcellus, and the development of assets located in the Gulf of Mexico and Alaska).
- In the Industrial business, maintenance and improvement of industrial complexes, and investments in large decarbonization projects (biofuel plant in Cartagena, expansion of the Sines chemical complex in Portugal and electrolyzers for hydrogen consumption in the refineries).
- In the LCG business, the development of renewable projects in the US (most notably the Frye and Outpost solar projects) and in Spain (Delta 2, Sigma and Pi).

Investments in 2023 increased compared to 2022 (€3,520 million), mainly as a result of driving the development of renewable projects, in line with the objectives of increasing renewable installed capacity set out in the Strategic Plan.

In 2023 "*Changes in the scope of consolidation*" for the Upstream segment includes mainly the addition to property, plant and equipment of Repsol Resources UK, after having acquired its 49% interest from Sinopec, whereby the company then became wholly owned (see Note 13), and the derecognition due to Repsol's divestment in Canada (see Note 19.7). The LCG segment mainly includes the addition of property, plant and equipment acquired in the Asterion Energies business combination (see Note 11).

The changes in depreciation and impairment losses in 2023 y 2022 are as follows:

	Upstream			Industrial, Customer and LCG				Corporate	
€ Million	Investments in areas with reserves	Investments in exploration	Others	Land, buildings and other constructions	Machinery and plant	Others	Property, plant and equipment in progress	Headquarters, land, constructions and others	**Total**
Saldo a Balance at January 1, 2022	**(16,115)**	**(1,556)**	**(325)**	**(963)**	**(14,176)**	**(1,114)**	**—**	**(554)**	**(34,803)**
Depreciation	(939)	(90)	(36)	(60)	(864)	(134)	—	(28)	(2,151)
Disposals or reductions	1,711	53	7	8	198	76	—	2	2,055
(Provision for)/Reversal of provisions for impairment	353	(23)	(7)	—	(2,134)	(1)	—	(3)	(1,815)
Translation differences	(937)	(87)	(17)	(16)	(91)	(19)	—	—	(1,167)
Changes in the scope of consolidation	—	—	—	—	—	—	—	—	—
Reclassifications and other	(93)	102	2	(4)	—	(8)	—	—	(1)
Balance at December 31, 2022	**(16,020)**	**(1,601)**	**(376)**	**(1,035)**	**(17,067)**	**(1,200)**	**—**	**(583)**	**(37,882)**
Depreciation	(1,187)	(39)	(46)	(60)	(813)	(121)	—	(23)	(2,289)
Disposals or reductions	1,048	7	90	12	205	20	—	93	1,475
(Provision for)/Reversal of provisions for impairment	(124)	21	—	(1)	245	(4)	—	—	137
Translation differences	541	52	15	3	67	14	—	—	692
Changes in the scope of consolidation	577	44	—	—	(1)	—	—	—	620
Reclassifications and other	(6)	—	10	(5)	(42)	(4)	—	1	(46)
Balance at December 31, 2023	**(15,171)**	**(1,516)**	**(307)**	**(1,086)**	**(17,406)**	**(1,295)**	**—**	**(512)**	**(37,293)**

The net cost, not yet including depreciation, of the depreciable assets at December 31, 2023 amounts to €20,310 million. The non-depreciable assets, i.e., land and property, plant and equipment in progress, amounted to €585 million and €4,491 million at December 31, 2023, respectively, and €584 million and €2,753 million at December 31, 2022, respectively.

In general, items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives (see Note 4.4 in relation to property, plant and equipment related to hydrocarbon exploration and production activities). The estimated initial useful lives of the main assets, by type, are detailed below:

Estimated useful life	Years
Buildings and other constructions	14-50
Machinery and plant:	
Machinery, plant and tools	8-25
Specialized complex installations (mainly Refining and Chemical industrial complexes):	
Units	6-25
Storage tanks	14-30
Cabling and networks	12-25
Specialized complex installations (power generation)	18-38
Other property, plant and equipment (transport, furniture and fittings, etc.)	4-15

In 2023, the higher depreciation charge is mainly explained by the Upstream segment as a result of higher investment in and production of assets in the US (Marcellus and Eagle Ford), in Norway (increased activity of the YME field) and the UK (acquisition of Repsol Resources, UK Ltd.), partially offset by lower depreciation of the Group's refineries following the impairment losses recognized in 2022.

In 2023, the estimated useful life of the Group's industrial plants[36] and commercial plants did not have to be changed as a result of the expected impact of the energy transition on demand for our products (see Note 4.5.2).

"*Property, plant and equipment*" included fully depreciated items in the amount of €10,857 million and €10,453 million at December 31, 2023 and 2022, respectively.

[36] *In 2022, the useful lives of certain facilities in the Group's refineries were revised, based on the expected periods for their decommissioning, without this having a significant impact on the Group's financial statements.*

At December 31, 2023 and 2022, the accumulated impairment losses on the assets came to €5,922 million and €7,014 million, respectively, corresponding mainly to the impairment of "*Investments in areas with reserves*" (€3,381 million and €4,102 million in 2023 and 2022, respectively) and "*Machinery and plant*" (€2,307 million and €2,601 million in 2023 and 2022, respectively). For more information, see Note 20.

Rights of use and concessions

"*Property, plant and equipment*" includes rights of use, the breakdown and changes of which are as follows:

Right-of-use assets € Million	Machinery and plant	Transport equipment	Buildings	Land	Others	**Total**
Balance at January 1, 2022	**1,477**	**179**	**42**	**201**	**190**	**2,089**
Acquisitions	97	38	1	50	109	295
Disposals or reductions	(3)	—	(1)	—	—	(4)
Depreciation and impairment	(544)	(76)	(15)	(20)	(74)	(729)
Translation differences and other	53	8	2	5	14	82
Balance at December 31, 2022	**1,080**	**149**	**29**	**236**	**239**	**1,733**
Acquisitions	187	205	28	15	(1)	434
Disposals or reductions	(28)	—	(2)	—	(4)	(34)
Depreciation and impairment	(184)	(70)	(13)	(20)	(73)	(360)
Translation differences and other	(1)	(10)	(1)	55	22	65
Balance at December 31, 2023	**1,054**	**274**	**41**	**286**	**183**	**1,838**

The most significant lease agreements are as follows:

- Lease agreements are signed for various reasons and with varying terms for the gas stations that the Group has in Spain, Portugal and Peru. At December 31, 2023, the corresponding rights of use amounted to €853 million and the future payments recognized as financial liabilities were €896 million.
- Agreement for the transportation of natural gas through a gas pipeline that connects the Saint John LNG plant (Canada) with the US border entered into with Emera Brunswick Pipeline Company, Ltd. for a term of 25 years (renewable for up to an additional 30 years). The lease came into effect in July 2009. At December 31, 2023, a provision for the rights of use under this agreement was recognized for the full amount (same as in 2022) and the future payments recognized as financial liabilities amounted to $378 million (€342 million).
- Agreement for the transportation of Canadian natural gas from the Canadian border to Dracut (US) entered into with Maritimes & North East Pipeline for a term of 25 years (renewable for up to an additional 30 years). The agreement initially came into effect in March 2009. At December 31, 2023 the corresponding rights of use amounted to €181 million[37] and the future payments recognized as financial liabilities totaled $761 million (€688 million).

"*Property, plant and equipment*" also includes administrative concessions, mainly corresponding to port facilities to receive crude oil and product outflows at the refineries and facilities associated with administrative concessions for gas stations, for a net cost of €158 million and €171 million at December 31, 2023 and 2022, respectively. These concessions revert to the State over a period of time ranging from 2024 to 2084.

[37] Impaired rights of use amounting to €330 million at December 31, 2023 (€341 million at December 31, 2022).

(13) Investments accounted for using the equity method

This heading includes investments that qualify as joint ventures under EU-IFRS (i.e., investments in jointly controlled entities) and investments in associates (i.e., those in which Repsol exercises significant influence). These investments are accounted for in the financial statements using the equity method (see Note 4.4.1).

The changes in this heading in 2023 and 2022 were as follows:

Investments accounted for using the equity method	€ Million	
	2023	**2022**
Opening balance for the year	**4,302**	**3,554**
Net investments	(78)	74
Changes in the scope of consolidation	(1,024)	55
Net income from investments accounted for using the equity method [1]	34	989
Dividends paid [2]	(446)	(751)
Translation differences	(59)	192
Reclassifications and other changes	228	189
Balance at year end	**2,957**	**4,302**

[1] The drop in revenue in 2023 is mainly due to the Upstream businesses, the income of which was affected by the significant decrease in hydrocarbon prices during the period. This heading does not include "*Other comprehensive income*" amounting to €-56 million in 2023 (€-49 million corresponding to joint ventures) and €197 million in 2022 (€173 million corresponding to joint ventures), mainly as a result of translation differences.
[2] In 2023 mainly Repsol Sinopec Brasil (€249 million), BPRY Caribbean Ventures, LLC (€112 million), Sierracol (€32 million), YPFB Andina, S.A. (€18 million), and Edwards Gas Services, LLC (€18 million); and in 2022 mainly Repsol Sinopec Brasil (€388 million), Equion Energía Ltd. (€205 million), Sierracol (€65 million) and YPFB Andina (€29 million).

In 2023 "*Changes in the scope of consolidation*" includes mainly the derecognition of the 51% interest in Repsol Resources, UK Ltd, an exploration and production joint venture with Sinopec in the United Kingdom, after Repsol acquired its 49% interest from Sinopec, whereby the company then became wholly owned (see specific section on the acquisition at the end of this Note) and the acquisition of 50.01% of CIDE HC Energía, S.A.U. (CHC) (electricity retailer in Spain that has contributed a portfolio of approximately 320 thousand customers).

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

Details of investments accounted for using the equity method	€ Million	
	Carrying amount of the investment [2]	
	2023	**2022**
Joint ventures	2,698	3,916
Associates [1]	259	386
TOTAL	**2,957**	**4,302**

(1) This mainly includes the interest in Hecate Energy, LLC, OGCI Climate Investments Llp, Salamanca Infraestructure, LLC., and Oleoductos de Crudos Pesados (OCP) Ltd.
(2) In 2023, €2,105 million correspond to Upstream (€3,383 million in 2022).

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, S.A. (RSB)*. Repsol has a 60% interest in RSB through Repsol Lux E&P S.A.R.L., which is wholly owned by Repsol Upstream B.V., which, in turn, is wholly owned by Repsol, S.A. The remaining 40% of this company is owned by Tiptop Luxembourg, S.A.R.L., an entity of the Chinese Sinopec Group. The main businesses are hydrocarbon exploration, production and sale in Brazil. For the guarantees granted by the Group to RSB, see Note 25.

- *YPFB Andina, S.A.* (Andina). Repsol holds a 48.33% interest in the share capital of Andina through Repsol Bolivia, S.A., with the other shareholders being the state-owned corporation YPF Bolivia (51%) and non-controlling shareholders (0.67%). It engages mainly in hydrocarbon exploration, operation and sale mainly in Bolivia. For information on the Group's risks and equity exposure in Bolivia, see Note 20.3.

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

- *Petroquiriquire, S.A. (PQQ)*. Repsol has a 40% interest in PQQ through Repsol Exploración, S.A. Petroquiriquire is a Venezuelan public-private venture, partly held by Corporación Venezolana de Petróleo, S.A. (CVP) with 56% and PDVSA Social, S.A. with 4%, both of which are state-owned companies. Its main activity is the production and sale of oil and gas in Venezuela. For information on the Group's risks and equity exposure in Venezuela, see Note 20.3.

- *Cardón IV, S.A. (Cardón IV)*. Repsol has a 50% interest in Cardón IV through Repsol Exploración, S.A. The other 50% is owned by the ENI Group. Cardón IV is a gas licensee whose main activity is the production and sale of gas in Venezuela. For information on the Group's risks and equity exposure in Venezuela, see Note 20.3.

The tables below provide a summary of the financial information for the main entities accounted for using the equity method, prepared in accordance with EU-IFRS,(see Note 4) and its reconciliation with the carrying amount of the investment in the consolidated financial statements[38]:

Income from joint ventures	**RSB**		**YPFB Andina**		**BPRY**		**PQQ**		**Cardón IV**	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Revenue	1,528	2,044	163	189	1,555	3,595	315	331	983	856
Amortization and impairment [(1)]	(264)	(351)	(55)	(248)	(1,686)	(618)	—	(212)	(636)	(183)
Other operating income/(expenses)	(652)	(707)	(54)	(95)	(897)	(1,411)	(45)	81	(266)	(229)
Operating income	**612**	**986**	**54**	**(154)**	**(1,028)**	**1,566**	**270**	**200**	**81**	**444**
Net interest	22	8	—	—	(143)	(113)	(108)	(65)	(6)	(38)
Other financial results	(118)	(94)	(8)	(9)	(36)	(32)	(40)	(6)	30	(10)
Net income from investments accounted for using the equity method [(2)]		—	(17)	(18)	—	—	—	—	—	—
Net income before tax	**516**	**900**	**29**	**(181)**	**(1,207)**	**1,421**	**122**	**129**	**105**	**396**
Tax expense	(93)	(239)	(7)	34	614	(811)	(323)	(81)	46	(116)
Net income attributable to the parent	**423**	**661**	**22**	**(147)**	**(593)**	**610**	**(201)**	**48**	**151**	**280**
Repsol interest	60 %	60 %	48 %	48 %	30 %	30 %	40 %	40 %	50 %	50 %
Consolidation income	**254**	**397**	**11**	**(71)**	**(178)**	**183**	**(80)**	**19**	**76**	**140**
Dividends	**249**	**388**	**18**	**46**	**112**	—	—	—	—	—
Other comprehensive income [(3)]	**(49)**	**84**	**(8)**	**21**	**1**	—	**19**	**(31)**	**(7)**	**(8)**

(1) Includes net impairment losses on assets at BPRY, YPFB Andina and Cardón IV, and due to credit risk, mainly at Cardón IV (see Note 20).
(2) Net of taxes
(3) "*Valuation gains/(losses)*" and "*Amounts transferred to the income statement*" in the statement of recognized income and expense.

[38] For significant joint arrangements and associates: (i) there are no applicable legal restrictions on the ability to transfer funds to the Group, (ii) the financial statements used refer to the same date as those of Repsol, S.A., and (iii) there are no unrecognized losses.

Carrying amount of the interest	**RSB**		**YPFB Andina**		**BPRY**		**PQQ**		**Cardón IV**	
€ Million	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Non-current assets	3,803	3,701	498	575	1,998	3,106	303	207	690	863
Current assets	651	909	254	241	574	1,815	390	433	471	174
Cash and cash equivalents	359	359	111	39	96	308	—	—	22	9
Other current assets (1)	292	550	143	202	478	1,507	390	433	449	165
Total assets	**4,454**	**4,610**	**752**	**816**	**2,572**	**4,921**	**693**	**640**	**1,161**	**1,037**
Non-current liabilities	1,727	1,808	267	264	2,127	2,787	1,221	986	308	342
Financial liabilities	810	900	—	—	1,381	1,392	944	868	5	46
Other non-current liabilities	917	908	267	264	746	1,395	227	118	303	296
Current liabilities	457	507	35	72	851	1,017	1,005	906	400	379
Financial liabilities	170	176	—	—	398	414	—	—	1	—
Other current liabilities (1)	287	331	35	72	453	603	1,005	906	399	379
Total liabilities	**2,184**	**2,315**	**302**	**336**	**2,978**	**3,804**	**2,226**	**1,892**	**708**	**721**
Net assets	**2,270**	**2,295**	**450**	**480**	**(406)**	**1,117**	**(1,533)**	**(1,252)**	**453**	**316**
Repsol interest	60 %	60 %	48 %	48 %	30 %	30 %	40 %	40 %	50 %	50 %
Share in net assets (2)	1,362	1,377	216	230	(122)	335	(613)	(501)	227	158
Goodwill	—	—	—	—		—	—	—	—	—
Carrying amount of the investment	**1,362**	**1,377**	**216**	**230**	**—**	**335**	**—**	**—**	**227**	**158**

Note: The amounts broken down in the tables include the Group's percentage of ownership interest in each of the companies:
(1) With regard to PQQ, other current assets and liabilities include the debt-to-equity swap and reciprocal debts with PDVSA under the agreed terms.
(2) PQQ: in 2023 and 2022 a provision was recognized for contingencies and charges amounting to €111 million and €501 million at December 31, respectively, corresponding to the equity deficit of PQQ (see Note 15). BPRY: in 2023, the value of the investment was zero as a result of reducing the carrying amount of the loan granted to this company.

Acquisition of Repsol Sinopec Resources, UK Ltd. (currently RRUK)

In relation to RRUK, the joint venture with Sinopec that focuses its activities on Upstream businesses in the United Kingdom, on October 31, 2023 the venturers agreed to settle the existing arbitration proceedings in relation to the acquisition by Sinopec of its ownership interest in RRUK from the Canadian group Talisman, which in turn was acquired by Repsol in 2015 (see Note 15.2). Under this agreement Repsol acquired from Sinopec its 49% shareholding in RRUK, which then became wholly owned by the company. The total consideration for the agreement (settlement of the arbitration proceedings and acquisition of 49% of RRUK) was approximately $2,100 million; however, after consolidating the cash and other financial assets in RRUK corresponding to the 49% interest acquired, the net impact on net debt for the Group was approximately $1,000 million.

Of the total consideration for the agreement, the amount allocated to the acquisition of 49% of RRUK amounted to $1,132 million.

The assets acquired relate mainly to "*Investments in areas with reserves*" of mature fields in the United Kingdom (see Note 12), the provisions to cover their future decommissioning (see Note 15), tax credits and net deferred tax assets (see Note 22), and the company's cash and other financial assets.

Given that the 12-month period since the acquisition has not yet ended in accordance with IFRS 3 "Business Combinations", this business combination is recognized on a provisional basis.

The detail of the net assets acquired as at October 31, 2023 and the goodwill generated after this acquisition is as follows (100% of the net assets after derecognition of the previous 51% interest in the company):

	US $ Million **Fair value**
Property, plant and equipment	1,481
Deferred tax assets	1,457
Other non-current assets	174
Other current assets	2,298
Cash and cash equivalents	113
Total assets	**5,523**
Current and non-current provisions	2,559
Current and non-current financial debt	92
Deferred tax liabilities	598
Total liabilities	**3,249**
NET ASSETS ACQUIRED	2,274
NET ACQUISITION COST	2,310
GOODWILL	**36**

The effect that the consolidation of 100% of RRUK from January 1, 2023 would have had on "*operating income*" and "*net result*" would have been 758 and -8 million euros, respectively.

(14) Other non-current assets and liabilities

In 2023 and 2022, "*Other non-current assets*" mainly included accounts receivable from PDVSA in Venezuela (see Notes 20.3) amounting to €294 million, net of impairment losses (€318 million in 2022), tax assets in relation to the Alaska Petroleum Tax associated with the investments in Alaska amounting to €182 million (€107 million in 2022), and the deposits associated with the decommissioning of exploration and production assets ("sinking funds") amounting to €71 million (€69 million in 2022), mainly in Indonesia, and derivative financial instruments associated with non-current trade receivables (see Note 8).

In 2023 and 2022, "*Other non-current liabilities*" mainly included derivative financial instruments related to trade receivables (see Note 7), and guarantees and deposits received for €123 million (€122 million in 2022).

(15) Current and non-current provisions

15.1 Provisions

Repsol makes judgments 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 5.9%.

Additionally, Repsol makes judgments 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 applicable 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.

At December 31, 2023 and 2022, the balance of and changes in the Group's various provisions are as follows:

Provisions for current and non-current contingencies and charges

	€ Million				
	Asset decommissioning	Use of CO_2 emission allowances	Litigation risks	Other provisions [(1)]	**Total**
Balance at January 1, 2022	**1,709**	**469**	**779**	**1,331**	**4,288**
Provisions charged to income [(2)]	113	1,099	29	468	1,709
Provisions credited to income	(28)	—	(25)	(60)	(113)
Cancellation due to payment	(81)	—	(51)	(231)	(363)
Changes in the scope of consolidation	—	—	—	—	—
Translation differences, reclassifications and other [(3)]	26	(477)	47	15	(389)
Balance at December 31, 2022	**1,739**	**1,091**	**779**	**1,523**	**5,132**
Provisions charged to income [(2)]	279	995	502	311	2,087
Provisions credited to income	(10)	(11)	(9)	(24)	(54)
Cancellation due to payment [(4)]	(133)	(3)	(278)	(212)	(626)
Changes in the scope of consolidation [(5)]	2,226	(2)	—	(24)	2,200
Translation differences, reclassifications and other [(3)]	(235)	(1,087)	(886)	(28)	(2,236)
Balance at December 31, 2023	**3,866**	**983**	**107**	**1,546**	**6,502**

(1) "*Other provisions*" includes those recognized to cover obligations arising from environmental clean-up and remediation costs (see the following section), pension commitments (see Note 27), 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 tax liabilities and other*" in the balance sheet (see Note 22).

(2) Mainly includes: (i) €100 million and €66 million in 2023 and 2022, respectively, relating to the discount to present value of the provisions; (ii) "Use of CO2 emission allowances" in the amount of €995 million and €1,099 million in 2023 and 2022, respectively, for the expense for the allowances necessary to cover CO2 emissions; (iii) "Asset decommissioning", in 2023 most notably the discount to present value of the decommissioning provisions for exploration and production assets in Spain. In 2023, a change in the discount rate of +/- 50 basis points would decrease/increase provisions by €-122 million and €137 million; (iv) in 2023 "Litigation risks" mainly includes provisions for settlement agreements reached to end lawsuits (see Note 15.2); and (v) "Other provisions" in 2023, it mainly includes provisions for workforce restructuring, the update corresponding to the provision for the oil spill produced at the La Pampilla refinery and provisions for environmental contingencies and others; in 2022 included the provision for the oil spill that occurred at the Pampilla refinery (see Note 15.2).

(3) In 2023 and 2022, "*Use of CO2 emission allowances*" included the derecognition of the allowances used for emissions in 2022 and 2021, respectively, and "*Other provisions*" included the restatement of the negative value of the investments in Petroquiriquire (see Note 13). In 2023, "*Litigation risks*" includes the derecognition of the provision for the risks arising from the arbitration proceedings with Addax following the agreement reached with Sinopec (see Note 15.2).

(4) In 2023 "Litigation risks" includes mainly the payment made to settle a lawsuit in the US with Maxus (see Note 15.2).

(5) In 2023 "Changes in the scope of consolidation" includes mainly the addition of decommissioning provisions related to Repsol Resources UK (RRUK), after acquiring its 49% interest from Sinopec, whereby the company then became wholly owned by Repsol (see Note 13), and the derecognition of decommissioning provisions related to Repsol Canada Energy Prtn (see Note 19.7).

The following table provides an estimate of maturities of provisions at year-end 2023:

Maturity dates of provisions	Maturity dates[(1)] € Million			
	Less than one year	From 1 to 5 years	> 5 years and/or undetermined	Total
Provisions for field decommissioning	313	1,126	2,427	3,866
Provisions for use of CO2 emission allowances	983	—	—	983
Provisions for legal contingencies	2	103	2	107
Other provisions	261	529	756	1,546
TOTAL	**1,559**	**1,758**	**3,185**	**6,502**

(1) Due to the nature of the risks included, 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.

Provisions for environmental actions[39] at December 31, 2023 amount to €130 million. These provisions include, among others, the estimated costs associated with the oil spill that occurred at the Refinería La Pampilla, S.A.A. (RELAPASAA) refinery for containment, cleanup, and remediation activities, which is detailed below. In addition, the Group has recognized provisions to cover the future decommissioning costs of its oil and gas exploration and production fields and industrial complexes.

[39] Repsol recognizes provisions for the necessary amounts to prevent and remedy effects on the environment, which are estimated based on technical and economic criteria. These amounts are shown under "*Current and non-current provisions*" of the balance sheet and in the "*Other provisions*" column of the table on changes in provisions in Note 15.

<u>Environmental risk - spill in Peru</u>

On January 15, 2022, an oil spill occurred at the Multiboyas Terminal No. 2 facilities in the Refinería La Pampilla, S.A.A. refinery while crude oil was being unloaded from the Mare Doricum, due to an uncontrolled movement of the vessel.

The spill impacted populations and the natural environment, as well as marine species off the Peruvian coast. The first response cleanup actions were completed on April 13, 2022.

The physical, chemical and hydrobiological monitoring carried out by the Company has shown that the sea and the accessible beaches have been complying with the strictest environmental standards for months and, therefore, do not represent any risk to health or the environment. These reports were drawn up by accredited laboratories and all updates have been submitted to the corresponding authorities, with the most recent complete report on the status of the affected areas submitted in April 2023.

Following the cleanup actions carried out by RELAPASAA, the most recent report from the Environmental Assessment and Taxation Body (OEFA) confirms that the results of the sea surface water affected by the spill comply with environmental standards. The Rehabilitation Plan required by the OEFA has been submitted by the deadline (October 2023) to the Ministry of Energy and Mining for approval and subsequent execution.

With regard to the Registry of Affected Persons (victims of the spill) prepared by the government, as of December 31, 2023, agreements for full compensation have been signed with more than 95% of those affected by the spill.

The expenses recognized to cover the damage caused by the incident, such as containment activities, cleanup, remediation, compensation to affected parties and other related costs, amount to a total of $352 million ($307 million in 2022). At December 31, 2023 the costs payable amounted to $93 million. These payments may vary due to various circumstances affecting the progress made towards the planned activities, and developments in the administrative sanctioning procedures, the outcome of which will depend on the conclusions of investigations still in progress.

Without prejudice to the actions that may be taken against the party responsible for the spill, RELAPASAA has reaffirmed its commitment to continue mitigating and remedying the effects of the spill, while working with the authorities and affected communities, and disclosing information to the public with the utmost transparency. The company has also stated its intent to develop sustainable social projects to contribute to the economic recovery in the affected areas, and social aid projects have been implemented in these areas since 2022.

Corporate insurance policies, subject to their terms and conditions, cover civil liability for pollution on land and at sea, for some countries and activities, and certain administrative liabilities for pollution on land, all resulting from accidental, sudden and identifiable events, in line with customary industry practices and applicable legislation. With regard to the incident, the actions to be taken are currently being coordinated with the experts appointed by the insurance companies. As at December 31, 2023, $196 million ($162 million in 2022) in compensation has been received.

For more information on ongoing litigation arising from the spill, see the following section. Regarding the environmental impacts of the spill and the actions to mitigate them, see sections 7.3.2 Respect for human rights and relations with communities and 7.3.3 Spill management of the 2023 consolidated Management Report.

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, 2023, Repsol's balance sheet includes provisions for risks arising from litigation totaling €107 million (€779 million at December 31, 2022). 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. For tax litigation risks, see Notes 15.1 and 22.

United States

The Passaic River / Newark Bay lawsuit

The events underlying this lawsuit related to the sale by Maxus Energy Corporation ("Maxus") on September 4, 1986 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 the date of the sale. After that (1995), Maxus was acquired by YPF, S.A. ("YPF") and subsequently (in 1999) Repsol, S.A. acquired YPF.

In December 2005, the New Jersey Department of Environmental Protection ("DEP") and the New Jersey Spill Compensation Fund (together, the "State of New Jersey") sued Repsol YPF, S.A. (currently Repsol, S.A., and 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 (together "the Defendants") demanding, among other things, that Repsol and YPF be held liable for Maxus' debts.

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 proceedings 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. On December 27, 2021 the Appellate Court upheld the appeals filed by OCC. The ruling did not find Repsol to be liable, but rather only remands the case to the Trial Court as it considers that a Summary Judgment could not be granted in this stage of the proceeding.

On June 14, 2018, the Maxus Liquidating Trust filed a 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.

On April 6, 2023, Repsol and YPF reached a settlement agreement that put an end to all outstanding lawsuits related to Maxus (the company acquired by YPF in 1995), paying a total amount of $575 million, which is divided in half between Repsol and YPF. This expense was recognized under "Other operating expenses" in the income statement with a credit to "Current provisions" in the balance sheet.

The agreement includes the arrangements reached with YPF, the Maxus Liquidating Trust, Occidental Chemical Corporation, the Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA) and the U.S. Department of the Interior, as well as with the States of Ohio and Wisconsin. By virtue of these agreements, Repsol obtains the waiver of actions by the various signatories and additional protections with respect to potential future actions by third parties.

On July 31, 2023, court approval was obtained for the Trust Settlement Agreement, Oxy Settlement Agreement and the Government Agreement, and on August 7, 2023, once payment of the settlement amount by Repsol and YPF was verified, the court approved the stipulations of dismissal and thus put an end to the lawsuit.

Lawsuits related to climate change

Repsol Energy North America Corporation, Repsol Trading USA LLC and Repsol, S.A. are defendants in lawsuits for damages brought by several California counties and municipalities before the California state courts for losses resulting from climate change allegedly caused by emissions from their products or operations. In addition, the Pacific Coast Federation of Fishermen Associations, Inc. also filed a lawsuit against these companies for similar reasons, which was dismissed in December 2023. The lawsuits allege that climate change has caused and continues to cause sea levels to rise and contributes to other negative impacts (such as more violent storms and droughts, so that coastal communities are increasingly prone to flooding, wildfires and wind damage, etc.). The lawsuits contain, among others, the following allegations: that the activities of these companies constitute a public nuisance — a form of tort — and, secondly, that the defendants downplay the dangers of climate change (and the relationship between fossil fuel products and climate change) in order to continue selling their products.

These lawsuits are directed against several energy companies (more than 30 defendants), and a ruling has yet to be handed down; in other words, to date there is no final court ruling ordering these Repsol entities to pay damages for their alleged contribution to climate change, nor is there any quantification of damages by the plaintiffs.

United Kingdom

Addax arbitration in relation to the purchase of Talisman Energy UK Limited (TSEUK)

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. (subsequently "ROGCI") and Talisman Colombia Holdco Limited ("TCHL") in relation to the purchase of 49% of the shares of TSEUK (currently Repsol Resources UK Limited ("RRUK")). 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 RRUK, materialized in 2012 through the purchase of 49% of this interest 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 figure of approximately $5,500 million.

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

ROGCI and TCHL asked the Arbitral Tribunal to dismiss the claims of Addax and Sinopec based on contractual guarantees. On August 15, 2017, the Arbitral Tribunal issued a First Partial Award dismissing the claims of Addax and Sinopec based on the contractual guarantees.

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 five main matters in dispute were Reserves, Production, Abandonment, Projects and Maintenance.
On January 29, 2020, the Arbitral Tribunal issued its Second Partial Award on Reserves, determining that ROGCI and TCHL were liable to Sinopec and Addax with regard to this matter.

On April 20, 2021 the Arbitral Tribunal issued a Third Partial Award with regard to the remaining issues pending to be decided in the liability phase, whereby it declared that TCHL and ROGCI were liable for the matter related to Production — which overlapped with what was already decided in the previous award on Reserves — and dismissed the claims of Addax and Sinopec regarding the remaining matters (Abandonment, Projects and Maintenance).

On January 31, 2023, the SICC issued a judgment dismissing the appeals for annulment filed against the Second Partial Award and the Third Partial Award.

The Third Partial Award dismissed most of the claims of Addax and Sinopec and allowed for a better estimate of the liabilities that could arise from this lawsuit. Therefore, a new assessment has been carried out of the provision necessary to cover the corresponding risks and, as a result of the analysis performed by the Company and its lawyers and external advisors, the provision initially recognized has been reduced.

In addition, 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. The Tribunal dismissed Repsol's claim in 2021, however, this decision did not have any impact on the risk assessment and the accounting provision for the Addax arbitration.

However, on April 28, 2023 Repsol and Sinopec agreed that, subject to the fulfillment of certain conditions, Repsol would acquire from Sinopec its 49% interest in the shares of RRUK (see Note 13 Investments accounted for using the equity method) and settle the arbitration proceedings. Therefore, Repsol and Sinopec suspended the arbitration proceedings on this same date. The total consideration for the agreement is approximately $2,100 million. On October 9, 2023, the parties declared that the conditions had been met. Therefore, on October 31, 2023, the shares were transferred and the arbitration proceedings were concluded, with the provisions for contingencies and charges recognized to date being derecognized (see Note 15.1).

Peru

Following the oil spill on January 15, 2022 at the facilities of the La Pampilla Refinery in Peru, which took place as a result of an uncontrolled movement of the Mare Doricum while unloading crude oil from the vessel (see Note 15.1), at the end of August, leave to proceed was granted for the civil lawsuit for damages filed by the National Institute for the Defense of Competition and the Protection of Intellectual Property of Peru (INDECOPI) against Repsol, S.A., Refinería La Pampilla, S.A.A. (RELAPASAA), Repsol Comercial, S.A.C (RECOSAC), and the insurance company Mapfre, as well as the shipping companies Fratelli d'amico Armatori and Transtotal Marítima, as operators of the ship, requesting compensation of $4,500 million for liabilities in the oil spill, of which $3,000 million would correspond to direct damages and $1,500 million to pain and suffering caused to consumers, users and third parties allegedly affected by the spill.

The notice of the lawsuit has not yet been served on Repsol, S.A., Mapfre Spain or the shipowners in Italy as it follows a consular notification that normally takes few months.

Meanwhile, RELAPASAA, RECOSAC and Mapfre Perú have presented their defenses of form and substance in a timely manner, filing appeals for annulment against the order for admission of the lawsuit based on its lack of due cause, failure to rectify the defects in the suit initially indicated by the judge, lack of prior settlement proceedings by INDECOPI and lack of identification of the claimants, as well as improper accumulation of petitions. These three entities have presented their formal defenses, pleading as follows: that INDECOPI does not have the right to demand payment; that there are transactions with a growing number of people affected by the spill, as recorded in the Register prepared by the Peruvian Government; that INDECOPI's representation is defective; that the Repsol Group companies and their insurance companies against which the lawsuit is filed do not have legal standing to be defendants; and that any potential civil liability resulting from the spill depends on the outcome of ongoing investigations. Finally, they have also formalized their substantive defenses regarding non-contractual civil liability based on the lack of foundation for the amounts claimed, among other arguments.

Although the lawsuit filed by INDECOPI may entail a long process, Repsol reaffirms its assessment that, according to the criteria of the external lawyers and in view of all the opposing arguments put forward, the Peruvian Courts will finally dismiss the lawsuit, and therefore considers it a remote risk.

Also in relation to the spill on January 15, 2022, the Association of Persons Affected by Repsol ("the Association") filed a lawsuit against RELAPASAA and the insurance company Mapfre Perú, claiming 5,134 million soles (around €1,273 million) in favor of 10,268 allegedly affected persons. Once RELAPASAA was notified of this lawsuit, it presented in a timely manner its defenses of form (improper accumulation of claims, lack of standing of the plaintiff and lack of identification of the alleged affected parties) and substance (lack of support for the amount claimed, among other arguments). In an attempt to correct various observations made by the Judge (in which it was requested to present itemized information on the facts that gave rise to the damage and the harm and loss suffered by each of the affected persons), the Association modified the claim, reducing its request for compensation to 21.9 million soles (approximately €5.2 million) and involving only 353 members. On April 13, 2023, the competent judge rejected the claim, among other reasons, because the Association was unable to provide itemized proof of the alleged damage for each claimant as required by Peruvian law. The Association appealed this decision, which was later ratified by the higher court on June 9, 2023, confirming the ruling that rejected the claim. The ruling handed down by the courts of second instance was not challenged by the Association within the legal period and, therefore, the Court ruled to definitively close the case. Once the case was closed, it will no longer be classified as a contingency for RELAPASAA.

In addition, following its announcement at the end of December 2023 through a letter sent to RELAPASAA, Repsol Peru B.V. and Repsol, S.A., on January 10, 2024 Repsol Peru B.V. — and in the following days, RELAPASAA and Repsol, S.A. — received notice from a Dutch court of a lawsuit directed against the three companies mentioned above brought by Stichting Environment and Fundamental Rights (SEFR), on behalf of almost 35,000 parties allegedly affected by the spill; the representation that they claim to have, or whose rights would have been subrogated to SEFR, are estimating the damages at no less than GBP 1,000 million (the lawsuit has no quantum but the letter indicates such amount). The defendants will assert that there is a lack of connection between the Dutch jurisdiction and the spill in Peru and, among other arguments, will highlight the similarities of this claim with that of the Association (already dismissed) and, therefore, the multiple defects of form and substance of the claim, which allow it to be considered a remote risk.

Furthermore, on January 12, 2024 RELAPASAA filed a lawsuit with a Peruvian court against Fratelli D'Amico Armatori, S.P.A., the company that owns the Mare Doricum, claiming compensation of $197.5 million plus interest for failure to fulfill its obligations and non-contractual liability, as it has been proven in all expert evidence obtained that it was the uncontrolled and improper movement of the vessel and the fact that it shifted from the position envisaged to safely unload its cargo that caused the rupture of the underwater installation of RELAPASAA's Terminal No. 2 and, with it, the spill of crude oil into the sea. The responsibility for the mooring process and its safety and operation lies with the captain and, therefore, with his employer, Fratelli D'Amico, not only according to Peruvian law but also according to international maritime law. In spite of this, RELAPASAA alone has borne all the expenses corresponding to the remediation of the coastline and compensation to those affected by the spill (more than $300 million), in addition to significant damages that, as they are materially and legally the responsibility of Fratelli D'Amico, RELAPASAA will claim in full from Fratelli D'Amico by bringing all corresponding actions. In the meantime, Fratelli D'Amico has filed a request for extrajudicial conciliation (a prerequisite for filing a lawsuit under Peruvian law), claiming almost $45 million from RELAPASAA for damages it allegedly suffered as a result of the spill. RELAPASAA considers that this potential counterclaim is groundless.

As a result of the spill, various Peruvian regulatory bodies (including the Environmental Assessment and Control Agency (OEFA), Supervisory Agency for Investment in Energy and Mining (OSINERGMIN), General Directorate of Captaincies and Coast Guard (DICAPI), National Service of Natural Protected Areas by the State (SERNANP), National Forestry and Wildlife Service (SERFOR) have initiated sanctioning administrative procedures against RELAPASAA against which the corresponding defenses have been presented, in addition to meeting the requirements of the authorities mentioned. There are administrative sanctioning procedures that are still in force either in administrative or judicial instance and their outcome will depend on the conclusions reached from the ongoing investigations.

CURRENT ASSETS AND LIABILITIES

(16) Inventories

Inventories are measured at the lower of their cost (calculated based on the weighted average cost) and their net realizable value. "*Commodities*" related to trading activity are measured at fair value less costs to sell and changes in value are recognized in the income statement.

Inventories also include those held as a result of a legal obligation to maintain a minimum level of inventory (as is the case in Spain, for example, with the minimum stocks of oil and products of the Industrial and Customer businesses) or due to the inventories of the production or commercial cycle (structural inventories).

CO_2 emission allowances (EUA CO_2) are recognized as inventories and are initially recognized at acquisition cost. Those allowances received free of charge 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 used, the deferred income is reclassified to profit or loss. As of 2023, in accordance with the accounting policy adopted by the Group for the presentation of grants, this income to be distributed is presented in the balance sheet as a reduction of the value of the associated inventories (at year-end, the deferred income for 2023 and 2022 is zero, since the Group has disposed of all the allowances allocated free of charge).

An expense was recognized under "*Other operating income/(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 those 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 emission 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.

Most of the Group's inventories are concentrated in the Industrial (88%) and Customer (9%) segments. The breakdown of "*Inventories*" at December 31, 2023 and 2022 is as follows:

Inventories	€ Million	
	2023	**2022**
Crude oil [(1)]	1,686	1,751
Natural gas [(2)]	236	369
Finished and semi-finished products [(3)]	3,220	3,712
CO_2 emission allowances [(4)]	992	1,085
Materials and other inventories	489	376
TOTAL [(5)]	**6,623**	**7,293**

[(1)] Crude oil stored in the Group's refineries (for distillation in the production process) and crude oil sold by the trading business (produced by the E&P business or acquired from third parties).
[(2)] Natural gas stored to be sold by the gas trading business in the US and Spain.
[(3)] Inventories in industrial complexes of products resulting from oil refining and, to a lesser extent, petrochemical products and fuels in the US.
[(4)] CO_2 allowances to cover emissions in refineries, chemical complexes and combined cycle power generation. The changes in the year were as follows:

CO_2 allowances (no. of allowances)	**2023**	**2022**
Opening balance	**13,098,227**	**8,458,881**
CO_2 allowances received free of charge	7,588,574	7,273,584
CO_2 allowances acquired on the ETS market	7,204,218	9,709,996
CO_2 allowances sold on the market	(2,673,777)	(1,127,993)
CO_2 allowances offset	(13,080,695)	(11,216,241)
Closing balance	**12,136,547**	**13,098,227**

[(5)] Includes inventory write-downs of €158 million and €101 million at December 31, 2023 and 2022, respectively. The write-downs recognized and reversed amounted to €-60 million and €48 million, respectively (€-91 million and €39 million in 2022).

At December 31, 2023 the balance of commodities, related to trading activity, amounted to €252 million, and the effect of their measurement at market value represented income of €7 million. The fair value is 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 balance of "*Inventories*" decreased mainly as a result of the drop in the cost of inventories (lower average price of Brent crude oil -6% / €-5/bbl) in December 2023 compared to December 2022, and the lower balance of CO_2 allowances as a result of the lower expected consumption of chemical complexes in Spain and Portugal (reduced production in an environment of low prices).

At December 31, 2023 and 2022 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, 2023 and 2022 is as follows:

Trade and other receivables	€ Million	
	2023	**2022**
Trade receivables for sales and services (gross amount)	5,788	6,352
Impairment	(174)	(184)
Trade receivables for sales and services	**5,614**	**6,168**
Receivables from operating activities and other receivables [1]	476	617
Receivables from operations with staff	54	50
Receivable from public administrations	319	526
Trade derivatives (Note 9)	252	498
Other receivables	**1,101**	**1,691**
Current tax assets	**1,259**	**1,168**
TOTAL	**7,974**	**9,027**

[1] Amount net of impairment. In 2023 this included impairment losses of €232 million on accounts receivable from PDVSA in Venezuela (see Note 10.3).

This heading decreased mainly due to lower prices in sales of crude oil and refined products and lower volume of sales in the Mobility business.

The most notable impairment losses on trade and other receivables are those corresponding to accounts receivable from PDVSA (see Note 10.3 and 20.3). For current tax assets, see Note 22.2.

(18) Trade and other payables

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

Trade and other payables	€ Million	
	2023	**2022**
Suppliers	**4,896**	**5,036**
Payables and others	4,017	4,145
Payable to public administrations	870	794
Trade derivatives (Note 9)	172	718
Other payables	**5,059**	**5,657**
Current tax liabilities	**395**	**1,100**
TOTAL	**10,350**	**11,793**

This heading decreased mainly as a result of the improved valuation of positions and contracts of the natural gas trading and retail activity, which in 2022 were very negative due to the price environment. Current tax liabilities are lower mainly in Spain and Norway in line with the lower current income tax for the year (for current income tax liabilities, see Note 22.2).

Information on the average period of payment to suppliers in Spain

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

Average payment period	Days	
	2023	**2022**
Average period of payment to suppliers [(1)]	30	27
Ratio of transactions paid [(2)]	30	27
Ratio of transactions payable [(3)]	30	33
	Amount (€ Million)	
Total payments made	16,294	23,181
Total payments made within the legal term [(4)]	15,698	22,194
Total payments outstanding	857	1,019
	Invoices	
Number of invoices within the legal term [(5)]	905,772	915,984

NOTE: The information for 2022 has been restated with respect to that included in the 2022 Financial Statements.
[(1)] Average payment period = ((Ratio of transactions paid * total payments made) + (Ratio of transactions payable * total payments outstanding)) / (Total payments made + total payments outstanding). In accordance with the transitional provisions of Law 15/2010, (amended by final provision two of Law 31/2014), the average payment period is 60 days.
[(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.
[(4)] Represents 96% of the total payments to suppliers in 2023 and 2022.
[(5)] Represents 79% (78% in 2022) of the total invoices to suppliers.

INCOME

(19) Operating income

On the same date as these consolidated Financial Statements, Repsol published its 2023 consolidated Management Report, which includes an explanation of the results and other aggregates regarding financial performance.

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 the performance obligations, (iii) determine the transaction price, (iv) allocate the transaction price to the different performance obligations, and (v) revenue recognition based on satisfaction of each obligation.

Most of the Group's business contracts have a single performance obligation that is satisfied with the delivery of the product, which takes place at a specific point in time (sale of goods). At December 31, 2023 there were no relevant performance obligations outstanding with customers.

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 tax as it is passed on by the holder of the tax warehouse (normally "Exolum", formerly named 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, where applicable, as an increase in revenue from sales.

The distribution of revenue from ordinary activities ("*Sales*" and "*Services rendered and other income*") by segment in 2023 and 2022 is shown below:

Income by segment	**2023**	**2022**
Upstream	4,976	6,949
Industrial	46,372	61,416
Customer	26,930	32,659
LCG	1,003	2,037
Corporate and other	(20,333)	(27,908)
TOTAL	**58,948**	**75,153**

Note: Includes excise duties levied on hydrocarbon consumption (€5,830 million and €5,862 million in 2023 and 2022, respectively). Corporate and other mainly includes the eliminations for income between Group segments, and for services provided by the corporate areas to the businesses.

In the Upstream segment, income is generated in various countries, mainly from the sale of crude oil, natural gas and condensates and liquefied natural gas that have been produced from the company's extraction activities, or from the provision of hydrocarbon operation services to the holder of the assets, 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 products resulting from oil refining in the industrial complexes in Spain and Peru (gasoline, fuel oil, LPG, asphalts, lubricants, etc.) and from the petrochemical industry in Spain and Portugal (ethylenes, propylenes, polyolefins and intermediate products), as well as from the sale of natural gas in Spain and the US and from the global international trading activities related to these products. In the Customer segment, income is generated mainly in Spain and Portugal from the sale of fuel at gas stations and from the sale of gas and electricity. In the LCG segment, income is generated mainly from the sale of electricity in Spain.

The breakdown in 2023 of ordinary income by type of product and segment is as follows:

Income by product type	**Upstream**	**Industrial**	**Customer**	**LCG**	**Corporate and other**	**TOTAL**
Crude oil	2,734	15,898	5	—	(110)	18,527
Gas [1]						
Wholesale market	2,238	1,536	—	—	(1,015)	2,759
Retail market (Residential and businesses)	—	—	240	46	—	286
Oil products [2]	—	25,979	25,411	—	(18,575)	32,815
Petrochemical products [3]	—	2,382	—	—	(1)	2,381
Electricity	—	174	1,023	957	(600)	1,554
Service provision and others [4]	4	403	251	—	(32)	626
TOTAL	**4,976**	**46,372**	**26,930**	**1,003**	**(20,333)**	**58,948**

[1] Corresponds mainly to condensates and liquefied natural gas and natural gas.
[2] Corresponds mainly to gasoline, fuel oil, LPG, asphalt, lubricants, etc.
[3] Corresponds mainly to ethylene, propylene, polyolefins and intermediate products.
[4] Other services.

The significant decline in revenue in 2023 is explained by the drop in international crude oil and gas prices, and the price of fuel and other derivative products as a result of the gradual normalization of international energy markets, the lukewarm economic environment and the uncertainty regarding the future growth of the economy. The following is also noteworthy of mention: (i) the decrease in revenue of the E&P businesses, despite higher sales volumes, due to lower crude oil and gas realization prices, (ii) the decrease in revenue of the Industrial segment, despite higher sales volumes in the Refining and Trading businesses, due to lower prices of products derived from both oil refining and the petrochemical industry, (iii) the drop in fuel prices in Europe, which affected the Customer businesses (mainly the Mobility business, mitigated by lower discounts[40]), and (iv) lower electricity sale prices in Spain, which affected both the LCG businesses (despite greater production due to the start-up of renewable projects) and the retail businesses in the Customer segment.

The distribution, by country, of income from ordinary activities in 2023 and 2022 is shown below:

Geographical distribution of income	**2023**	**2022**
Spain	33,465	43,493
Peru	4,595	5,417
United States	3,550	4,304
Portugal	3,088	3,431
Other	14,250	18,508
TOTAL [1][2]	**58,948**	**75,153**

[1] The distribution by geographical area has been drawn up based on the markets to which the sales or income relate and includes special taxes on hydrocarbon consumption.
[2] The distribution of the target markets is as follows: (i) EU euro zone: €42,250 million (€53,984 million in 2022), (ii) EU non-euro zone: €151 million (€241 million in 2022), and (iii) Other countries: €16,547 million (€20,928 million in 2022).

19.2 Changes in inventories of finished goods and work in progress

The expense recognized under this heading is explained both by lower average product prices (-8%), influenced by the decline in average Brent crude oil prices, and by the lower volume of product inventory (-6%), mainly in the industrial complexes of the refining business in Spain.

[40] In accordance with Royal Decree Law 6/2022, an extraordinary and temporary discount was approved, which was in force from April 1 to June 30 (subsequently extended until December 31, 2022), on the sale price of certain energy products and additives. The Group therefore offered discounts of €0.30 per liter (which included the government discount of €0.20 per liter and an additional discount of €0.10 per liter provided by Repsol on all refueling paid through the Waylet app or using the SOLRED card) and €0.25 per liter (the government discount of €0.20 per liter and an additional discount of €0.05 per liter to other customers). These discounts (effective from March 16 to December 31), not including the discount that is neutral in the Group's income statement, had a negative impact on the revenue of the Mobility business for 2022. After the government discount ended last December 31, Repsol decided to extend the €0.10 discount through the Waylet app until March 31, 2023 and, since April 1, fuel discounts have been linked to contracting energy products and making payments through Waylet (Connected Energy Plans, for more information, see section 5.3 of the consolidated Management Report).

19.3 Supplies

This heading "*Supplies*" includes the following items:

Supplies	€ Million	
	2023	**2022**
Purchases	42,982	57,061
Changes in inventories (raw materials and goods held for sale)	(94)	(883)
TOTAL	**42,888**	**56,178**

This heading mainly includes the supply through third parties of crude oil for distillation in the production process of the industrial complexes of the Refining business (approximately 80% of the total) and of other raw materials for the production of petrochemical products, as well as purchases of gas to generate electricity at the combined cycle power plants of the LCG segment. In the Customer segment, this mainly includes purchases of products to be sold in the mobility businesses in Portugal and Mexico (in Spain, purchases are mostly made through the Industrial segment), purchases of additives and bases to manufacture lubricants and specialized products, purchases of LPG, purchases of gas to be sold to customers, and access tolls for electricity and gas networks. It also includes purchases from third parties for the sale of LNG and natural gas in the trading and wholesale businesses.

The lower costs of "*Supplies*" in 2023 were mainly due to the lower prices of the commodities (crude oil and natural gas) supplied to the industrial complexes.

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

The breakdown, by segment, of "*Supplies*" in 2023 and 2022 is shown below:

Supplies by segment	€ Millions	
	2023	**2022**
Upstream	85	137
Industrial	38,737	52,058
Customer	23,781	30,068
LCG	1,093	2,590
Adjustments [1]	(20,808)	(28,675)
TOTAL	**42,888**	**56,178**

[1] Relates to the eliminations for supplies between Group segments.

19.4 (Charges for)/Reversal of impairment

These headings include the following items:

Charges for/Reversal of impairment	€ Million	
	2023	**2022**
Impairment losses of assets (Notes 10.3, 17 and 20)	(1,671)	(3,371)
Reversal of impairment losses (Note 20)	1,361	698
TOTAL	**(310)**	**(2,673)**

In 2023, impairment losses were mainly recognized in the Upstream segment (€-728 million for production and development assets mainly in the US, Colombia and Algeria and €-370 million for goodwill associated with the acquisition of ROGCI) and the Industrial segment (€-469 million for the Chemicals business).

However, impairment losses were reversed for the Group's refineries (€725 million as a result of revising margin and distillation expectations) and the E&P assets in Canada (€521 million as a result of their sale).

For detailed information on impairment, see Note 20.

19.5 Personnel expenses

"*Personnel expenses*" includes the following items:

Personnel expenses	€ Million	
	2023	**2022**
Remuneration and other	1,531	1,516
Social security costs	479	451
TOTAL	**2,010**	**1,967**

This includes remuneration to members of the Board of Directors and key management personnel (see Note 28) and other personnel obligations such as pension plans and incentive plans (see Note 27).

The increase in personnel expenses in 2023 is mainly explained by the increase in employee salaries and a 5% increase in the headcount[41].

Staff

The Repsol Group employed a total of 25,059 people at December 31, 2023, geographically distributed as follows: Spain (17,729), Latin America (3,610), North America (922), Europe, Africa and Brazil (2,705), and Asia (94). The average headcount in 2023 was 24,680 employees (23,866 employees in 2022).

Below is a breakdown of the Group's total staff[42] distributed by professional category and gender at year-end 2023 and 2022:

Headcount by category and gender	**2023**			**2022**		
	Total	Men	Women	**Total**	Men	Women
Executives	222	173	49	221	176	45
Technical managers	2,438	1,654	784	2,257	1,507	750
Technicians	10,905	7,086	3,819	9,988	6,386	3,602
Manual workers and junior personnel	11,494	6,363	5,131	11,304	6,367	4,937
TOTAL	**25,059**	15,276	9,783	**23,770**	14,436	9,334

Using the calculation criteria stipulated in the Spanish Law on General Disability Rights and Social Inclusion[43], in 2023 Repsol surpassed the legally required percentage threshold in Spain, with its differently-abled workforce accounting for 2.34% of its workforce, namely 415 direct hires.

19.6 Exploration expenses

Hydrocarbon exploration expenses in 2023 and 2022 (determined in accordance with that explained in Note 4.4.4) amounted to €116 million and €452 million, of which €60 million and €133 million are recognized under "*Amortization and depreciation of non-current assets*" and €0 million and €217 million under "*(Charges for)/Reversal of impairment*" in 2023 and 2022, respectively.

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

Exploration expenses	€ Million	
	2023	**2022**
Europe	21	34
America	99	227
Asia	(4)	191
TOTAL	**116**	**452**

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

[41] For more information on the workforce and employee management policies, see section 7.3.1 of the 2023 consolidated Management Report.
[42] In accordance with the provisions of Organic Law 3/2007, of March 22, for the effective equality of men and women, published in the Official State Journal of March 23, 2007.
[43] Royal Legislative Decree 1/2013, of November 29, approving the consolidated text of the Spanish Law on the general rights of persons with disabilities and their social inclusion.

19.7 Gains/(losses) on disposal of assets

In 2023 this heading included gains (€49 million) and losses (€-45 million) on the disposal of assets. This includes, among others, the impacts from the sale of assets of the Upstream segment in Canada (Greater Edson) and the US (Salamanca Infrastructure).

On October 17, 2023, oil and gas assets in Canada were sold to Peyto Exploration & Development Corp. for $523 million, whereby this sale included all mining rights, facilities and infrastructure related to Repsol's oil and gas exploration and production business in Canada, including the assets in the Greater Edson area. The sale resulted in the reversal of the impairment losses related to these assets (see Notes 19.4 and 20.1). Following this sale, the liquidation and dissolution of Repsol Oil&Gas Canada Inc. (ROGCI) was completed, which means the end of Repsol's exploration and production activities in Canada.

On December 1, 2023, 20% of Salamanca Infraestructure LLC was sold — retaining 2.5% — to investment banks Arclight and Centaurus for $129 million, a company in charge of managing the construction of infrastructure (midstream) to develop the Leon-Castile asset located in the US Gulf of Mexico.

In 2022 the gains (€122 million) and losses (€-44 million) on the disposal of assets correspond mainly to the sale of E&P assets in Ecuador (blocks 16 and 67), in Malaysia (blocks PM3 CAA, Kinabalu and PM305/314) and in Canada (mainly Chauvin).

19.8 Transport and freights, supplies and other operating income / expenses

The expenses recognized under "*Transport and freight*" increased as a result of higher prices in the freight market, which was partly affected by geopolitical tensions (mainly in the Red Sea) and by limitations on the use of the Panama Canal.

The expenses under "*Supplies*" decreased mainly as a result of lower gas prices (the main European reference price TTF fell by 66% and the North American HH by 59%) and electricity prices (the electricity pool in Spain fell by 48%) for the consumption of industrial complexes.

Moreover, "*Other operating income/(expenses)*" includes the following items[44]:

Other operating income/(expenses)	€ Million	
	2023	**2022**
Other operating income [(1)]	**934**	**915**
Measurement of trade derivatives [(2)]	**197**	**(1,090)**
Other operating expenses:	**(5,335)**	**(3,994)**
Operator expenses [(3)]	(724)	(722)
Services of independent professionals	(587)	(463)
Leases [(4)]	(214)	(160)
Taxes [(5)]	(940)	(513)
Taxes on production	(190)	(263)
Other	(750)	(250)
Repair and upkeep [(6)]	(295)	(287)
Net use of CO_2 allowances [(7)]	(381)	(493)
Others [(8)]	(2,194)	(1,356)
TOTAL	**(4,204)**	**(4,169)**

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 others, the application of provisions credited to income (see Note 15). Includes grants related to income amounting to €24 million and €20 million in 2023 and 2022, respectively.

(2) Relates to derivatives (assets and liabilities) arranged in trading activities involving crude oil, gas, oil products and electricity (see Note 9). In 2023, the increase in "*Changes in trade derivative instruments*" is mainly explained by the improved valuation of positions and contracts of the natural gas trading and retail activity, which in 2022 were very negative due to the price environment.

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

(4) In 2023, this included expenses for short-term leases for which the underlying asset is of low value (€171 million) and for variable payments (€42 million).

(5) They correspond to taxes other than income tax (see Note 22). Taxes on hydrocarbon production in exploration and production activities have been paid mainly in Peru, Libya, and the US. Other taxes reflect local taxes and in 2023 also include the temporary energy levy in Spain (see Note 22). For more

[44] The information for 2022 has been modified for comparative purposes, whereby a change has been made to "*Other operating income*" and "*Other operating expenses*" so as to present the allocation of income from free CO_2 emission allowances (previously recognized under "*Other operating income*", see Note 16) together with the use of CO_2 allowances for the period under "*Net use of CO_2 allowances*" in the table.

information on taxes paid, see section 7.5 of the 2023 consolidated Management Report and the Report on Payments to Governments published by the Company.
(6) Relates to repair, upkeep and maintenance activities carried out mainly at the Group's industrial complexes.
(7) "*Net use of CO2 allowances*" decreased as a result of a decrease in the price of CO2 allowances and activity at industrial complexes (see Note 15). This includes the application of deferred income from the use of free CO2 allowances amounting to €609 million and €610 million in 2023 and 2022, respectively (see Note 16).
(8) Includes, among others, the provisions recognized (see Note 15.1), fees for bottled LPG and gas stations, processing costs, collection at industrial complexes, maintenance of servers, insurance expenses, research and development expenses, etc.

19.9 Research and development

Research expenses are recognized under "Other operating expenses" in the income statement for the year in which they are incurred.

Development expenses are recognized under assets and amortized over their useful life, up to a maximum of five years, provided that they qualify for recognition as assets. If there are reasonable doubts as to the project's technical success or economic and commercial profitability, the amounts recognized under assets are allocated directly to losses for the year.

The expense recognized in the income statement in connection with research and development activities was €68 million in 2023 and €59 million in 2022. The capitalized expenses corresponding to development activities amounted to €21 million in 2023.
The most notable research and development expenses for 2023 correspond to the following projects:

- Self-Driving Lab, in which technologies such as artificial intelligence, 5G, robotics and the Internet of Things (IoT) are used to manufacture lubricants and renewable fuels produced from waste, in a much more agile way, thus accelerating the design of new formulas.
- The design, manufacture and supply of the first batch of 100% renewable gasoline for gas stations and renewable fuels for competition, such as that used in the Dakar Rally.
- Circular Ethylene (Plastic2Olefins): a project that implements and scales a new technology for the chemical recycling of plastic waste to produce olefins, in consortium with twelve other technological and industrial partners.

For more information, see section 7.2.2 of the 2023 consolidated Management Report.

19.10 Environmental expenses

The investments and expenses identified as being of an environmental nature, are those whose purpose is to minimize environmental impact and protect or improve the environment. They are classified as such in accordance with the Group's technical criteria based on the guidelines issued by the American Petroleum Institute (API).

Environmental expenses, which are recognized under "*Other operating expenses*" (not including the expenses for the allowances necessary to cover CO2 emissions (see Notes 15 and 16) or those related to the spill in Peru (see Note 15.1)), amounted to €88 million and €82 million in 2023 and 2022, respectively.

In 2023, the most notable expenses are those that relate to the actions carried out for the protection of the atmosphere at the industrial facilities amounting to €20 million (€29 million in 2022); waste management amounting to €17 million (€15 million in 2022); and water management amounting to €12 million (€17 million in 2022).

Accordingly, the environmental investments made in 2023 amounted to €121 million (€65 million classified as "*work in progress*" at December 31). These investments most notably include those aimed at fulfilling the obligations assumed by the Company with regard to the energy transition (energy savings, energy efficiency or use of waste as raw material), management and optimization of water consumption, reduction of atmospheric emissions and soil remediation[45].

[45] In 2023, this most notably includes projects for the electrification of large machines in industrial complexes, the project for the new biodiesel and biojet production plant in Cartagena, the 100% renewable biodiesel production unit in Puertollano, the polyol and polyolefin production projects incorporating recycled material in Puertollano, renewable hydrogen production projects and a pilot plant to produce synthetic fuels in Bilbao.

(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 judgments and the determination, among other criteria, of the business units and geographical areas in which the Group operates. Against this backdrop, each CGU in the Upstream segment generally 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 segment, the CGUs correspond to activities and geographical areas (Refining Spain, Chemicals Iberia, etc.), as is the case with the Customer segment (Gas Stations Spain, Direct Sales Spain, LPG Spain, etc.). For low-carbon electricity generation, CGUs are considered by technology, geographical location and project (combined cycle, hydro and, individually, the different wind and solar photovoltaic projects).

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 4.5.1.

20.1 Asset impairment test

Assumptions regarding asset valuations

The Group has assessed the recoverable amount of its cash-generating units as per the methodology described in Note 4 and the scenarios consistent with its vision of the market, the expected environment and its strategy. The main assumptions used are described below:

a) Future price paths:

In 2023, the environment was characterized by the high volatility generated by the reopening after the pandemic and the huge energy shock following the Russian invasion of Ukraine, which contributed to the biggest spike in inflation in more than forty years and a strong tightening of monetary policy (see Note 3.4 and 20.3). Against this backdrop, the Group has revised its expectations for future crude oil and gas, electricity and CO2 prices in view of the bearish dynamics on commodity markets in 2023. The new estimates have been made in a highly uncertain environment, marked by the developments of the armed conflicts, the dynamics of the energy transition and decarbonization of the economy and, ultimately, by their possible impacts on the oil and gas markets.

- The price of a barrel of Brent crude oil was revised downward for 2024 as a result of the price decline observed throughout 2023. After this point the price path is then revised slightly upward taking into account the massive investment needs required to meet both demand and the decline in production in a historical context of very low investment levels in recent years. The price path considers reductions in demand due to energy transition and decarbonization policies, taking into account that oil, unlike gas, is not considered a "transitory" fuel for decarbonization.
- The price path for Henry Hub (HH) gas was revised slightly downward for the next five years to bring it into line with the current context of lower stresses than those experienced in 2022, while maintaining price supports for continued LNG exports. From 2042 onwards, it is revised slightly upward due to the slight change in the supply outlook, where investment will play a crucial role in order to further increase production. Particularly in the US, natural gas as a transition fuel in decarbonization processes should lead to more investment and production compared to oil, where the contribution to the electricity mix will remain high.

- In the case of electricity in Spain (electricity pool), the price path has been revised downward until 2032, and will then remain in ranges similar to those of the previous year's curve, taking into account the lower natural gas prices in Europe.
- The price path for CO_2 emission allowances was revised upwards in 2023 compared to 2022, at around $15 per ton, due to market trends (see Note 4.5.1).

The assumptions for the main price references are:

Prices in real terms (1)	**2024-2050** (2)	**2024**	**2025**	**2026**	**2027**	**2028**	**2029-2050** (3)
Brent ($/ barrel)	**72,2**	78,4	81,4	80,5	79,7	78,9	**70,5**
WTI ($/ barrel)	**70,1**	75,5	78,5	77,7	77,0	76,2	**68,6**
HH ($/ Mbtu)	**3,3**	3,3	3,6	3,5	3,5	3,5	**3,2**
Electricity pool (€/MWh)	**59,9**	98,1	93,4	85,1	78,7	72,1	**54,1**
CO_2 ETS-EU ($/Tn)	**89,3**	94,7	92,8	92,4	92,7	92,2	**88,4**

(1) To carry out the conversion in real terms, an inflation rate of 2% is used, which corresponds to the medium-term inflation target of the monetary policy established by the European Central Bank
(2) Average prices for the 2024-2050 period.
(3) Average prices for the 2029-2050 period.

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 Summit Agreement and sustainability goals of the UN. They assume the decarbonization of the economy and, therefore, restrictions 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. This will require companies to have a strategy in place to adapt to the energy transition that Repsol has already begun (see Note 4.5.2). These assumptions are also consistent with those considered to define Repsol's strategy and with the objectives set out in the strategic update published in February 2024 (2024-27 Strategic Plan). It should be noted that the 2024-27 Strategic Plan lays out certain pricing scenarios in order to demonstrate the Company's ability to meet its investment and shareholder remuneration objectives in different contexts and solely for this purpose. In any case, the most probable scenario, which coincides with the Company's view of future prices, is the one considered for the impairment test, as explained in Note 4.5.1.

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 risk. For more information, see Note 4.5.1.

Discount rates	**2023**	**2022**
UPSTREAM (1)		
North America (2)	8,8%	8,5% - 9,1%
Latin America (3)	8,8% - 37,6%	8,4% - 37,6%
Europe, Africa and rest of the world (3)	8,6% - 14,6%	8,1% - 16,9%
INDUSTRIAL (4)	7,2% - 10,5%	6,8% - 10,7%
CUSTOMER (4)	6,5% - 9,9%	6,7% - 10,4%
LCG (4)	7% - 8,3%	6,8% - 8,2%

(1) Discount rates in US dollars.
(2) In 2023, includes the US. In 2022, it also included Canada.
(3) In Latin America the high range corresponds to Venezuela and in North Africa corresponds to Libya.
(4) Discount rates in euros and dollars.

Discount rates remain at levels similar to those of 2022, since the higher risk-free interest rate is offset by lower credit risk, and in some cases, also lower country risk.

The recoverable amount of the assets, calculated using the weighted average cost of capital employed after tax in the table above, does not differ from that calculated using pre-tax rates, which (excluding outliers in some countries and businesses) would be an average of 15% for Upstream, 13% for Industrial, 14% for Customer and 10% for LCG.

Impairment recognized

In 2023 impairment losses were recognized for the Group's assets in these balance sheet headings:

Asset write-downs

€ Million	Notes	Total
Write-down of goodwill	11	(371)
Reversible impairment loss on intangible assets (1)	11	(21)
Reversal of the impairment loss on property, plant and equipment (1)	12	137
Reversible impairment loss on investments accounted for using the equity method (2)	13	(484)
Adjustments to deferred tax assets	22	(727)

(1) Does not include impairment losses on unsuccessful exploratory investments recognized in the normal course of operations (see Note 19.6) amounting to €-24 million (recognized under "*Other intangible assets*") and €2 million (recognized under "*Property, plant and equipment - Investments in exploration*").
(2) Before taxes.

Provisions, net of reversals, amounted to €-739 million before tax (€-1,793 million after tax)[46]. The main CGUs for which impairment losses were recognized or reversed are as follows:

– Various assets of the Upstream segment. Net impairment losses of €-895 million were recognized mainly in: (i) North America (€62 million) due to the reversals of impairment losses on assets sold in Canada, partially offset by impairment losses on certain US assets as a result of the impact of lower gas prices and higher investments on productive assets; (ii) Latin America (€-603 million) mainly in Trinidad and Tobago, Colombia and Venezuela due to lower expected gas prices and less activity as a result of the natural decline of fields; and (iii) impairment of ROGCI goodwill (€-370 million) following the withdrawal from Canada and liquidation of ROGCI.

– Refineries in Spain. Impairment losses of €725 million before tax recognized in prior years were reversed. The reversal is the result of improved expectations regarding distillation and production margins (co-processed to manufacture biofuel), largely offset by the estimated adverse impact of the extension of the temporary energy levy (see Note 22.1.c.3) and the increase in the cost of capital (discount rate of 9.0%, up from 8.4% in 2022).

  The recovery in demand and the geopolitical context have driven the strengthening of industrial margins in the last two years (reflected in the recoverable amount of current assets in the 2023 impairment test). However, other dynamics are negative, such as public policies that make the refining industry in Spain less competitive (temporary levies on energy companies (see Note 22.1.c.3), or restrictions on the supply of heavy crude oil that affect the impact on the supply alternatives of the refineries.

– Assets and investments of the Chemicals business. Impairment losses of €-528 million before tax were recognized. This related mainly to Spain, affected by the deterioration of the situation in international markets, which has collapsed margins and product demand, and by the poor framework for industrial activity in Spain (temporary energy levy) and energy costs.

  The context of geopolitical uncertainty and the negative dynamics of the chemical industry since mid-2022 have led to a downward revision of the forecast for margins and demand.

The recoverable amount of the impaired assets comes to roughly €9,881 million.

In addition, deferred tax assets in the US, Algeria and Mexico were reduced by €-727 million in 2023 (see Note 22).

[46] In 2022 provisions, net of reversals, amounted to €-2,598 million before tax (€-1,755 million after tax)

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 main sensitivities to these variations without taking into account the rebalancing of other related variables or the possible adjustments of the operational plans, which would allow the negative impact of the above-mentioned variations to be mitigated, are indicated in the table below:

Sensitivity of main assumptions		€ Million	
	Increase (+) / decrease (-)	Operating income	Net income [1]
Change in hydrocarbons prices	20%	1,714	1,819
	10%	911	931
	(10)%	(2,381)	(2,329)
	(20)%	(4,806)	(4,345)
Change in hydrocarbons production	10%	791	817
	(10)%	(2,040)	(2,096)
Change in hydrocarbons prices (+/-20%) and production (+/-10%)	+	2,232	2,517
	-	(6,680)	(5,985)
Changes in the margins of Industrial, and Customer and LCG	10%	713	566
	(10)%	(1,500)	(1,164)
Change in discount rate	+100 b.p.	(1,602)	(1,224)
	-100 b.p.	1,249	931

[1] Includes impact on investments accounted for using the equity method.

In response to requests from information users, the Company also reports the impact impact that would result from using in the impairment test the hydrocarbon price paths of the International Energy Agency's Net Zero Emissions (NZE) 1.5°C scenario, published in the *World Energy Outlook 2023*[47] report, which would imply additional impairments of around €5,400 million after tax.

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 mainly in Venezuela, Bolivia, Algeria and Libya.

<u>Russia's invasion of Ukraine</u>

Following Russia's invasion of Ukraine on February 24, 2022, economies around the world, including the United States, the European Union and the United Kingdom, announced the imposition of trade sanctions targeting Russian individuals, companies and institutions. These sanctions, and the counter-sanctions imposed by Russia, have triggered a significant reduction in commercial operations between Russia and these economies. This has led to an increase in the raw material prices in world markets for oil, natural gas and wheat, among other products, and has exacerbated inflationary pressures, bottlenecks in the supply chain, and volatility in financial and raw material markets.

The European Central Bank (ECB) has raised its inflation forecasts and cut its growth outlook as the conflict is likely to keep commodity material prices high, weakening household purchasing power and the investment capacity of companies. In response to rising inflation, the ECB also decided to modify its monetary policy, reducing its bond-buying program and raising interest rates. Lower business and consumer confidence and activity, and energy-led inflationary pressure, have all led to a slowdown in the global economy, which is still recovering from the effects of the COVID-19 pandemic.

Although the Group does not have any equity exposure or a significant commercial position in these countries following the divestment of all its assets in Russia in 2021, Repsol is exposed to indirect risks arising from the new macroeconomic

[47] These paths consider prices in real terms of $45/bbl in 2030 and $27/bbl in 2050 for crude oil and $2.4/MBtu and 2.0 MBtu, respectively, for gas in North America. The NZE scenario is one of many possible scenarios that can be projected to limit the temperature increase to 1.5°C. In fact, the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC), published in 2022, includes more than 200 scenarios consistent with a temperature increase limited to 1.5°C in 2100, of which 28 reach emissions neutrality in 2050 and the rest do so later.

scenario marked by the war (ban on operations under the framework of sanctioning policies, regulatory and intervention measures in the energy markets (see Appendix III)), and changes in the monetary policies of central banks, which entail a significant increase in interest rates (see Note 10) and, therefore, in discount rates (see Note 20).

It is difficult to predict to what extent and for how long into the future the war will have an impact. The course of the war, along with the financial and fiscal policies adopted by governments, will shape the scope and duration of both the crisis and the subsequent recovery process.

Conflict in the Red Sea

Since October 7, Houthi militants (members of a rebel group also known as Ansar Allah "Supporters of God") in Yemen have been attacking commercial cargo ships in the Red Sea, severely disrupting maritime trade, in retaliation to Israel's invasion of Gaza.

The group is using drones to attack ships that it believes are delivering goods to Israel. These attacks are taking place in the crucial Bab al-Mandab Strait, which connects the Red Sea to the Arabian Sea, and borders Yemen on one side and Djibouti and Eritrea on the other.

The increased risk to ships traveling through this strait is forcing shipping companies to avoid the Red Sea, in turn preventing access to the Suez Canal, through which nearly 12% of the world's maritime trade passes. Ships diverted from the Suez Canal are now being forced to round the Cape of Good Hope. This longer route increases fuel and freight costs, reduces shipping efficiency, and affects the price of goods transported.

In response to the Houthi attacks, the US has formed a defense coalition led by nine other nations working together to strengthen security in the area.

The risk premium on the price of crude oil is in a range around $5/bl, which rises or falls depending on the intensity of the attacks. However, the fuel market, especially diesel fuel, has been the most affected by this conflict, reaching its highest level in three months in early February, since the detours around Africa have destabilized supply lines to Europe, which were already complicated by the Russian invasion of Ukraine.

With regard to macroeconomic repercussions, the up to 400% increase in shipping costs from Asia to Europe and 100% from Asia to the United States has rekindled concerns regarding inflation, especially given the recent experience of the impacts caused by disruptions in the supply chain of goods following the lockdowns.

However, the scenario is now very different. The current increase in transportation costs does not stem from widespread factory closures or increased demand, which were key factors in the post-pandemic rise in inflation rates for goods. In addition, international transportation costs constitute a small fraction of the final price of consumer goods (approximately 1.5% on average), and ocean freight costs represent an even smaller proportion (0.7%). Therefore, according to estimates by various institutions, even considering aggressive cases as regards passing on cost increases to the final price of goods, the current disruptions would only result in an increase of approximately 0.1 percentage points in general inflation in the US and 0.15 percentage points in Europe, with a considerably smaller impact on core inflation.

Venezuela

Repsol has a presence in Venezuela through its holdings in and gas licensees (Cardón IV, etc.) and in mixed oil companies (Petroquiriquire and others). The country faces a crisis that affects the business development. Notwithstanding this, the outlook has improved as a result of the improvement in the political and social situation and a relative relaxation in the coercive measures[48] of the US Government imposed on Venezuela. In this regard, on December 18, 2023 Repsol and PDVSA signed a new management agreement for the Petroquiriquire joint venture to increase production (in the Mene Grande, Barúa Motatán and Quiriquire fields) and facilitate the recovery of the debt linked to these assets, without the need for additional investments by Repsol.

Repsol's total equity exposure[49] in Venezuela on December 31, 2023 amounted to €259 million, (€411 million on December 31, 2022), which includes mainly the financing granted to its Venezuelan subsidiaries (see Note 8 and 13), the investment in Cardón IV (see Note 13) and the accounts receivable from PDVSA (see Notes 14 and 17).

[48] The General License 44 issued by the OFAC as a result of the agreements reached between the Venezuelan regime and the opposition in October 2023.
[49] Equity exposure relates to the value on the Group's balance sheet of net consolidated assets exposed to own risks of the countries reported.

Although there was an improvement in forecasts, the political and economic crisis described in Note 20.3 of the financial statements for 2022 continued in 2023. GDP[50] decreased by 0.7% in 2023 and inflation continued to be very high, reaching 190%[51] in 2023 and 200% is forecast for 2024. Oil production, which has been significantly reduced in recent years, has recovered in 2023 and there was a significant devaluation of the Venezuelan currency (€18.694/Bs compared to €18.423/Bs on December 31, 2021 , SIMECA exchange rate[52]), although this devaluation has not had a significant impact on the Group's financial statements, given that the functional currency of most of its subsidiaries in the country is the US dollar[53] (see Note 13).

In relation to the international sanctions affecting the Venezuelan government and PDVSA and its subsidiaries, it should be noted that on October 18, 2023 the General License 44 was granted by the Office of Foreign Assets Control ("OFAC"), by which the US Government authorizes any company in the oil and gas sector to carry out operations in Venezuela for a period of 6 months. This license represents a temporary relief from the sanctions regime, and it was granted following the agreement reached by the Venezuelan Government with the opposition which required the Venezuelan Government to commit holding democratic and free presidential elections (in 2024), as well as addressing other issues such as the release of political prisoners. If the Venezuelan Government keeps its word, the license would be extended upon expiry in April 2024.

On January 30, 2024, the U.S. government announced that in absence of progress between Maduro and his representatives and the opposition Unitary Platform, particularly on allowing all presidential candidates to compete in this year's election, the United States will not renew GL 44, "Authorizing Transactions Related to Oil or Gas Sector Operations in Venezuela," when it expires on April 18, 2024.. Repsol is currently analyzing these new developments in order to properly understand their scope and mitigate their impact on the business plans in the country.

Repsol continues to adopt the necessary measures to continue its activities in Venezuela in full compliance with applicable international sanctions, including US policies in relation to Venezuela, and is constantly monitoring changes and developments and, therefore, the possible effects they may have on such activities.

The Group evaluates the recoverability of its investments, as well as the credit risk on accounts receivable from PDVSA. To evaluate investments in this country, it is necessary to use certain hypotheses and assumptions (such as asset development plans, compliance with signed agreements and the evolution of the environment) that require significant judgments and estimates and that are subject to high uncertainty (see Notes 4.5 10.3 and 13).

Regarding financial instruments, expected loss is calculated considering the cash flow scenarios forecast for the business, weighted by their estimated probability. Three severity scenarios are applied (moderate, significant and serious) with different assumptions and economic impacts on the estimated cash flows. The probability of occurrence of these scenarios is in turn weighted based on historical information on sovereign defaults (Moody´s "Sovereign Default and recovery rates 1983-2022" report) and management's expectations. The estimated cash flow scenarios are consistent with those used for the purpose of calculating the recoverable amount of the assets. The evaluation of impairment due to credit risk in Venezuela required estimates to be made of the implications and evolution of a highly uncertain environment, which made it advisable to compare with an independent expert to validate the management's judgments.

As a result, in 2023, the Group recognized provisions for PDVSA's credit profile and for the difficult business environment in Venezuela, affecting the value of financing instruments and accounts receivable from PDVSA (€-34 million, see Notes 8, 14 and 17)[54] and the value of investments accounted for using the equity method (€-295 million, see Note 13).

Bolivia

The Group has carried out activities related to oil and gas exploration and production in Bolivia since 1994, participating at December 31, 2023 in three contractual areas, in addition to owning a 48.33% interest in the share capital of YPFB Andina, S.A. The estimated net proven reserves on December 31, 2023 were 46.8 million barrels of oil equivalent. Around 65% of these correspond to the Margarita-Huacaya field in production, located in the south of Bolivia, in the regions of Tarija and Chuquisaca. Repsol has a 37.5% interest in the project, operating together with Shell (37.5%), and Pan American Energy (25%).

Repsol's equity exposure in Bolivia on December 31, 2023 amounted to €466 million (comprising mainly the value of productive assets – property, plant and equipment and value of the investment by the equity method – at that date).

[50] Source: International Monetary Fund estimate.
[51] Values estimated in accordance with the National Price Index of the National Assembly (INPCAN).
[52] SIMECA (Exchange Market System) reference exchange rate.
[53] Quiriquire Gas's functional currency is the bolivar (the carrying amount of the investment is nil, so any effect from the conversion to euros is not significant.
[54] Recognized under "*(Charges for)/reversal of impairment*" (credit risk, see Notes 10.3 and 19.4) and "*Impairment of financial instruments*" (see Note 21), of the income statement.

The economic stability of the country has been affected by the financial impact of the fall in the international reserves of the Central Bank of Bolivia, generated mainly by the high international prices of fuels that the State has to import, which are marketed in the local market at subsidized prices. The drop in these reserves has led to an increase in bank fees for remittances abroad. In addition, the scarcity of reservescould have animpacton the State's ability to pay its obligations, including the Remuneration to the titleholder of the Operating Contracts., an aspect partially mitigated by the agreements included in the Operating Contracts themselves, in addition to the strategic condition of the hydrocarbon industry as a source of generating foreign currency for the country.

With regard to the political situation, there are internal divisions within the governing party, which makes it difficult to pass laws in Congress and hinders basic operations of the authorities. This division has moved to the streets, where there have been road blockades by sectors demanding judicial elections be called. This situation has caused difficulties in the distribution and sale of fuels in the domestic market, which has had a negative economic impact on the country.

Average net production in Bolivia in 2023 was 30.8 thousand barrels of oil equivalent per day (33.1 thousand barrels of oil equivalent per day during the same period in 2022).

Algeria

Repsol has two blocks in the production phase in Algeria, Reggane Nord and block 405a (with the MLN, EMK and Ourhoud licenses).

Repsol had a 29.25% interest in the project up until October 2023, operating jointly with the Algerian state company Sonatrach ([40]%), the German Wintershall Dea AG (19.5%) and the Italian Edison Reggane SPA (11.25%). On October 11, the sale and purchase transaction was carried out through which Edison sold its shareholding to Repsol and Wintershall Dea AG, thus increasing their shareholdings to 36% and 24%, respectively.

In 2023 a new contract was signed for block 405a, which allows operations to be extended for another 25 years with an option for an additional 10 years. This contract has yet to be approved by the Algerian Council of Ministers and has not yet been published in the Algerian Official Gazette, at which time the contract would enter into force.

The estimated net proven reserves at December 31, 2023 were 21.1 million barrels of oil equivalent. Around 83% the net proven reserves, correspond to the Reggane gas project in production, located in the Algerian Sahara, in the Reggane basin.

Repsol's equity exposure in Algeria at December 31, 2023 amounted to €277 million (comprising mainly property, plant and equipment at that date).

With regard to the geopolitical situation, in June 2022 the Algerian Government, through the Association of Banks and Financial Institutions, ordered the country's financial institutions to freeze direct debits in all foreign trade operations of products to and from Spain and broke from the "Friendship, Good Neighbor and Cooperation Treaty" signed between both countries. With the reinstatement of the Algerian ambassador to Spain in November 2023, the diplomatic rift is considered to be over. This conflict did not have a major impact on operations in 2023.

The average net production in Algeria in 2023 was 11.0 thousand barrels of oil equivalent per day from the Reggane Nord and 405a blocks (12.3 thousand barrels of oil equivalent per day in 2022).

Libya

Repsol has been present in Libya since the 1970s, when it began exploratory activities in the Sirte Basin. At December 31, 2023, Repsol had mining rights in this country over two contractual areas with exploration and production activities, located in the Murzuq basin, known as the El Sharara oil field, with net estimated proven reserves at December 31, 2022 of 101.2 million barrels of oil equivalent.

Repsol's equity exposure in Libya at December 31, 2023 amounted to €511 million (comprising mainly property, plant and equipment at that date).

There are still two governments in the country: the government in the East and the Government of National Unity in the West. The government in the West is recognized by the United Nations and Western countries, and maintains control of Tripoli through various militias that oversee security and condition government action. The Libyan parliament is still based in Tobruk and remains aligned with the Benghazi government. Accordingly, it exercises control over 80% of Libyan territory through the Libyan National Army, under the command of Marshal Haftar.

Following the failure to hold UN-supported presidential elections in December 2021, the new UN Special Envoy for Libya and Head of the United Nations Support Mission in Libya has set up a high-level committee between the House of Representatives and the High Council of State to reach minimum agreements to enable presidential and parliamentary elections to be held. In addition, the United Nations promoted restoring the Political Dialogue Forum, as an international attempt to overcome the deadlock through the direct appointment of 40 Libyan nationals from various sectors in order to pave the way for elections. However, the Prime Minister has decided not to resign before the elections are held, as required.

The ceasefire continues in the country. The United Nations Special Envoy for Libya has recognized the progress made in the DDR (disarmament, demobilization and reintegration) process. The balance between the militias at a time when the boom in oil prices is guaranteeing income for these groups keeps the escalation of fighting at bay for the time being, but a drop in the price of crude oil would increase tensions between militias, and between the countries that are encouraging the conflict through their local representatives.

Production at the El Sharara field was interrupted on only one occasion in 2023, for a period of 24 hours. On January 3, 2024, production was interrupted for safety reasons, with force majeure being declared on January 7, 2024, and production began once again on January 21. Repsol's average net production of crude oil in Libya in 2023 was 32.9 thousand barrels of oil per day (28.6 thousand barrels of oil per day in 2022).

(21) Financial result

The breakdown of financial income and expenses in 2023 and 2022 is as follows:

Financial result	€ Million	
	2023	**2022**
Financial income	425	157
Financial expenses	(279)	(238)
Net interest (1)	**146**	**(81)**
By interest rate	81	129
By exchange rate	(222)	470
Other positions	9	342
Change in fair value of financial instruments (2)	**(132)**	**941**
Exchange gains/(losses) (3)	**242**	**(434)**
Impairment of financial instruments (4)	**(114)**	**49**
Adjustment for provision discounting	(128)	(75)
Interim interest	158	70
Interest on leases (5)	(171)	(177)
Others	36	38
Other financial income and expenses	**(105)**	**(144)**
FINANCIAL RESULT	**37**	**331**

(1) Includes interest income from financial instruments measured at amortized cost in the amount of €425 million (€157 million in 2022).
(2) Includes the results from the valuation and settlement of derivative financial instruments (see Note 9). "*Other provisions*" includes the results from the valuation and settlement of derivatives on treasury shares (see Notes 6.2 and 9).
(3) Includes the exchange gains and losses generated by the valuation and settlement of monetary items in foreign currency.
(4) Includes impairment losses on loans granted to investments accounted for using the equity method in Canada (Industrial) and Venezuela (Upstream).
(5) Corresponds to the financial discounting of lease liabilities.

The financial result is lower than that of 2022. The poor valuation of derivatives on treasury shares (see Note 9) and interest rate and dollar/euro exchange rate positions recognized under "*Change in fair value of financial instruments*" have been mitigated by the gains recognized under "*Exchange gains/(losses)*" and higher amounts recognized under "*Financial income*" due to the returns obtained from the Group's high liquidity.

(22) Income tax

The appropriate assessment of the income tax expense is dependent on several factors, including estimates on the timing and realization of tax credits and 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 that they are not recovered, 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 verify the existence or otherwise of sufficient future earnings for tax purposes that might offset the tax losses or apply existing tax credits; (ii) the assessment of earnings estimates for each entity or tax group in accordance with their individual business plans; and (iii) the statute of limitations period and other limits established under prevailing legislation in each country for the recovery of the tax credits.

22.1 Applicable taxes

With regard to taxation and, in particular, income tax, the Repsol Group is subject to the regulations of several tax jurisdictions due to the broad geographical mix and the significant 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, occasionally, by the taxation of these earnings in more than one country (double taxation).

a) In Spain

Most of the entities resident in Spain for tax purposes are subject to taxation for corporate income tax 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. This Consolidated Tax Group was composed of 114 companies in 2023, 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 Comercial de Productos Petrolíferos, S.A., Repsol Exploración, S.A., Repsol Exploración Murzuq, S.A., Repsol Generación Eléctrica, S.A. and Repsol Renovables, S.A.

Moreover, Petróleos del Norte, S.A. (Petronor) is the company representing Consolidated Tax Group 02/01/B, to which the special regional corporate income tax regulations of Vizcaya are applicable. There were a total of nine companies comprising the aforementioned Group in 2023, the most significant of which are as follows: Petróleos del Norte, S.A. (Petronor), Repsol Customer Centric, S.L. and Repsol Industrial Transformation, S.L.

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.

Spanish companies, whether taxed individually or on a consolidated basis, were subject to a general tax rate of 25% in 2023, except for the Petronor group, which is taxed at a rate of 24% under Vizcaya provincial regulations.

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 income tax rate in force 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 Algeria, Indonesia, Libya or Peru).

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%	Mexico	30%
Bolivia	25%	Norway	78%
Brazil	34%	Netherlands	25,8%
Chile	27%	Peru [5]	29,5%
Colombia [2]	35%	Portugal	22,5% - 31,5%
United States [3]	21%	United Kingdom [6]	40%
Indonesia	32,5% - 44%	Singapore	17%
Italy [4]	24%	Trinidad and Tobago	55% - 57,2%
Libya	65%	Venezuela	34% (Gas) y 50% (Oil)
Luxembourg	25%		

[1] Plus tax on exceptional profits (TPE).
[2] The applicable rate could reach 50% subject to changes in crude oil prices.
[3] Does not include state taxes.
[4] Does not include regional rates.
[5] General rate.
[6] Does not include the Energy Profit Levy (tax rate of 35% from 2023 to 2028).

c) New developments in the tax regulatory framework

c.1) Main tax reforms in the period

- In Spain, in December 2022, Law 38/2022, of December 27, 2022, amended, among others, the Corporate Income Tax Law, effective for tax periods beginning on January 1, 2023, introducing a temporary limitation of 50% on offsetting losses in consolidated tax groups. The amount of the individual negative tax bases not included in the tax base of the consolidated tax group will be included, in equal parts, in the ten tax periods starting January 1, 2024.

- In the US, the government changed the rules of the game in the development of renewable energies with the approval of the Inflation Reduction Act ("IRA") in August 2022. The IRA provides a stable legal framework for both foreign and domestic investors, supporting technological neutrality, and helping to gradually reduce dependence on Asia in the supply chain. Specifically, it increases tax credits so that they could finance between 30% and 70% of investments and enables the immediate monetization of these credits.

- In Portugal, an Incentive for the Capitalization of Companies was approved, which allows the corporation tax base to be reduced by 4.5% of the net increase in shareholders' equity.

c.2) Minimum tax (OECD Pillar II)

In October 2021, 137 countries in the OECD Inclusive Framework reached a political agreement to establish common standards to guarantee minimum tax for multinational groups. This agreement resulted in the publication in December 2021 of the model rules that would ensure a global effective tax of 15%.

In December 2022, the 27 Member States of the EU approved a Directive, substantially based on the OECD model rules, which must be implemented into the national legislation of each State before the end of 2023, for its entry into force in the fiscal year 2024.

The progress regarding domestic implementation of a minimum tax in the countries where the Repsol Group has a presence are as follows: a) Italy, Luxembourg, Norway, the Netherlands and the United Kingdom have already approved national regulations, b) in Spain and Portugal, these regulations are currently being processed, c) in the other countries (Brazil, the United States, Indonesia, Peru, Trinidad and Tobago, etc.), it is still unknown whether these regulations will be implemented locally. Countries that do not fall under the Inclusive Framework, such as Algeria, Bolivia, Libya or Venezuela, are not expected to introduce regulations in this regard.

Beyond a significant increase in the tax compliance burden, the Repsol group does not expect significant economic impacts from the application of this new regulation, as it is already subject to effective tax rates well above 15% in the main countries where it operates. However, the complexity of the regulation could cause specific cases of double taxation.

For the appropriate purposes, it should be noted that the exception to recognize and disclose information on deferred tax assets and liabilities related to income taxes under Pillar II is applicable.

c.3) Levies on extraordinary profits

In Spain, Law 38/2022, of December 27, 2022, introduced into domestic law a temporary energy levy that certain operators in the energy sector must pay on a temporary basis for two years. The tax applicable is 1.2% of the net revenue from the Group's activity carried out in Spain in 2022 and 2023, with certain adjustments. Royal Decree Law 8/2023, of December 27, 2023, provided for the extension of the temporary energy levy for 2024, established an investment incentive, and envisaged its reconfiguration in 2024 to be fully integrated into the tax system.

The temporary energy levy corresponding to operations carried out in 2022 was recognized, in accordance with the criteria given by the Spanish National Securities Market Commission (CNMV), as an expense on January 1, 2023 in the amount of €443 million, and was paid in February and September 2023 (an effect mitigated by the partial reversal of the impairment loss on the Refining business in Spain as it was taken into account in its impairment test; see Note 20). The above accounting criteria of the CNMV have been applied in the financial statements, however, it is the Company's opinion that they are not consistent with either the substantive characteristics of the levy or the principles of financial reporting, since as it is a tax levied on the income of a year and whose payment is certain at the end of the year, it should be recognized as an expense in 2022 and 2023, not in the following year.

Following this same criteria of the CNMV, the temporary energy levy corresponding to operations carried out in 2023, which is estimated at approximately €350 million, will be recognized as an expense for accounting purposes on January 1, 2024.

Repsol, in accordance with the views of its internal and external advisors, considers that the temporary energy levy is incompatible with the Spanish Constitution and European Union law, and has therefore filed an appeal with the Courts requesting its annulment (See Note 22.4).

22.2 Accrued income tax expense

The table below shows how the accrued income tax expense for accounting purposes in 2023 and 2022 was calculated:

Income tax expense	€ Million	
	2023	**2022**
Current tax on income for the year (1)	(1,250)	(2,349)
Deferred tax for the year (2)	733	(364)
Adjustments from previous years and other adjustments (3)	(564)	(122)
Total income tax (expense)/income	**(1,081)**	**(2,835)**

(1) Accounting expense for the tax to be paid on earnings obtained in the current tax year.
(2) Accounting expense for temporary differences arising in the year and for application of tax credits from previous years.
(3) Adjustments corresponding to previous years' income tax (including changes in tax provisions and deferred tax assets, adjustments to the estimated amount of the previous year's tax, etc.).

The reconciliation of "*Income tax expense*" recognized to the expense that would result from applying the statutory income tax rate existing in the country of the parent company (Spain) is as follows:

Reconciliation of income tax expense	€ Million	
	2023	**2022**
Profit before income tax	4,365	7,180
Profit of investments accounted for using the equity method	34	989
Profit before income tax and profit of investments accounted for using the equity method	**4,331**	**6,191**
General nominal income tax rate in Spain	25%	25%
Income tax (expense)/income at the general nominal rate in Spain	**(1,083)**	**(1,547)**
Additional income tax (expense)/income due to adjustments to nominal rates other than the general rate in Spain [1]	(575)	(855)
Additional income tax expense from non-deductible expenses [2]	(183)	(328)
Lower income tax expense due to application of mechanisms to avoid double taxation [3]	270	5
Lower income tax expense due to application of tax credits and incentives [4]	33	30
Income tax income due to adjustments for deferred taxes [5]	1,434	136
Income tax expense due to provisions for income tax risks	(1,032)	(115)
Other items [6]	55	(161)
Income tax (expense)/income	**(1,081)**	**(2,835)**

(1) Profit taxed abroad or in Spain at tax rates other than 25% (regional regimes, etc.).
(2) Corresponds to accounting provisions and expenses that are not tax deductible (among others, the Spanish temporary energy levy).
(3) Includes mechanisms to prevent international and internal double taxation, whether in the form of exemptions, tax relief and tax credits.
(4) Relates mainly to the application of the tonnage tax regime in Spain.
(5) Includes mainly the recognition for accounting purposes of deferred tax assets for tax-deductible impairment losses from prior years, and the adjustment, after reviewing their recoverability, to deferred tax assets in the US, Mexico and Algeria (see Note 20.1).
(6) Includes mainly income tax adjustments/payments from previous years and tax costs (taxes withheld) as a result of dividends distributed.

22.3 Deferred taxes

a) *Deferred taxes recognized*

The Group presents deferred tax assets and liabilities on a net basis in each company or entity. The breakdown of the deferred tax assets and deferred tax liabilities by underlying concept recognized in the accompanying balance sheet is shown below:

Deferred taxes	**€ Million**	
	2022	**2021**
Tax losses, tax credits and similar benefits (not yet used)	4,035	2,303
Amortization differences for tax and accounting purposes	(2,154)	(1,445)
Provisions for field decommissioning (not yet used)	1,041	304
Staff and other provisions (not yet used)	926	643
Other deferred taxes	51	221
Total deferred tax	**3,899**	**2,026**
Provisions for contingencies related to income tax [1]	(2,551)	(1,463)
Net deferred tax and other taxes	**1,348**	**563**

(1) The changes in provisions for contingencies related to income tax is as follows: (i) provisions charged to profit or loss, €-1,057 million; (ii) payments/ reclassifications, €-41 million; and (iii) translation and other differences, €9 million.

The breakdown of changes in deferred taxes in 2023 is as follows:

€ Million	**2023**	**2022**
Opening balance	**2,026**	**2,188**
Income/(expense) in the income statement	1,411	(340)
Income/(expense) in equity	(54)	102
Translation differences for balances in foreign currency	(47)	79
Other [1]	563	(3)
Closing balance	**3,899**	**2,026**

(1) Relates mainly to deferred taxes due to the integration of Repsol Resources UK (see Note 13), and the acquisition of Asterion Energies S.L. (see Note 11).

In 2023, deferred tax assets were recognized in Spain (€914 million) as a result of the tax losses generated in the year affected by the temporary limit of 50% on offsetting losses in consolidated tax groups; in the United Kingdom (€777 million) due to the inclusion of Repsol Resources UK (see Note 13); and in Luxembourg (€230 million) for the improvement in expected future earnings. Furthermore, following the impairment test carried out by the Group on its assets (see Note 20.1), a adjustment has been made to the tax credits in the US, Mexico and Algeria.

b) *Tax assets and other tax credits*

The tax assets recognized corresponding to tax losses, tax credits and similar tax benefits (not yet used) amount to €4,035 million and relate mainly to:

Country	€ Million	Legal expiry	Estimated recoverability
Spain [1] [2]	2,701	No time limit	In less than 10 years
United Kingdom	594	No time limit	In less than 10 years
Luxembourg	347	No time limit	In less than 10 years
United States	320	20 years / no time limit	Mostly in 10 years
Algeria	49	No time limit	In less than 10 years
Portugal	19	No time limit	In less than 10 years
Other	5	-	-
Total	**4,035**		

[1] Includes, among other tax losses, those generated in 2023 affected by the temporary limit of 50% on offsetting losses in consolidated tax groups established by Law 38/2022.
[2] The possible impacts of the declaration of unconstitutionality of the limits on offsetting tax losses and tax credits from prior years established by Royal Decree Law 3/2016 (see Note 22.4) are not taken into account.

c) *Deferred tax assets not recognized*

Below is a breakdown of the net deferred tax assets not recognized at 2023 year-end:

		Opening balance by item		
Country	€ Million	Tax losses	Tax credits	Other deferred taxes
Luxembourg	2,625	2.625	—	—
United Kingdom	1,302	1.103	—	199
United States	1,100	976	—	124
Spain [1]	655	207	164	284
Canada	249	1	—	248
Algeria	62	62	—	—
Mexico	74	74	—	—
Netherlands	9	9	—	—
Singapore	9	9	—	—
Venezuela	8	—	—	8
Brazil	1	1	—	—
Colombia	1	—	—	1
Bolivia	1	1	—	—
Total [2]	**6,096**	**5,068**	**164**	**864**

NOTE: In 2022 this amounted to €5,121 million.
[1] In Spain this does not include deferred tax liabilities associated with taxable temporary differences on investments in subsidiaries, associates and permanent establishments that meet the requirements established in IAS 12 to apply the accounting exception (€97 million and €94 million at the end of 2023 and 2022, respectively).
[2] This does not include the amount corresponding to net deferred tax assets not recognized of companies accounted for using the equity method, which amounted to €578 million: Venezuela, €460 million, (ii) Trinidad and Tobago, €112 million, (iii) Spain, €4 million, and (iv) Bolivia, €2 million.

22.4 Government and legal proceedings with tax implications

As established by current legislation, taxes cannot be considered definitively settled until the returns submitted have been inspected by the tax authorities or the statute of limitations applicable in each jurisdiction has elapsed.

When different interpretations of the tax regulations applicable to certain operations arise between Repsol and the tax authorities, the Group acts with the authorities in a transparent and cooperative manner to resolve disputes through the legal formulas available, with the aim of reaching a non-litigious solution. However, both in previous years and this year, there have been administrative and legal proceedings with tax implications contrary to the Group's aims, which have given rise to litigious situations and possibly additional tax liabilities. Repsol considers that its action in these matters has been in accordance with the law and is based on reasonable interpretations of the applicable regulations, and has therefore filed the appropriate appeals in defense of the interests of the Group and its shareholders.

It is difficult to predict the period for resolution of such disputes due to the length of the claims procedure. The Company, based on the advice of internal and external tax experts, considers that the tax debts that could ultimately arise from these actions would not significantly affect the attached financial statements.

The Group's general policy is to recognize provisions for tax-related litigation where it is determined that the risk of losing is probable. 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.

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

Country	Years	Country	Years
Algeria	2019 - 2023	Luxembourg	2019 - 2023
Bolivia	2016 - 2023	Mexico	2019 - 2023
Brazil	2018 - 2023	Norway	2018 - 2023
Chile	2020 - 2023	Netherlands	2020 - 2023
Colombia	2018 - 2023	Peru	2020 - 2023
Spain	2021 - 2023	Portugal	2020 - 2023
United States	2020 - 2023	United Kingdom	2018 - 2023
Indonesia	2019 - 2023	Singapore	2018 - 2023
Italy	2017 - 2023	Trinidad and Tobago	2017 - 2023
Libya	2015 - 2023	Venezuela	2017 - 2023

Given the uncertainty as to whether the existing tax risks associated with litigation and other tax contingencies will materialize, the Group has recognized provisions considered adequate to cover the corresponding risks. At December 31, 2023, the Group has recognized €2,551 million for uncertain income tax positions (€1,463 million at December 31, 2022). In addition, it recognized tax provisions for an amount of €396 million (€240 million at December 31, 2022), 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. (see Note 13) is involved in a lawsuit regarding the deduction of royalty payments and hydrocarbon shares from the Company's income tax. After an unfavorable ruling at first instance, a favorable ruling was handed down at second instance, which was challenged by the tax authorities before the Supreme Court. On January 16, 2024, this Court ruled that the appeal to the Supreme Court filed by the tax authorities was unfounded (the ruling is not yet final as it is subject to appeal).

– *Brazil*. Petrobras, as operator of the Albacora Leste (currently operated by Petro Rio), BMS 7, BMES 21 and BMS 9 consortia — in which Repsol has or had a 6%, 22%, 7% and 15% net interest, respectively — received various tax assessments (IRRF, CIDE and PIS/COFINS)[55] for 2008 to 2013, in connection with payments to foreign companies for charter contracts for exploration platforms and related services.

  Repsol Sinopec Brasil, S.A. (RSB, see Note 13) received tax assessments for the same items and taxes for 2009 and 2011, regarding payments to foreign companies for charter contracts for exploration charters and related services.

  These lawsuits are currently limited to CIDE for 2009, and CIDE and PIS/COFINS for 2011. These cases are being appealed at first instance through the Courts, and in the case of CIDE for 2009, an unfavorable preliminary decision

[55] 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).

has been handed down and a request for clarification has been filed with the same Court. The Company believes that its actions were lawful and in line with industry practice.

Furthermore, in 2021 and 2022 RSB received tax assessments adjusting the price applied by Agri, B.V. and Guara, B.V. for 2016 and 2017, and Lapa, B.V. for 2017, in the contracting of drilling and extraction platforms. In October 2023, the Company was notified of a new tax assessment in respect of the same issue for 2018. The Company has appealed these adjustments as it considers that the methodology used to determine the price of the services is correct and in accordance with the law, obtaining favorable rulings at first instance through administrative proceedings with respect to 2016 and 2017.

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

  - Tax audits for 2006 to 2009. The issues under dispute relate mainly to (i) transfer pricing, (ii) tax credits for losses incurred on activities and investments abroad, and (iii) the application of investment incentives. In relation to 2007-2009, the lawsuit has concluded with most of Repsol's claims being upheld; a decision has yet to be handed down by the National Court for 2006. More than 90% of the debt originally claimed by the tax authorities has been canceled.
  - Tax audits for 2010-2013. The tax audits were concluded in 2017 without any penalties being imposed and, for the most part, through assessments signed on an uncontested basis or agreements that did not generate significant liabilities for the Group. However, with regard to two issues (deduction of interest for the late payment of taxes and the deduction of losses incurred on activities and investments abroad), the administrative decision was appealed, as the Company considers that it acted within the law. The decision on this lawsuit has yet to be handed down by the National Court.
  - Tax audits for 2014-2016. The tax audits ended in 2019 without any penalties being imposed 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 tax credits for losses incurred on activities and investments abroad and application of the limits on the use of tax assets established in Royal Decree Law 3/2016. The decision on this lawsuit has yet to be handed down by the National Court.
  - Tax audits for 2017-2020. The tax audits ended without any penalties being imposed and, for the most part, with assessments signed on an uncontested basis that did not generate significant liabilities for the Group. However, a new issue has arisen regarding tax credits for activities and investments abroad and the discussion on the application of the limits on the application of tax credits established in Royal Decree Law 3/2016 is ongoing.

  The Company is also involved in multiple lawsuits related to requests for tax refunds as a result of applying tax rules considered to be illegal, unconstitutional or contrary to European Union law, both as regards direct taxation (e.g., Royal Decree Law 3/2016, which should be upheld after the judgement by the Constitutional Court declaring that the regulations are unconstitutional and, therefore, null and void), and indirect taxation linked to energy (e.g., regional hydrocarbon tax rates). In particular, Repsol has appealed and requested a refund of the temporary energy levy as it violates the Spanish Constitution and European Union law (an appeal has been filed with the National Court against the Ministerial Order implementing Law 38/2022 and proceedings have been initiated with the tax authorities to request a refund of the amounts paid as a result of this tax).

– *Indonesia*. The Indonesian tax authorities have been questioning the application of the reduced branch profit tax rate established in the double tax treaties imposed on the Group's permanent establishments in Indonesia. The Company considers that its actions are in line with industry practice and are in accordance with the law and, therefore, appeals have been filed through administrative proceedings or through the Courts.

– *Peru*. The Energy and Mining Investment Supervisory Body (OSINERGMIN) has ordered RELAPASAA to pay the "contribution for regulation of companies in the hydrocarbons subsector" for the sales of aviation fuel for international flights. RELAPASAA considers that these sales are exempt from payment of this contribution since the product is intended for consumption on flights abroad. The Tax Court (administrative proceedings) has upheld RELAPASAA's arguments and ordered the tax authorities to verify that the fuel was actually used for international flights. This position is not final and could be challenged in court by the tax authorities.

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, 2023 and 2022 are detailed below:

Earnings per share (EPS)	**2023**	**2022**
Net income attributed to the parent (€ million)	3,168	4,251
Adjustment to the interest expense on subordinated perpetual bonds (€ million)	(60)	(60)
Weighted average number of shares outstanding (millions of shares)	1,264	1,414
Basic and diluted earnings per share (euros/share)	**2.46**	**2.96**

CASH FLOWS

(24) Cash flows

24.1 Cash flow from operating activities

In 2023 cash flows from operating activities amounted to €6,511 million compared to €7,832 million in 2022. The breakdown of "*Cash flows from operating activities*" in the statement of cash flows is as follows:

Cash flows from operating activities		€ Million	
	Notes	**2023**	**2022**
Income before tax		**4,365**	**7,180**
Adjustments to income:		**3,401**	**4,026**
Amortization and depreciation of non-current assets	4, 11 and 12	2,436	2,339
Operating provisions and impairment losses	10.3, 11, 12, 15 and 20	1,277	3,099
Gains/(Losses) on disposal of assets	19.7	(4)	(77)
Financial result	21	(37)	(331)
Share of results of companies accounted for using the equity method, net of taxes	13	(34)	(989)
Other adjustments (net)		(237)	(15)
Changes in working capital:		**878**	**(1,375)**
Increase/Decrease in accounts receivable	17	1,585	248
Increase/Decrease in inventories	16	154	(764)
Increase/Decrease in accounts payable	18	(861)	(859)
Other cash flows from operating activities:		**(2,133)**	**(1,999)**
Dividends received		426	753
Income tax refunded/(paid) (1)		(1,968)	(2,398)
Other proceeds from/(payments for) operating activities (2)		(591)	(354)
Cash flows from operating activities		**6,511**	**7,832**

(1) For further information on the Group's tax contribution, see section 7.5 of the 2023 consolidated Management Report and Appendix V "*Responsible tax policy*".
(2) Includes mainly payments for the application of provisions (see Note 15).

The decrease in 2023 in this heading is mainly explained by lower earnings (affected by the drop in crude oil and gas prices in the Upstream segment and by lower margins in Industrial) and the payments made to cover the temporary energy levy (€443 million) and to settle the lawsuit in the US with Maxus (€265 million). This was partially mitigated by an improvement in working capital (lower inventories in the industrial businesses as a result of lower crude oil prices compared to 2022).

24.2 Cash flows from investing activities

Cash flows from investing activities reflects a net outflow of €5,853 million in 2023, which reveals the Group's significant investment effort during the period.

Payments for investments in "*Property, plant and equipment, intangible assets and investment property*" (€4,289 million) increased with respect to the comparative period, reflecting the increase in E&P investments (most notably including the development of new wells and facilities in Eagle Ford, Marcellus and the Gulf of Mexico in the US); in Industrial, improvements (maintenance and technological upgrades at the refineries and petrochemical plants) and the start-up of important projects (new biofuels plant in Cartagena, expansion of the Sines industrial complex in Portugal, etc.); in the LCG segment, the development of renewable energy generation projects (Frye Solar, Delta II, Outpost, Chile, etc.) and digitalization projects in all areas of the Company.

Payments for investments in "*Group companies and associates*" (€898 million) increased considerably and reflect the payments for the acquisition of Asterion Energies (see Note 11), Inpex Eagle Ford LLC (a company with gas assets in production for Eagle Ford in the US), and an additional 85% of Eólica de Taltal, SpA (a renewable wind project in Chile). Proceeds from investments in "*Group companies and associates*" (€659 million) mainly include the divestment of exploration and production assets in Canada and the US (see Note 19.7).

Net payments under "*Other financial assets*" (€2,747 million) are accounted for by the arrangement and cancellation of deposits during the period.

For more information, see sections 4 and 5 of the 2023 consolidated Management Report.

24.3 Cash flows from financing activities

In 2023 cash flows from financing activities represented a net payment of €3,053 million compared to the payment of €2,832 million in 2022, which is explained by the net amortization of debt instruments (Repsol International Finance bonds, see Note 7), the cancellation of derivative instruments, investments in treasury shares (share buyback program and capital reduction) debt service and dividend and payments (see Note 6). These cash outflows were partially offset by the cash received from the sale of 25% of the Upstream segment (see Notes 6.5 and 8).

The breakdown of the changes in liabilities arising from financing activities in 2023 is as follows:

Cash flows from financing activities 2023	€ Million					
	2022	**2023**				
			Non-cash flows			
	Opening balance (1)	Cash flows	Exchange rate effect	Changes in fair value	Others	Closing balance (1)
Bank borrowings	1,137	177	(6)	—	91	1,399
Bonds and other marketable securities	7,816	(1,973)	6	—	100	5,949
Derivatives (liabilities)	316	(1,280)	21	1,103	2	162
Loans	1,483	(315)	(64)	—	(861)	243
Other financial liabilities	—	(1)	1	—	939	939
Lease liabilities	2,923	(617)	(50)	—	715	2,971
Shareholder remuneration and perpetual bonds	2,780	(979)	—	—	976	2,777
Treasury shares and own equity instruments	(3)	(1,283)	—	—	1,278	(8)
Changes in investments in companies without loss of control	—	2,174	—	—	(2,174)	—
Total liabilities from financing activities	**16,452**	**(4,097)**	**(92)**	**1,103**	**1,066**	**14,432**
Derivatives (assets)	(500)	1,091	(17)	(967)	324	(69)
Other proceeds from/payments for financing activities	—	(47)	—	—	47	—
Total other assets and liabilities	**(500)**	**1,044**	**(17)**	**(967)**	**371**	**(69)**
Total	**15,952**	**(3,053)**	**(109)**	**136**	**1,437**	**14,363**

(1) Corresponds to the current and non-current balance on the balance sheet.

The breakdown of the changes in liabilities arising from financing activities in 2022 is as follows:

Cash flows from financing activities 2022	€ Million					
	2021	**2022**				
			Non-cash flows			
	Opening balance (1)	Cash flows	Exchange rate effect	Changes in fair value	Others	Closing balance (1)
Bank borrowings	1,887	(838)	58	—	30	1,137
Bonds and other marketable securities	8,570	(973)	12	—	207	7,816
Derivatives (liabilities)	199	(2,017)	300	1,827	7	316
Loans	1,087	259	116	—	21	1,483
Other financial liabilities	106	(2)	9	—	(113)	—
Lease liabilities	2,948	(613)	122	—	466	2,923
Shareholder remuneration and perpetual bonds	2,739	(1,027)	—	—	1,068	2,780
Treasury shares and own equity instruments	(641)	(1,714)	—	—	2,352	(3)
Changes in investments in companies without loss of control	—	1,155	—	—	(1,155)	—
Total liabilities from financing activities	**16,895**	**(5,770)**	**617**	**1,827**	**2,883**	**16,452**
Derivatives (assets)	(244)	2,557	(41)	(2,867)	95	(500)
Other proceeds from/payments for financing activities	—	381	—	—	(381)	—
Total other assets and liabilities	**(244)**	**2,938**	**(41)**	**(2,867)**	**(286)**	**(500)**
Total	**16,651**	**(2,832)**	**576**	**(1,040)**	**2,597**	**15,952**

(1) Corresponds to the current and non-current balance on the balance sheet.

Cash and cash equivalents decreased by €(2,383) million compared to December 31, 2022, amounting to a total of €4,129 million. Cash and cash equivalents are part of the Group's liquidity (see Note 10).

OTHER DISCLOSURES

(25) Commitments and guarantees

25.1 Contractual commitments

Commitments consist of future unconditional obligations (i.e., 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 4 and 20).

At December 31, 2023, the Group has contractually committed to the following purchases, investment and other expenditures:

Contractual commitments

€ Million	2024	2025	2026	2027	2028	Subsequent years	Total
Purchase commitments	8,824	1,562	1,547	1,538	1,514	15,962	30,947
Natural gas [1] [3]	1,419	1,171	1,185	1,182	1,162	13,709	19,827
Crude oil and others [2] [3]	7,405	391	362	356	352	2,253	11,120
Investment commitments [4]	1,791	396	84	47	36	11	2,366
Provision of services [5]	427	303	256	179	88	83	1,336
Transport commitments [6]	183	136	111	90	82	255	857
TOTAL	**11,225**	**2,397**	**1,998**	**1,854**	**1,720**	**16,311**	**35,506**

(1) Primarily includes commitments to purchase liquefied natural gas (LNG) in North America (with "take or pay" clauses), which is 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 be measured and recognized in accordance with the criteria established in IFRS 9 (see Note 9). In 2018, Repsol signed a long-term contract for the supply of LNG with Venture Global Calcasieu Pass ("VG"), whose section of LNG deliveries was set to begin once construction had ended and the commissioning of the liquefied natural gas terminal was completed. At the date of authorization for issue of these consolidated Financial Statements, VG had not yet indicated the date on which commercialization of the terminal is to commence, after more than two years of commissioning and having delivered numerous commissioned shipments to the market. Repsol does not agree with this situation and has initiated the dispute resolution mechanisms provided for in the contract. The table includes the commitments to purchase gas from Venture LNG (whose contract currently expires in 2045) for a cumulative amount of 1,020 Tbtu.

(2) This mainly includes commitments to purchase products for the operation of refineries in Spain, and commitments corresponding to crude oil purchase agreements with the Libyan National Oil Corporation, the State Organization for Marketing of Oil (SOMO), the Pemex Group, Saudi Arabian Oil Company, Sinochem International Oil (London), Sonatrach and the Repsol Sinopec Brasil Group (some of them are renewed on an annual basis, and all expire in 2024). It also includes commitments to purchase electricity in Spain.

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

Purchase commitments	Unit of measurement	2024	2025	2026	2027	2028	Subsequent years	Total
Crude oil	kbbl	92,487	218	192	206	204	—	93,307
Natural gas:								
Natural gas	Tbtu	87	39	12	5	5	—	148
Liquefied natural gas	Tbtu	111	144	169	169	166	1,933	2,692

(4) Includes mainly investment commitments in Spain, Chile, the US, Portugal, Algeria and Colombia amounting to €939 million, €324 million, €266 million, €242 million, €201 million, €189 million, respectively.

(5) Includes mainly commitments for future technological developments amounting to €793 million.

(6) Includes, primarily, hydrocarbon transportation commitments in North America and Peru amounting to approximately €808 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 likelihood that any non-compliance would give rise to a liability for these commitments to any material extent is remote.

At December 31, 2023, the most significant guarantees to ensure fulfillment of obligations are those corresponding to the lease of three floating production platforms to develop the BMS 9 field in Brazil. The Group has arranged the following guarantees: (i) a guarantee for $356 million corresponding to 100% of Repsol Sinopec Brasil's obligations (see Note 13), for which Repsol holds a counter guarantee from China Petrochemical Corporation for its 40% interest in RSB; and (ii) two additional guarantees of $353 million and $313 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.

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 €141 million. In Venezuela an unspecified guarantee was 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. The guarantee provided in the sale of LNG assets to Shell in 2015 is noteworthy of mention.

(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. Directors and executives: includes members of the Board of Directors as well as members of the Executive Committee, who are considered "key management personnel" and any persons related thereto for the purpose of this section (see Note 28.4).

b. 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:

Revenue and expenses	2023				2022			
€ Million	Directors and executives (1)	People, companies or entities within the Group	Significant shareholders	Total	Directors and executives (1)	companies or entities within the Group	Significant shareholders	Total
Financial expenses	—	62	—	62	—	31	—	31
Leases	—	1	—	1	—	1	1	2
Services received	—	71	—	71	—	80	4	84
Purchase of goods (2)	—	1,307	—	1,307	—	2,022	2	2,024
Other expenses (3)	—	125	—	125	—	22	—	22
TOTAL EXPENSES	**—**	**1,566**	**—**	**1,566**	**—**	**2,156**	**7**	**2,163**
Financial income	—	133		133	—	98	—	98
Services provided	—	17	—	17	—	6	—	6
Sale of goods (4)	—	597	—	597	—	865	9	874
Other revenue	—	35	—	35	—	122	—	122
TOTAL REVENUE	**—**	**782**	**—**	**782**	**—**	**1,091**	**9**	**1,100**

Other transactions	2023				2022			
€ Million	Directors and executives [1]	People, companies or entities within the Group	Significant shareholders	Total	Directors and executives [1]	People, companies or entities within the Group	Significant shareholders	Total
Financing agreements: credit facilities and capital contributions (lender) [5]	—	273		273	—	301	—	301
Financing agreements: loans and capital contributions (borrower)	—	372		372	—	827	—	827
Guarantees and sureties given [6]	—	718		718	—	546	—	546
Guarantees and sureties received	—	—		—	—	3	—	3
Commitments assumed [7]	—	33		33	—	165	—	165
Dividends and other profits distributed [8]	1	—		1	1	—	14	15
Other transactions [9]	—	1,099		1,099	—	1,482	3	1,485

Closing balances	2023				2022			
€ Million	Directors and executives [1]	People, companies or entities within the Group	Significant shareholders	Total	Directors and executives [1]	People, companies or entities within the Group	Significant shareholders	Total
Trade and other receivables		163		163	—	161	3	164
Loans and credit facilities granted		983		983	—	1,033	—	1,033
Other receivables		116		116	—	105	—	105
TOTAL BALANCES RECEIVABLE		**1,262**		**1,262**	**—**	**1,299**	**3**	**1,302**
Suppliers and trade payables		188		188	—	144	2	146
Loans and credit facilities received [10]		243		243	—	1,482	—	1,482
Other payment obligations		1		1	—	1	—	1
TOTAL BALANCES PAYABLE		**432**		**432**	**—**	**1,627**	**2**	**1,629**

Note: In 2023, the "*People, companies or entities within the Group*" column in the tables on *Revenue and expenses* and *Other transactions* includes the transactions with Repsol Resources UK Ltd. (RRUK) until the date of its takeover (see Note 13 Acquisition of RRUK). In 2022, the "*Significant shareholders*" column in the tables on *Revenue and expenses* and *Other transactions* included the transactions with the Sacyr group up until June.

(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 2023 "*People, companies or entities within the Group*" primarily includes products purchased from Repsol Sinopec Brasil (RSB) and from RRUK in the amount of €889 million and €46 million, respectively (€1182 million and €369 million in 2022).

(3) Includes mainly provisions for credit risks on trade and other receivables and financial instruments (see Notes 10.3 and 20.3) and supplies from the Dynasol Group.

(4) In 2023 and 2022 *"People, companies or entities of the Group"* included mainly sales of products to Iberian Lube Base Oil, S.A. (ILBOC) and the Dynasol Group for €366 million and €103 million in 2023 and €599 million and €201 million in 2022, respectively.

(5) Includes loans granted and new drawdowns on 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 RRUK, issued in the ordinary course of business to cover obligations to dismantle offshore platforms in the North Sea.

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

(8) In 2023 and 2022, includes the amounts corresponding to the cash dividend paid in January and July 2023 and 2022.

(9) In 2023 and 2022 "*People, companies or entities within the Group*" included mainly the repayments and/or cancellations of guarantees provided or loans granted to RRUK and financing agreements (see the following footnote to the table).

(10) In 2023 includes mainly financial liabilities with Equion Energía, Ltd. and BPRY Caribbean Ventures, LLC. amounting to €156 million and €80 million, respectively (in 2022 included €986 million and €336 million with RRUK and BPRY Caribbean Ventures, LLC., respectively).

(27) Personnel obligations

27.1 Defined contribution pension plans

For certain employees in Spain, Repsol has recognized mixed pension plans in line with the current law. Specifically, these are defined contribution pension plans for the contingency of retirement and defined benefit plans for the contingencies of total or absolute permanent disability, comprehensive disability and death. In the case of total or absolute permanent disability, comprehensive disability and death, the pension plans have taken out insurance policies with an external entity.

The annual cost charged to "*Personnel expenses*" in the income statement in relation to the defined contribution pension plans detailed above amounted to €51 million and €46 million in 2023 and 2022, respectively.

The Group's executives in Spain are beneficiaries of an executive pension plan that supplements the standard pension plan known as the Executive Welfare Plan (*Plan de Previsión de Directivos*), 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 2023 and 2022 amounted to €8 million and €15 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 was €3 million in expenses in 2023 and €4 million in income in 2022, while the provisions recognized on the balance sheet at December 31, 2023 and 2022 stood at €20 million and €62 million, respectively (see Note 15).

No significant impacts are expected on the Group's financial statements, given the valuation of the provisions recognized for the pension plans as a result of the assumptions used (inflation rate, interest and exchange rates, etc.) in the current macroeconomic scenario.

27.3 Long-term variable remuneration

A loyalty building plan aimed at executives and other persons holding positions of responsibility consisting of long-term incentives as part of their benefit package. The purpose of this plan 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, 2020-2023, 2021-2024, 2022-2025 and 2023-2026 plans were in force. The 2019-2022 plan was closed and its beneficiaries received their bonuses in 2023.

The four plans are independent of each other, have a respective term of four years 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 plans in force at the end of the year are implemented by granting a total incentive (the "Incentive"), which is the sum of a cash incentive and a certain number of performance shares that will entitle the holder to receive Repsol, S.A. shares once the measurement period of each plan has elapsed and compliance with the established performance metrics has been verified.

For the members of the Executive Committee, the maximum incentive assigned in cash and performance shares is 50%, respectively, of the total Incentive, calculated on the grant date. For the rest of the beneficiaries of the plan, this proportion is 70% in cash and 30% in performance shares.

The 2020-2023 Long-Term Incentive to be received by the members of the Executive Committee will therefore amount to €1,255,253 in cash and 78,506 shares in the Company, equivalent to €1,055,909 (42,303 shares net of personal income tax prepayments)[56].

To reflect these commitments assumed, expenses of €17 million and €25 million were recognized in 2023 and 2022, respectively, with the accumulated outstanding payment obligation amounting to €48 million and €53 million in 2023 and 2022, 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

[56] For the purpose of this report and to calculate the settlement of the 2020-2023 Long-Term Incentive Plan, the closing price of the share on December 29, 2023 was taken as the most reasonable price, although the actual settlement will be at the closing price on February 21, 2024.

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), an additional performance requirement is established for the delivery of the additional shares, which, for the eleventh and twelfth cycles, consists of an overall achievement of at least 75% of the targets established in the Long-Term Incentive Plan ending in the year preceding the date on which the shares are delivered, and for the thirteenth and subsequent cycles, an overall achievement of at least 75% of the targets established for the annual variable remuneration of the Chief Executive Officer for the year immediately preceding the date on which the shares are delivered, without taking into consideration in any case the power of the Board of Directors to adjust this amount.

The following cycles of this Plan are currently in force:

Share purchase plan for the long-term incentive plans	Number of participants	Total initial investment (no. of shares)	Average price (Eur/Share)	Maximum commitment for delivery of shares
Eleventh cycle (2021-2024) (1)	180	200,997	11.0414	66,999
Twelfth cycle (2022-2025) (2)	214	134,064	15.1098	44,652
Thirteenth cycle (2023-2026) (3)	229	170,359	13.0146	56,716

(1) Includes 19,337 shares delivered to the Chief Executive Officer as partial payment for the 2017-2020 Long-Term Incentive 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 13,184 shares delivered to the Chief Executive Officer as a partial payment for the 2018-2021 Long-Term Incentive Plan.
(3) Includes 10,845 shares delivered to the Chief Executive Officer as a partial payment for the 2019-2022 Long-Term Incentive Plan.

During this thirteenth cycle, the current members of the Executive Committee, including the Chief Executive Officer, have acquired a total of 48,023 shares.

As a result of this Plan, at December 31, 2023 and 2022, the Group had recognized an expense under "*Personnel expenses*" with a balancing entry under "*Other equity instruments*" in equity of €0.49 million.

In addition, the tenth cycle of the Plan (2020-2023) vested on May 29, 2023. As a result, the rights of 196 beneficiaries vested 87,451 shares (65,690 shares net of personal income tax prepayments). Specifically, the rights of the members of the Executive Committee and the Chief Executive Officer to 28,804 shares also vested (19,688 shares net of prepayments).

ii.) *"Share Acquisition Plans"*

The Company has been implementing, on an annual basis, a share acquisition plan aimed at all Group employees in Spain since 2011. These plans enable those wishing to do so 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 2023 the Group purchased 886,026 shares of Repsol, S.A. (761,243 shares in 2022) amounting to €12.4 million (€9.8 million in 2022) for delivery to employees (see Note 6).

The members of the Executive Committee acquired 3,406 shares in accordance with the plan terms and conditions in 2023.

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

The YOUR REPSOL Plan was launched in 2020, which enabled all employees to allocate a certain amount of their remuneration to purchase shares in the Company and receive one bonus share for every two shares initially acquired, provided the shares were then held for a period of two years and the other conditions of the Plan were met.

In February 2023, once the 2-year period had elapsed, the corresponding bonus shares were delivered to the beneficiaries.

In 2020, the current members of the Executive Committee acquired a total of 1,078 shares under the YOUR REPSOL Plan. Under the terms of the Plan, these shares entitled them to receive a total of 539 shares in February 2023 (they received 524 shares once withholdings were discounted).

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) For 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 amount approved 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 of them, membership of the Committees, the positions held by each one of them on the Board and any other objective circumstance considered relevant.

The upper limit established in the Directors Remuneration Policy approved at the Annual General Meeting held on May 25, 2023 is €8,5 million.

The remuneration accrued in 2023 for membership of the Board of Directors and with a charge to bylaw-stipulated emoluments amounted to €6,258 million, the detail being as follows:

	Remuneration of Board members relating to their position (euros)							
	Board	Delegate C.	Lead Independent Director	Audit C.	Appoints C.	Remun. C.	Sustain. C.	Total
Antonio Brufau Niubó [1]	1,747,312	—	—	—	—	—	—	1,747,312
Josu Jon Imaz	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	176,594	—	—	—	—	—	353,188
Ignacio Martín San Vicente	176,594	176,594	—	—	—	—	—	353,188
Manuel Manrique Cecilia	176,594	176,594	—	—	—	—	—	353,188
Mariano Marzo Carpio	176,594	—	22,074	88,297	—	—	44,149	331,114
Isabel Torremocha Ferrezuelo	176,594	—	—	88,297	—	—	44,149	309,040
Emiliano López Achurra	176,594	—	—	—	22,074	22,074	44,149	264,891
Aurora Catá	176,594	—	—	88,297	22,074	22,074	—	309,040
J. Robinson West	176,594	176,594	—	—	—	—	—	353,188
Iván Martén Uliarte	176,594	176,594	—	—	—	—	—	353,188
María del Pino Velázquez Medina [2]	117,729	—	—	58,865	—	—	—	176,594
Luis Suárez de Lezo Mantilla [3]	58,865	58,865	—	—	—	—	—	117,729

Note: In accordance with the scheme approved by the Board of Directors, and at the proposal of the Remuneration Committee, the amount due in 2023 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) €22,074for membership of the Remuneration Committee; and (vii) €22,074 for the position of Independent Lead Director.

(1) The remuneration conditions of Mr. Brufau, as Non-Executive Chairman of the Board of Directors, consist of a fixed remuneration which, as he himself proposed and following approval at the Annual General Meeting held on May 25, 2023, was reduced from €2,500 thousand to €1,250 thousand gross per year, therefore, the fixed remuneration earned in 2023 amounted to €1.747 million. Additionally, remuneration in kind and prepayments/withholdings linked to remuneration in kind amounted to a total of €0.346 million.

(2) The appointment of Ms. Velázquez Medina as Director was approved at the Annual General Meeting held on May 25, 2023.

(3) Mr. Suárez de Lezo resigned from his position as Director and as member of the Executive Committee on April 26, 2023.

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) For holding executive positions and performing executive duties

In 2023, compensation to Directors for the performance of executive duties was as follows:

€ Million	Josu Jon Imaz
Fixed monetary remuneration	1.200
Variable remuneration and remuneration in kind [1]	2.368

[1] Includes, among other items, life and disability insurance and health insurance, as well as annual and multi-annual variable remuneration, and additional shares corresponding to the settlement of the tenth cycle of the Share Purchase Plan for the Beneficiaries of the Long-Term Incentive Plans, as detailed in Note 27.4.

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

c) For membership of the Boards of Directors of investees

The remuneration earned in 2023 by members of the Board of Directors of the parent company for membership on the managing bodies of other Group companies, joint arrangements or associates amounts to €0.799 million, and is detailed as follows:

	€ Million
Arantza Estefanía Larrañaga	0.060
Emiliano López Achurra	0.619
Ignacio Martín San Vicente	0.060
María Teresa García-Milá Lloveras	0.060

d) For contributions to pension plans and welfare plans

The cost in 2023 of the contributions made to pension plans and welfare plans for the Chief Executive Officer discharging executive duties in the Group amounted to:

	€ Million
Josu Jon Imaz	0.254

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

On May 29, 2023, the vesting period concluded for the tenth cycle of the Share Purchase Plan for Beneficiaries of Long-Term Incentive Plans (see Note 27.4). Upon vesting, Josu Jon Imaz became entitled to receive a total of 19,848 shares, valued at a price of €13.355 per share.

28.2 Indemnity payments to Board members

In 2023, no Director received any indemnity payments from Repsol.

28.3 Other transactions with directors

In 2023, Repsol's Directors did not conclude any material transaction with the Parent or any of the Group companies outside the ordinary course of business or under any conditions other than the standard customer or normal market conditions.

The Chief Executive Officer signed up for the 2021-2024, 2022-2025 and 2023-2026 cycles of the Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans, as detailed in Note 27.4.

In 2023, the Board of Directors was not 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 of Directors and of the Appointments

Committee during the year regarding the ratification and re-election of Directors and the 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 2023, a total of 10 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 2023 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 2023 is as follows:

	€ Million
Wages	4.069
Allowances	0.040
Variable remuneration [(1)]	5.154
Remuneration in kind [(2)]	0.889
Executive welfare plan	0.917

(1) This consists of an annual bonus, and a multi-annual incentive, 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 rights to 8,956 additional gross shares for the tenth cycle of the Share Purchase Plan for Beneficiaries of the Long-Term Incentive Plans, valued at €13.36 per share, equivalent to a gross amount of €119,634. It also includes contributions to pension plans for executives (see Note 27), and the premiums paid for life and disability insurance, amounting to €0.097 million.

c) Advances and loans granted

At December 31, 2023, Repsol, S.A. had granted loans to key management personnel amounting to €0.288 million, which accrued interest at an average rate of 2.28% 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 a breach of executive duties, retirement, disability or their own free will without reference to any of the grounds for compensation 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.

The severance payments received in 2023 by the Company's management personnel due to contract termination and non-competition agreements amounted to €2.283 million.

28.6 Other transactions with key management personnel

In 2023, 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 2021-2024, 2022-2025 and 2023-2026 cycles of the Share Purchase Plan for Beneficiaries of the Long-term Incentive Plans, as detailed in Note 27.4.

28.7 Civil liability insurance

In 2023, the Group took out a civil liability policy that covers Board members, the key management personnel referred to in Note 28.4 a), and the other executives and people who perform functions similar to those carried out by executives, for a total premium of €3.9 million. The policy also covers the different Group companies under certain circumstances and conditions.

(29) Fees paid to auditors

The fees for audit services and other 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:

Audit fees (main auditor)	€ Million	
	2023	**2022**
Audit services	7.6	7.1
Other services:	1.8	1.6
Audit related	1.8	1.6
Tax	—	—
Other	—	—
Total (1)	**9.4**	**8.7**

(1) The fees approved in 2023 for PricewaterhouseCoopers Auditores, S.L. (not including companies that are part of its network) for audit services and other services amounted to €4.4 million and €1.4 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.

"*Other services*" includes professional services related to the audit, mainly comprising the review of the Internal Control over Financial Reporting System, a limited review of the interim condensed consolidated financial statements, verifications and certifications for shareholders and official bodies, reports for the issuance of debentures and other marketable securities (comfort letters), as well as the verification of the non-financial information of the 2023 consolidated Management Report. No tax services or any different types of services other than those related to the audit were provided.

(30) Subsequent events

In 2024, prior to publication of this report, the following event stand out:

2024-27 strategic update

After meeting the majority of the objectives set in the 2021-2025 Strategic Plan, Repsol carried out a strategic reflection process throughout 2023 that culminated in the publication of a strategic update for the 2024-2027 period (2024-27 Strategic Plan). This update is based on three pillars: (i) significant growth in dividends per share in 2024 (30% compared to 2023), on track for an additional 3% per year; (ii) maintaining the current credit rating (BBB+/Baa1) during the 2024-27 cycle; (iii) net investments for the period of between €16 billion and €19 billion, with more than a third corresponding to the low-carbon businesses.

For more information, see section 2.5 of the 2023 consolidated Management Report.

(31) 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: Segment reporting and reconciliation with EU-IFRS financial statements[57]

Income statement figures

The reconciliation of adjusted income to EU-IFRS net income at December 31, 2023 and 2022, is as follows:

Income			€ Million											
			ADJUSTMENTS											
	Adjusted income		Reclassification of joint ventures		Inventory effect[(2)]		Special items		Non-controlling interests		Total adjustments		Net income under EU-IFRS	
Earnings	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Operating income	7,250 [(1)]	10,648 [(1)]	(305)	(1,819)	(610)	103	(2,041)	(3,072)	—	—	(2,956)	(4,788)	4,294	5,860
Financial result	8	86	176	178	—	—	(147)	67	—	—	29	245	37	331
Net income from companies accounted for using the equity method - net of tax	1	(22)	124	1,030	—	—	(91)	(19)	—	—	33	1,011	34	989
Income before tax	**7,259**	**10,712**	**(5)**	**(611)**	**(610)**	**103**	**(2,279)**	**(3,024)**	**—**	**—**	**(2,894)**	**(3,532)**	**4,365**	**7,180**
Income tax	(2,248)	(3,938)	5	611	157	(25)	1,005	517	—	—	1,167	1,103	(1,081)	(2,835)
Consolidated income for the year	**5,011**	**6,774**	**—**	**—**	**(453)**	**78**	**(1,274)**	**(2,507)**	**—**	**—**	**(1,727)**	**(2,429)**	**3,284**	**4,345**
Income attributed to non-controlling interests	—	—	—	—	—	—	—	—	(116)	(94)	(116)	(94)	(116)	(94)
Income attributable to the parent	**5,011**	**6,774**	**—**	**—**	**(453)**	**78**	**(1,274)**	**(2,507)**	**(116)**	**(94)**	**(1,843)**	**(2,523)**	**3,168**	**4,251**

(1) Income from continuing operations at current cost of supply (CCS).
(2) The inventory effect represents an adjustment to "*Procurements*" and "*Changes in inventory of finished goods*" in the income statement under EU-IFRS.

The reconciliation of revenue from ordinary activities to other figures in the income statement, by segment, is provided below:

Other aggregates of the business segments	€ Million											
	Income from ordinary activities [(3)]		Net income from operations		Provisions for amortization of fixed assets [(2)]		Impairment income / (expenses)		Net income from entities valued using the equity method		Income tax	
Segments	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**	**2023**	**2022**
Upstream	7,576	10,712	2,936	5,705	(1,801)	(1,655)	(1,122)	(773)	28	28	(1,185)	(2,703)
Industrial	46,676	61,848	3,626	4,315	(747)	(827)	257	(2,070)	(8)	(3)	(884)	(1,071)
Customer	27,315	32,957	819	564	(336)	(360)	(60)	(159)	3	—	(208)	(144)
LCG	1,003	2,028	134	245	(60)	(57)	(4)	—	(28)	(42)	(31)	(59)
Corporate	(21,017)	(28,821)	(265)	(181)	(39)	(36)	(1)	(3)	6	(5)	60	39
Adjusted figures [(1)]	**61,553**	**78,724**	**7,250**	**10,648**	**(2,983)**	**(2,935)**	**(930)**	**(3,005)**	**1**	**(22)**	**(2,248)**	**(3,938)**
Adjustments:												
Upstream	(2,600)	(3,763)	(1,683)	(2,236)	522	573	619	320	78	987	538	510
Industrial	(304)	(432)	(778)	(2,327)	14	13	—	—	(62)	24	151	455
Customer	(385)	(298)	(202)	(171)	11	10	1	12	22	—	(28)	16
LCG	—	8	(17)	3	—	—	—		—	—	(15)	4
Corporate	684	914	(276)	(57)	—	—	—	—	(5)	—	521	118
EU-IFRS FIGURES	**58,948**	**75,153**	**4,294**	**5,860**	**(2,436)**	**(2,339)**	**(310)**	**(2,673)**	**34**	**989**	**(1,081)**	**(2,835)**

(1) Figures drawn up according to the Group's reporting model described in Note 3.2.
(2) Includes the depreciation of unsuccessful exploratory wells recognized in the normal course of operations.
(3) Corresponds to the sum of "*Sales*" and "*Services rendered and other income*" (see Note 19.1). The itemization by origin (customer or inter-segment transactions) is as follows:

[57] 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 II of the 2023 consolidated Management Report.

Revenue from ordinary activities by segment	€ Million					
	Customers		Inter-segment		Total	
	2023	2022	2023	2022	2023	2022
Upstream	5,199	7,486	2,377	3,226	7,576	10,712
Industrial	28,674	37,332	18,002	24,516	46,676	61,848
Customer	27,164	32,696	151	261	27,315	32,957
LCG	516	1,210	487	818	1,003	2,028
Corporate	—	—	10	8	10	8
(-) Adjustments and eliminations of operating income between segments	—	—	(21,027)	(28,829)	(21,027)	(28,829)
TOTAL	**61,553**	**78,724**	**—**	**—**	**61,553**	**78,724**

Balance sheet figures	€ Million							
	Non-current assets		Net operating investments [2]		Capital employed [3]		Investments accounted for using the equity method	
Segments	2023	2022	2023	2022	2023	2022	2023	2022
Upstream	16,284	16,891	2,627	2,127	12,716	12,282	129	188
Industrial	7,861	7,274	1,161	1,025	10,929	11,108	12	73
Customer	3,071	2,935	423	258	2,788	4,667	73	14
LCG	4,316	2,270	1,876	667	3,897		297	356
Corporate	670	660	80	105	836	172	3	51
ADJUSTED FIGURES [1]	**32,202**	**30,030**	**6,167**	**4,182**	**31,166**	**28,229**	**514**	**682**
Adjustments:								
Upstream	(3,460)	(4,581)	(825)	(236)	(557)	518	1,976	3,197
Industrial	(193)	(185)	(15)	(26)	(2)	(25)	269	259
Customer	(150)	(115)	(93)	(10)	18	3	198	164
LCG	—	—	(46)	(98)	—	—	—	—
Corporate	—	—	(1)	1	—	(1)	—	—
EU-IFRS FIGURES	**28,399**	**25,149**	**5,187**	**3,813**	**30,625**	**28,724**	**2,957**	**4,302**

(1) Figures drawn up according to the Group's reporting model described in Note 3.2.
(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

The reconciliation of the cash flow from operations to free cash flow with the EU-IFRS Statement of Cash Flows at December 31, 2023 and 2022 is as follows:

Cash flow	At December 31					
	Free cash flow		Reclassification of joint ventures and other		EU-IFRS statement of cash flows	
	2023	2022	2023	2022	2023	2022
I. Cash flows from / (used in) operating activities (cash flow from operations)	7,064	8,923	(553)	(1,091)	6,511	7,832
II. Cash flows from / (used in) investing activities	(5,634)	(3,712)	(219)	(391)	(5,853)	(4,103)
Free cash flow (I+II)	**1,430**	**5,211**	**(772)**	**(1,482)**	**658**	**3,729**

Net debt

The reconciliation of net debt to the IFRS-EU balance sheet as at December 31, 2023 and 2022 is as follows:

Net debt	**Net debt**	**Reclassification of joint ventures**	**EU-IFRS balance sheet**
€ Million	**2023**	**2023**	**2023**
Non-current assets			
Non-current financial instruments[1] [2]	1,060	429	1,489
Current assets			
Other current financial assets [2]	4,410	81	4,491
Cash and cash equivalents	4,552	(423)	4,129
Non-current liabilities			
Non-current financial liabilities [2]	(8,808)	458	(8,350)
Current liabilities			
Current financial liabilities [2]	(3,310)	(4)	(3,314)
NET DEBT [3]	**(2,096)**	**541**	**(1,555)**

[1] Amounts recognized under "*Non-current financial assets*" on the balance sheet.
[2] Includes net non-current and current leases amounting to €-2973 and €-633 million, respectively, according to the Reporting model and €-2452 and €-506 million, respectively, according to the EU-IFRS balance sheet.
[3] Reconciliations of this figure for previous periods are available at www.repsol.com.

Appendix II: Group's corporate structure

Appendix IIA: Companies comprising the Repsol Group

					12/1/2023			
					%		€ Million	
Name	Parent company	Country	Corporate purpose	Method of conso. (1)	Total Group interest	Cont. interest (2)	Equity (3)	Share capital (3)
UPSTREAM								
Agri Development, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.(J.V.)	4.50	10.00	—	—
Akakus Oil Operations, B.V.	Repsol Exploración Murzuq, S.A.	Netherlands	Oil and gas exploration and production	E.M.	36.75	49.00	—	—
BP Trinidad & Tobago, Llc. (14)	BPRY Caribbean Ventures, Llc.	United States	Oil and gas exploration and production	E.M.(J.V.)	22.50	100.00	—	—
Repsol Sinopec Brasil, S.A.	Repsol E&P S.a.r.l.	Brazil	Operation and sale of oil and gas	E.M.(J.V.)	45.01	60.01	2,295	2,107
YPFB Andina, S.A. (13)	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	E.M.(J.V.)	36.25	48.33	480	166
Edwards Gas Services, Llc.	Repsol Oil & Gas USA, LLC	United States	Portfolio company	F.C.	75.00	100.00	72	120
Equion Energía, Ltd. (13)	Repsol, S.A.	United Kingdom	Oil and gas exploration and production	E.M.(J.V.)	49.00	49.00	153	—
Fortuna International (Barbados), Inc. (10)	Repsol E&P S.a.r.l. (26)	Barbados	Portfolio company	F.C.	75.00	100.00	69	69
Fortuna Resources (Sunda), Ltd. (9)	Talisman UK (South East Sumatra), Ltd.	Indonesia	Oil and gas exploration and production (11)	F.C.	75.00	100.00	21	—
Guará, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	11.25	25.00	(9)	—
Lapa Oil & Gas, B.V.	Repsol Sinopec Brasil, B.V.	Netherlands	Platform for production of crude oil and natural gas	E.M.	11.25	25.00	—	—
Oleoducto de Crudos Pesados, Ltd.	Repsol OCP de Ecuador, S.A.	Cayman Islands	Portfolio company	E.M.	22.25	29.66	9	27
Pacific Compass, LLC (5)	Repsol E&P USA, LLC	United States	Sale of oil products	E.M.(J.V.)	36.75	49.00	—	—
Paladin Resources, Ltd.	FEHI Holding, S.a.r.l.	United Kingdom	Portfolio company	F.C.	75.00	100.00	60	74
Petrocarabobo, S.A.	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	8.25	11.00	(39)	62
BPRY Caribbean Ventures, Llc. (13)	Repsol Exploración, S.A.	United States	Oil and gas exploration and production	E.M.(J.V.)	22.50	30.00	1,117	2,924
Quiriquiré Gas, S.A.	Repsol Venezuela, S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	45.00	60.00	—	—
Repsol Alpha Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Andaman B.V. (11)	Repsol Exploración, S.A.U. (34)	Netherlands	Oil and gas exploration and production	F.C.	75.00	100.00	(5)	—
Repsol Angostura, Ltd. (6)	Repsol Exploración, S.A.U.	Trinidad and Tobago	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	39
Repsol Beta Limited. (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Bolivia, S.A.	Repsol Exploración, S.A.U. (27)	Bolivia	Provision of services	F.C.	75.00	100.00	342	15
Repsol Bulgaria Khan Kubrat, S.A.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	10	—
Repsol Colombia Oil & Gas Limited	Repsol Exploración, S.A.U.	Canada	Oil and gas exploration and production	F.C.	75.00	100.00	564	803
Repsol Corridor, S.A.U.	Fortuna International (Barbados), Inc.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	698	42
Repsol Delta Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Ductos Colombia, S.A.S.	Talisman Colombia Holdco, Ltd.	Colombia	Oil and gas exploration and production	F.C.	75.00	100.00	42	3
Repsol Earth Solutions USA, LLC (5)	Repsol Oil & Gas Holding USA, Inc	United States	Interest in projects of Geological Low Carbon Solutions	F.C.	75.00	100.00	—	—
Repsol E&P Bolivia, S.A.	Repsol Bolivia, S.A.	Bolivia	Oil and gas exploration and production	F.C.	75.00	100.00	341	2
Repsol E&P S.a.r.l. (16)	Repsol Upstream B.V.	Luxembourg	Acquisition, administration, management, control and development of holdings in Luxembourg and foreign companies	F.C.	75.00	75.00	11,497	2

Repsol E&P USA Holdings, Inc.	Repsol Oil & Gas Holdings USA, Inc.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	1,492	1,712
Repsol E&P USA, Llc.	Repsol USA Holdings LLC	United States	Oil and gas exploration and production	F.C.	75.00	100.00	2,752	2,533
Repsol Eagle Ford North LLC. (5)	Repsol Oil & Gas USA, LLC.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	22	6
Repsol Exploração Brasil, Ltda.	Repsol, S.A.	Brazil	Oil and gas exploration and production	F.C.	100.00	100.00	939	1,081
Repsol Exploración 405A, S.A.U.	Repsol Exploración, S.A.U.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	108	—
Repsol Exploración Aitoloakarnania, S.A. (11)	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	4	—
Repsol Exploración Argelia, S.A.	Repsol Exploración, S.A.U.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	198	5
Repsol Exploración Aru, S.L.U.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Exploración Colombia, S.A.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	64	2
Repsol Exploración Gharb, S.A.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	6	—
Repsol Exploración Guinea, S.A.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	—	—
Repsol Exploración Guyana, S.A.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	(1)	—
Repsol Exploración Ioannina, S.A.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	15	—
Repsol Exploración Irlanda, S.A.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	12	—
Repsol Exploración México, S.A. de C.V.	Repsol Exploración, S.A.U.	Mexico	Oil and gas exploration and production	F.C.	75.00	100.00	142	306
Repsol Exploración Murzuq, S.A.U.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	515	9
Repsol Exploración Perú, S.A.U.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	648	12
Repsol Exploracion South East Jambi B.V.	Repsol Exploración, S.A.U.	Netherlands	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Exploración South Sakakemang, S.L.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	2	—
Repsol Exploración Tanfit, S.L.U.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	7	3
Repsol Exploración Tobago, S.A.	Repsol Exploración, S.A.U.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	4	—
Repsol Exploración West Papúa IV, S.L.	Repsol Exploración, S.A.U. (27)	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Exploración, S.A.U.	Repsol E&P S.a.r.l.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	5,931	27
Repsol Finance Brasil B.V.	Repsol Finance Brasil, S.A.R.L (35)	Netherlands	Financial and holding of shares	F.C.	100.00	100.00	1,078	4
Repsol Greece Ionian, S.L.U.	Repsol, S.A.	Spain	Oil and gas exploration and production	F.C.	100.00	100.00	156	—
Repsol Investigaciones Petrolíferas, S.A.	Repsol Exploración, S.A.U.	Spain	Oil and gas exploration and production	F.C.	75.00	100.00	192	215
Repsol LNS Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Norge, AS	Repsol Exploración, S.A.U.	Norway	Oil and gas exploration and production	F.C.	75.00	100.00	78	—
Repsol North Sea Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol OCP de Ecuador, S.A.	Repsol Exploración, S.A.U.	Spain	Operation of a pipeline for oil and gas transport	F.C.	75.00	100.00	52	—
Repsol Offshore E&P USA, Inc.	Repsol USA Holdings LLC	United States	Oil and gas exploration and production (11)	F.C.	75.00	100.00	13	30
Repsol Oil & Gas Australasia Pty, Ltd.	Repsol Exploración, S.A.U. (34)	Australia	Shared services company	F.C.	75.00	100.00	—	69
Repsol Oil & Gas Australia (JPDA 06-105) Pty Ltd.	Paladin Resources, Ltd.	Australia	Oil and gas exploration and production	F.C.	75.00	100.00	(14)	148
Repsol Oil & Gas Gulf of Mexico, LLC	Repsol E&P USA Holdings Inc.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	805	440
Repsol Oil & Gas Holdings USA, Inc.	FEHI Holding, S.a.r.l.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	7,048	1,730
Repsol Oil & Gas RTS Sdn, Bhd.	Repsol Greece Ionian, S.L.U.	Malaysia	Shared services company (11)	F.C.	100.00	100.00	2	19

Repsol Oil & Gas USA, LLC.	Repsol USA Holdings LLC	United States	Oil and gas exploration and production	F.C.	75.00	100.00	3,011	1,831
Repsol Oil &Gas Vietnam 07/03 Pty Ltd.	Repsol Greece Ionian, S.L.U.	Australia	Oil and gas exploration and production (11)	F.C.	100.00	100.00	1	—
Repsol Oil Trading Limited (14)	Repsol North Sea Limited	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Oriente Medio, S.A.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	43	—
Repsol Pension and Life Scheme Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Perpetual Norge, A.S.	Talisman Perpetual (Norway), Ltd.	Norway	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	1
Repsol Sakakemang, B.V.	Repsol Exploración, S.A.U. (34)	Netherlands	Oil and gas exploration and production	F.C.	75.00	100.00	48	—
Repsol Salamanca Midstream, LLC	Repsol Oil & Gas Gulf of México, LLC	United States	Oil and gas exploration and production	F.C.	75.00	100.00	42	37
Repsol Services Company	Repsol USA Holdings LLC	United States	Provision of services	F.C.	75.00	100.00	22	40
Repsol Servicios Colombia, S.A.	Repsol Greece Ionian, S.L.U.	Spain	Oil and gas exploration and production (11)	F.C.	100.00	100.00	3	—
Repsol Shale Oil & Gas LLC	Repsol E&P USA Holdings, Inc.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	13	—
Cardón IV, S.A.	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	37.50	50.00	316	4
Repsol Sinopec Brasil, B.V.	Repsol E&P S.a.r.l.	Brazil	Portfolio company	E.M.(J.V.)	45.00	60.00	13	8
Repsol Resources UK, Ltd. (13)	Talisman Colombia Holdco, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	2,062	4,466
Repsol Transgasindo S.à r.l.	Fortuna International (Barbados), Inc.	Luxembourg	Portfolio company	F.C.	75.00	100.00	36	4
Repsol Transportation (UT) Limited (14)	Repsol North Sea Limited	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol Trustees (U.K.) Limited. (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Repsol U.K., Ltd. (14)	Repsol Exploración, S.A.U.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	(3)	31
Repsol Upstream B.V.	Repsol, S.A.	Netherlands	Portfolio company	F.C.	100.00	100.00	5,329	3
Repsol USA Holdings LLC	Repsol Oil & Gas Holdings USA, Inc.	United States	Oil and gas exploration and production	F.C.	75.00	100.00	3,182	4,645
Repsol Venezuela, S.A.	Repsol Exploración, S.A.U.	Venezuela	Oil and gas exploration and production	F.C.	75.00	100.00	114	725
Repsol Zeta Limited (14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Rigel Petroleum (NI), Ltd. (14)	Rigel Petroleum UK, Ltd.	Northern Ireland	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Rigel Petroleum UK, Ltd.	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Salamanca Infrastructure, LLC	Repsol Salamanca Midstream, LLC	United States	Oil and gas exploration and production	E.M.	1.88	2.50	14	14
Sierracol Energy Arauca, LLC	Repsol E&P S.a.r.l.	Colombia	Portfolio company	E.M.(J.V.)	18.75	25.00	32	24
Talisman (Asia), Ltd.	Repsol Exploración, S.A.U. (28)	Canada	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	—
Talisman (Block K 39), B.V.	Repsol Exploración, S.A.U.	Netherlands	Oil and gas exploration and production (11)	F.C.	75.00	100.00	(5)	—
Talisman Energy DL, Ltd. (11)(14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Talisman Energy NS, Ltd. (11)(14)	Repsol Resources UK, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Talisman (Jambi Merang), Ltd.	Repsol Exploración, S.A.U. (34)	Indonesia	Oil and gas exploration and production (11)	F.C.	75.00	100.00	8	73
Talisman (Sageri), Ltd.	Repsol Exploración, S.A.U. (28)	Indonesia	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	—
Talisman (Vietnam 133 & 134), Ltd.	Repsol Greece Ionian, S.L.U.	Vietnam	Oil and gas exploration and production (11)	F.C.	100.00	100.00	1	33
Talisman Colombia Holdco, Ltd.	Repsol Exploración, S.A.U.	United Kingdom	Portfolio company	F.C.	75.00	100.00	958	1,473
Talisman East Jabung, B.V.	Repsol Exploración, S.A.U. (34)	Netherlands	Oil and gas exploration and production (11)	F.C.	75.00	100.00	1	—
Talisman Perpetual (Norway), Ltd.	FEHI Holding, S.a.r.l.	United Kingdom	Portfolio company (11)	F.C.	75.00	100.00	—	1
Talisman Resources (Bahamas), Ltd. (8)	Paladin Resources, Ltd.	Bahamas	Oil and gas exploration and production (11)	F.C.	75.00	100.00	1	—
Talisman Resources (North West Java), Ltd.	Talisman UK (South East Sumatra), Ltd.	Indonesia	Oil and gas exploration and production (11)	F.C.	75.00	100.00	37	—

Talisman South Sageri, B.V.	Repsol Exploración, S.A.U. (34)	Netherlands	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	—
Talisman UK (South East Sumatra), Ltd.	Paladin Resources, Ltd.	United Kingdom	Oil and gas exploration and production (11)	F.C.	75.00	100.00	38	—
Transasia Pipeline Company Pvt. Ltd.	Repsol Transgasindo S.à r.l	Republic of Mauritius	Portfolio company	E.M.	11.25	15.00	(93)	—
Transportadora Sulbrasileira del Gas, S.A.	Repsol Exploração Brasil Ltda	Brazil	Construction and operation of a gas pipelines	E.M.(J.V.)	25.00	25.00	—	3
Transworld Petroleum (U.K.) Ltd.	Repsol Sinopec North Sea, Ltd.	United Kingdom	Oil and gas exploration and production	F.C.	75.00	100.00	—	—
Triad Oil Manitoba, Ltd.	Repsol Exploración, S.A.U. (29)	Canada	Oil and gas exploration and production (11)	F.C.	75.00	100.00	—	—
Vung May 156 - 159 Vietnam, B.V.	Repsol Greece Ionian, S.L.U.	Netherlands	Oil and gas exploration and production (11)	F.C.	100.00	100.00	—	4
Petroquiriqué, S.A. - Empresa Mixta	Repsol Exploración, S.A.	Venezuela	Oil and gas exploration and production	E.M.(J.V.)	30.00	40.00	(1,252)	244
YPFB Transierra, S.A. (14)	YPFB Andina, S.A.	Bolivia	Transport of oil and gas by pipeline	E.M.	16.13	44.50	28	16
INDUSTRIAL								
8787352 Canada, Ltd.	Repsol Industrial Transformation, S.L.U.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	(1)	2
Acteco Productos y Servicios, S.L.	Repsol Química, S.A.	Spain	Waste management and mechanical recycling of plastics	E.M.(J.V.)	27.00	27.00	2	—
Alba Emission Free Energy, S.A.	Petróleos del Norte, S.A.	Spain	Decarbonization activities	F.C.	85.98	100.00	15	13
Asfaltos Españoles, S.A.	Repsol Petróleo, S.A.	Spain	Asphalts	I.P.	49.99	50.00	17	4
Basque Hydrogen, S.L	Alba Emission free Energy, S.A.	Spain	Decarbonization activities	E.M.(J.V.)	43.85	51.00	1	1
Bay of Biscay Hydrogen, S.L.	Alba Emission free Energy, S.A.	Spain	Decarbonization activities	F.C.	85.98	100.00	1	—
Biscay Eco Aggregates, S.L. (5)	Alba Emission free Energy, S.A.	Spain	CO_2 fixation plant for material recovery of waste in eco-aggregates (mineralization)	F.C.	85.98	100.00	—	—
Biscay Pyrolytic Ecofuels, S.L. (5)	Alba Emission free Energy, S.A.	Spain	Pyrolysis HUB pilot plant for manufacture of biobunker from municipal solid waste	F.C.	85.98	100.00	—	—
Cartagena Hydrogen Network, S.L.	Repsol Industrial Transformation, S.L.U.	Spain	Development of production processes, storage, transport, use, consumption and transformation of hydrogen	F.C.	100.00	100.00	—	—
Tarragona Hydrogen Network, S.L.	Repsol Industrial Transformation, S.L.U.	Spain	Development of production processes, storage, transport, use, consumption and transformation of hydrogen	F.C.	100.00	100.00	—	—
Cogeneración Gequisa, S.A. (12)	General Química, S.A.U.	Spain	Production of electricity and steam	E.M.	19.50	39.00	2	7
Compañía Auxiliar de Remolcadores y Buques Especiales, S.A.	Repsol Petróleo, S.A.	Spain	Provision of maritime services	F.C.	99.24	100.00	17	—
Dynasol China, S.A. de C.V. (12)	Dynasol Gestión México, S.A.P.I. de C.V.	Mexico	Provision of services	E.M.(J.V.)	50.00	100.00	23	25
Dynasol Elastómeros, S.A. de C.V. (12)	Dynasol Gestión México, S.A.P.I. de C.V.	Mexico	Production and sale of chemical products	E.M.(J.V.)	50.00	99.99	136	36
Dynasol Elastómeros, S.A.U. (12)	Dynasol Gestión, S.L.	Spain	Production and sale of chemical products	E.M.(J.V.)	50.00	100.00	124	17
Dynasol Gestión México, S.A.P.I. de C.V.	Repsol Química, S.A.	Mexico	Portfolio and shared services company	E.M.	50.00	50.00	150	112
Dynasol Gestión, S.L.	Repsol Química, S.A.	Spain	Portfolio and shared services company	E.M.	50.00	50.00	109	21
Dynasol, Llc. (12)	Dynasol Gestión, S.L.	United States	Sale of petrochemical products	E.M.(J.V.)	50.00	100.00	15	11
Ecoplanta Molecular Recycling Solutions, SL	Repsol Industrial Transformation, S.L.U.(15)	Spain	Promotion, design, construction and operation of molecular recycling facilities.	F.C.	100.00	100.00	37	4
Energía Distribuida del Norte, S.A.	Repsol Customer Centric, S.L.(30)	Spain	Construction and operation of an oil refinery	F.C.	97.79	100.00	1	1
Enerkem Inc.	Repsol Química, S.A.	Canada	Production of renewable syngas (methanol) from municipal waste	E.M.	14.11	14.11	(11)	77
General Química, S.A.U. (12)	Dynasol Gestión, S.L.	Spain	Manufacture and sale of petrochemical products	E.M.(J.V.)	50.00	100.00	47	6
Grupo Repsol del Perú, S.A.C.	Repsol Perú, B.V.	Peru	Shared services company	F.C.	100.00	100.00	1	—
Iberian Lube Base Oils Company, S.A.	Repsol Petróleo, S.A.	Spain	Development and production of lubricants	I.P.	29.99	30.00	76	54
Ibero Waste Trading S.L.(5)	Repsol Industrial Transformación S.L.U.	Spain	Waste management	E.M.(J.V.)	55.00	55.00	—	—

Industrias Negromex, S.A. de C.V. (12)	Dynasol Gestión México, S.A.P.I. de C.V.	Mexico	Manufacture of synthetic oil cloths	E.M.	50.00	99.99	130	62
Insa Gpro (Nanjing), Synthetic Rubber Co. Ltd. (12)	Dynasol China, S.A. de C.V.	China	Manufacture, development, sale of synthetic rubber	E.M.(J.V.)	25.00	50.00	40	35
Liaoning North Dynasol Synthetic Rubber Co. Ltd. (12)	Dynasol Gestión, S.L.	China	Manufacture, development, sale of synthetic rubber	E.M.(J.V.)	25.00	50.00	95	3
Petróleos del Norte, S.A.	Repsol Industrial Transformation, S.L.U	Spain	Construction and operation of an oil refinery	F.C.	85.98	85.98	2,074	121
Petronor Innovación, S.L.	Petróleos del Norte, S.A.	Spain	Research activities	F.C.	85.98	100.00	—	—
Polidux, S.A.	Repsol Química, S.A.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	11	17
Refinería La Pampilla, S.A.A.	Repsol Perú, B.V.	Peru	Refining and sale of oil and gas	F.C.	99.20	99.20	578	672
Relkia Distribuidora de Electricidad, S.L	Repsol Petróleo, S.A.	Spain	Distribution of electricity	F.C.	99.97	100.00	13	—
Remolcadores Portuarios de Tarragona, S.L.	Compañía Auxiliar de Remolcadores y Buques Especiales, S.A.	Spain	Activities related to maritime transport and inland waterways	I.P.	37.71	38.00	2	—
Remolcadores Puerto A Coruña, A.I.E. (5)	Repsol Petróleo, S.A.	Spain	Activities related to maritime transport and inland waterways	I.P.	59.98	60.00	1	—
Repsol Canadá, Ltd.	Repsol Industrial Transformation, S.L.U.	Canada	LNG regasification	F.C.	100.00	100.00	(1)	2
Repsol Chemie Deutschland, GmbH	Repsol Química, S.A.	Germany	Sale of chemical products	F.C.	100.00	100.00	6	—
Repsol Comercial, S.A.C.	Refinería La Pampilla, S.A.A.	Peru	Sale of fuel	F.C.	99.20	100.00	169	76
Repsol Energy North América Canada Partnership	Saint John LNG Development Company Ltd.	Canada	Oil and gas exploration and production	F.C.	100.00	100.00	37	—
Repsol Energy North América Corporation	Repsol Industrial Transformation, S.L.U.	United States	Sale of LNG	F.C.	100.00	100.00	328	1,101
Repsol Energy Perú, S.A.C.	Repsol Comercial, S.A.C.	Peru	Sale of solid, liquid and gaseous fuels (11)	F.C.	99.20	100.00	—	—
Repsol Financial Trading S.a.r.l. (17)	Albatros, S.a.r.l. (22)	Luxembourg	Acquisition, administration, management, control and development of holdings in Luxembourg and foreign companies	F.C.	100.00	100.00	2,039	—
Repsol Industrial Transformation, S.L.U.	Repsol, S.A.	Spain	Portfolio company	F.C.	100.00	100.00	6,112	—
Repsol LNG Holding, S.A.	Repsol Industrial Transformation, S.L.U.	Spain	Sale of oil and gas	F.C.	100.00	100.00	314	2
Repsol Marketing, S.A.C.	Repsol Customer Centric, S.L.	Peru	Sale of fuel and specialized products	F.C.	97.79	100.00	7	3
Repsol Perú, B.V.	Repsol, S.A.	Netherlands	Portfolio company	F.C.	100.00	100.00	340	351
Repsol Petróleo, S.A.	Repsol Industrial Transformation, S.L.U	Spain	Import of products and operation of refineries	F.C.	99.97	99.97	4,650	218
Repsol Polímeros, Unipessoal, Lda.	Repsol Química, S.A.	Portugal	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	436	562
Repsol Química, S.A.	Repsol Industrial Transformation, S.L.U.	Spain	Manufacture and sale of petrochemical products	F.C.	100.00	100.00	697	60
Repsol Renewable and Circular Solutions, S.A	Repsol Industrial Transformation, S.L.U.	Spain	Production, storage, consumption and transformation of hydrogen	F.C.	100.00	100.00	2	—
Repsol Saint 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	Storage, sale, trading and transport	F.C.	100.00	100.00	13	9
Repsol Trading Singapore Pte, Ltd.	Repsol Trading, S.A.	Singapore	Storage, sale, trading and transport	F.C.	100.00	100.00	(85)	—
Repsol Trading USA LLC.	Repsol Energy North América Corporation	United States	Storage, sale, trading and transport	F.C.	100.00	100.00	188	286
Repsol Trading, S.A.	Repsol Industrial Transformation, S.L.U.	Spain	Storage, sale, trading and transport	F.C.	100.00	100.00	848	—
Saint John LNG Development Company Ltd. (10)	Repsol Industrial Transformation, S.L.U.	Canada	Liquefaction plant investment project in Canada	F.C.	100.00	100.00	20	22
Saint John LNG Limited Partnership	Saint John LNG Development Company Ltd.	Canada	Provision of services in liquefaction plant investment project in Canada	F.C.	100.00	100.00	40	—
Servicios de Seguridad Mancomunados, S.A.	Repsol Petróleo, S.A.	Spain	Safety	F.C.	99.95	100.00	—	—
Synkedia Biscay, AIE (5)	Alba Emission Free Energy, S.A.	Spain	Construction and operation of demo plant for synthesis of renewable products	E.M.(J.V.)	42.99	50.00	12	12

Tucan LNG S.a.r.l. (5)	Repsol Industrial Transformation, S.L.U	Luxembourg	Sale of oil products	F.C.	100.00	100.00	—	—
CUSTOMER								
Abastecimentos e Serviços de Aviaçao, Lda.	Repsol Portuguesa, Lda	Portugal	Sale of oil products	E.M.	48.89	50.00	—	—
Air Miles España, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Travel Club Program. Loyalty services	E.M.	26.03	26.67	5	—
Arteche y García, S.L.U.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	97.60	100.00	—	—
Bardahl de México, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	39.12	40.00	41	—
Benzirep - Vall, S.L.U.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	97.60	100.00	—	—
Campsa Estaciones de Servicio, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Operation and management of gas stations	F.C.	97.60	100.00	180	8
Becsol, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Andorra	Distribution of oil products	E.M.	32.45	33.25	1	—
CI Repsol Downstream Colombia, S.A.S.	Repsol Downstream Internacional, S.A.	Colombia	Distribution and sale of oil products	F.C.	97.79	100.00	—	—
Cide HCEnergía, S.A. (5)	Repsol Customer Centric, S.L.	Spain	Sale of electricity, oil and gas and water	E.M.	48.90	50.01	20	—
Comercializador de Referencia Energético, S.L.U. (5)	Cide HCenergía, S.A.	Spain	Sale of electricity, natural gas or other products and services additional or ancillary to the supply of energy	E.M.	48.90	100.00	1	—
Compañía Anónima de Revisiones y Servicios, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	92.72	95.00	3	1
Distribuidora Andalucía Oriental, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Sale of fuel	E.M.(J.V.)	48.80	50.00	1	1
Distribuidora de Petróleos, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Sale of fuel	F.C.	82.96	85.00	—	—
Ekiluz Energía Comercializadora, S.L.	Repsol Customer Centric, S.L.	Spain	Sale of electricity from renewable or conventional sources	F.C.	97.79	100.00	1	—
Ekiluz Promoción, S.L.	Repsol Customer Centric, S.L.	Spain	Administrative development of plants producing electricity from renewable sources	F.C.	97.79	100.00	5	—
Endomexicana Renta y Servicios, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	E.M.(J.V.)	39.12	40.00	—	—
Estación de Servicio Barajas, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	F.C.	93.70	96.00	3	1
Estación de Servicio Montsia, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Installation and operation of gas stations	E.M.(J.V.)	48.80	50.00	—	—
Gaolania Servicios, S.L.	Repsol Customer Centric, S.L.	Spain	Sale of electricity	F.C.	88.01	90.00	4	—
Gestao e Administraçao de Postos de Abastecimiento Unipessoal, Lda.	Repsol Portuguesa, Lda	Portugal	Sale of oil products	F.C.	97.79	100.00	10	2
Gestión de Puntos de Venta, Gespevesa, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Gas station management	F.C.	92.72	95.00	47	39
Ibil, Gestor de Carga de Vehículo Eléctrico, S.A.	Repsol Customer Centric, S.L.	Spain	Operation of EV charging points	E.M.(J.V.)	48.89	50.00	—	2
Klikin Deals Spain, S.L.U.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Customer and oil product marketing management	F.C.	97.60	100.00	10	1
LGA Logística Global de Aviação, Lda.	Repsol Portuguesa, Lda	Portugal	Transport of aviation oil products	E.M.	19.56	20.00	—	—
Medusa Alternativas Suministro Eléctrico, S.L.	Repsol Customer Centric, S.L.	Spain	Offer a recharging solution that provides economic savings per term of capacity compared to a conventional facility connected to the distribution network	E.M.	32.60	33.33	—	—
MUVEXT, S.A (5)	Repsol Portuguesa, Lda	Portugal	Electric mobility operator	E.M.	71.22	72.83	—	—
PT Pacific Lubritama Indonesia	United Oil Company Pte Ltd	Indonesia	Production and distribution of lubricants	E.M.	37.16	95.00	10	3
Régsiti Comercializadora Regulada, S.L.U.	Repsol Comercializadora de Electricidad y Gas, S.L.U.	Spain	Sale of electricity	F.C.	97.79	100.00	6	1
Repsol Butano, S.A.	Repsol Customer Centric, S.L.	Spain	Sale of LGP	F.C.	97.79	100.00	196	59
Repsol Comercial de Productos Petrolíferos, S.A.	Repsol Customer Centric, S.L.	Spain	Sale of oil products	F.C.	97.60	99.79	729	335
Repsol Comercializadora de Electricidad y Gas, S.L.U.	Repsol Customer Centric, S.L.	Spain	Sale of electricity	F.C.	97.79	100.00	18	1
Repsol Customer Centric, S.L.	Repsol, S.A.	Spain	Portfolio company	F.C.	97.79	100.00	3,550	—
Repsol Directo, Lda.	Repsol Portuguesa, Lda	Portugal	Distribution and sale of oil products	F.C.	97.79	100.00	3	2

Repsol Directo, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and sale of oil products	F.C.	97.60	100.00	8	—
Repsol Downstream Internacional, S.A.U.	Repsol Customer Centric, S.L.	Spain	Portfolio company	F.C.	97.79	100.00	215	—
Repsol Downstream México, S.A. de C.V	Repsol Downstream Internacional, S.A.	Mexico	Production and distribution of lubricants	F.C.	97.79	100.00	(24)	244
Repsol Gas Portugal, Unipessoal, Lda.	Repsol Butano, S.A.	Portugal	Sale of LGP	F.C.	97.79	100.00	67	3
Repsol Lubricantes y Especialidades, S.A.	Repsol Customer Centric, S.L.	Spain	Manufacture and sale of oil products	F.C.	97.79	100.00	97	5
Repsol Lubrificantes e Especialidades Brasil Participaçoes, Ltda.	Repsol Downstream Internacional, S.A.	Brazil	Production and sale of lubricants	F.C.	97.79	100.00	4	8
Repsol Marketing France, S.A.S.U.	Repsol Downstream Internacional, S.A.	France	Sale of oil products	F.C.	97.79	100.00	—	—
Repsol Monti, S.r.l. (5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Portuguesa, Lda.	Repsol Downstream Internacional, S.A.	Portugal	Distribution and sale of oil products	F.C.	97.79	100.00	321	68
Repsol Services México, S.A. de C.V.	Repsol Downstream Internacional, S.A.	Mexico	Oil and gas exploration and production	F.C.	97.79	100.00	5	2
Servicios Logísticos de Combustibles de Aviación, S.L	Repsol Lubricantes y Especialidades, S.A.	Spain	Transport of aviation oil products	E.M.(J.V.)	48.85	50.00	12	2
Sociedade Abastecedora de Aeronaves, Ltda.	Repsol Portuguesa, Lda	Portugal	Sale of oil products	E.M.	24.45	25.00	—	—
Societat Catalana de Petrolis, S.A.U.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Distribution and sale of oil products	F.C.	97.60	100.00	10	6
Solar 360 de Repsol y Movistar, S.L.	Repsol Customer Centric, S.L.	Spain	Development and sale of photovoltaic self-consumption products and/or services	E.M.(J.V.)	48.89	50.00	(3)	—
Solar 360 Soluciones de Instalación y Mantenimiento, S.L.	Repsol Customer Centric, S.L.	Spain	Sale, management and provision of services related to photovoltaic self-consumption equipment	E.M.	47.92	49.00	—	—
Solgas Distribuidora de Gas, S.L.	Repsol Butano, S.A.	Spain	Sale of LGP	F.C.	97.79	100.00	1	1
Solred, S.A.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Management of means of payment at gas stations	F.C.	97.60	100.00	75	26
SPK Águila, S.L.U.(5)	Ekiluz Promoción S.L.	Spain	Photovoltaic project	F.C.	97.79	100.00	—	—
Terminales Canarios, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Storage and distribution of oil products	E.M.(J.V.)	48.80	50.00	13	10
United Oil Company Pte Ltd	Repsol Downstream Internacional, S.A.	Singapore	Production and distribution of lubricants	E.M.	39.12	40.00	17	4
WIB Advance Mobility, S.L.	Repsol Comercial de Productos Petrolíferos, S.A.	Spain	Shared vehicle rental in the city	E.M.(J.V.)	48.80	50.00	1	—
LOW-CARBON GENERATION								
Agrovolt 01 S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Alectoris Energía Sostenible 1, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	48	—
Alectoris Energía Sostenible 3, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	43	—
Aneto SAS (5)	Prejeance Industrial SAS	France	Portfolio company	F.C.	75.00	100.00	—	—
Aragonesa de Infraestructuras Energéticas Renovables, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	3	—
Araste SPV 2021, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Arco Energía 1, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	28	—
Arco Energía 2, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	24	—
Arco Energía 3, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	25	—
Arco Energía 4, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	16	—
Arco Energía 5, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	15	—
Arcos 400 Renovables, A.I.E.	Arco Energía 1, S.L.U.	Spain	Common electricity evacuation infrastructures	E.M.	18.76	49.05	6	6
Baschenis S.r.l. (5)	PI Italy 2 S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Be.Na S.r.l (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	45.00	60.00	—	—

Boalar Energías, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	(3)	—
Boethia SAS (5)	Aneto SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
BPC Energy S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	1	—
CAL SAS (5)	Cinto SAS	France	Production of electricity	F.C.	75.00	100.00	(1)	—
CAL II SAS (5)	Aneto SAS	France	Production of electricity	F.C.	75.00	100.00	(2)	—
CAL III SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
CAL IV SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	(1)	—
CAL V SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
CAL VI SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
CAL VII SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
CAL VIII SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco, S.L.U. (5)	LCG Renewables Energies Spain, S.L.U.	Spain	Portfolio company	F.C.	75.00	100.00	4	—
Cefiro Holdco 1, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 2, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	(1)	—
Cefiro Holdco 3, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	(1)	—
Cefiro Holdco 4, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 5, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 6, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 7, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 8, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 9, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 10, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 11, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cefiro Holdco 12, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Cinto SAS (5)	Prejeance Industrial SAS	France	Portfolio company	F.C.	75.00	100.00	1	—
Clemer S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Corsica Optimum 2 SAS (5)	Volt B SAS	France	Production of electricity	F.C.	75.00	100.00	3	—
Cyrasol Energia I S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Cyrasol Energia III S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Cyrasol Energia IV S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Damien S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Desarrollo Eólico Las Majas VII, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	41	—
Desarrollo Eólico Las Majas VIII, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Desarrollo Eólico Las Majas XIV, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Desarrollo Eólico Las Majas XV, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	1	—
Desarrollo Eólico Las Majas XXVII, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Desarrollo Eólico Las Majas XXXI, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—

Desarrollos Eólicos El Saladar, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol US Renewables, LLC (5)(32)	Repsol Renewables North America, Inc	United States	Portfolio company	F.C.	75.00	100.00	—	—
Energía Eólica Foque, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	3	—
Energía Eólica La Mayor, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	2	—
Energía Eólica Timón, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	2	—
Energía Electrones, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	1	—
Energía Célula, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	1	—
Energías Renovables de Cilene, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Energías Renovables de Dione, S.L.U.	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	22	—
Energías Renovables de Gladiateur 18, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Energías Renovables de Hidra, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Energías Renovables de Kore, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Energías Renovables de Lisitea, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	28	—
Energías Renovables de Polux, S.L.U,	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	8	—
Eólica de Taltal, SpA	Repsol Chile, SpA	Chile	Portfolio company	F.C.	75.00	100.00	77	75
Eólica Montesinos, S.L.U. (5)	LCG Renewables Energies Spain, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	11	—
ERNC LOA, SpA	Repsol Ibereólica Renovables Chile SpA	Chile	Production of electricity	E.M.	37.50	100.00	6	6
Four Winds Investco, S.L.U. (5)	LCG Renewables Energies Spain, S.L.U.	Spain	Portfolio company	F.C.	75.00	100.00	—	—
Fuerzas Energéticas del Sur de Europa V, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	37	—
Fuerzas Energéticas del Sur de Europa VI, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	15	—
Fuerzas Energéticas del Sur de Europa XI, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	38	—
Fuerzas Energéticas del Sur de Europa XII, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	37	—
Fuerzas Energéticas del Sur de Europa XIII, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	19	—
Fuerzas Energéticas del Sur de Europa XIV, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	15	—
Fuerzas Energéticas del Sur de Europa XVIII, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	13	—
Fuerzas Energéticas del Sur de Europa XX, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	18	—
Gemini Wind S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Generación Eólica El Vedado, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	18	—
Generación y Suministro de Energía, S.L.	Repsol Wind and Solar Spain, S.L.U.(25)	Spain	Production of electricity and portfolio company	F.C.	38.25	51.00	505	—
Georges S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Gimsan SPV 2021, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Giovanni S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	1	—
Gruppo Visconti Turi S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Gulf Coast Offshore Wind LLC. (5)	Repsol Renewables North America, Inc	United States	Production of electricity	F.C.	75.00	100.00	—	—
Gustave S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Hecate Energy Frye Solar LLC	Repsol Renewables Development Company LLC	United States	Production of electricity	F.C.	75.00	100.00	(78)	—
Hecate Energy Group, LLC	Repsol Renewables North America, Inc	United States	Development of photovoltaic and battery energy storage projects	E.M.	30.00	40.00	48	52

Hecate Energy Longhorn Solar LLC	Repsol Renewables Development Company LLC	United States	Production of electricity	F.C.	75.00	100.00	5	5
Hecate Energy Outpost Solar LLC	Repsol Renewables Development Company LLC	United States	Production of electricity	F.C.	75.00	100.00	8	6
Hispánica de Desarrollos Energéticos Sostenibles, S.L.U	Generación y Suministro de Energía S.L. (33)	Spain	Production of electricity	F.C.	38.25	100.00	79	—
Iberen Renovables, S.A.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	7	4
Iberia Solar Brownfield 1, S.L.U. (5)	LCG Renewables Energies Spain, S.L.U.	Spain	Portfolio company	F.C.	75.00	100.00	6	—
Innea Project 2 SAS (5)	Cinto SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 1, S.L.U.(5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 2, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 3, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 4, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 5, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 6, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 8, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 9, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 10, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 11, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	(1)	—
ISC Greenfield 13, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 17, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 18, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 19, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 20, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 24, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
ISC Greenfield 25, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Jackson S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	4	—
Jasper S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	(2)	—
Jicarilla Solar 1 LLC	Jicarilla Solar 1 Holdings, LLC	United States	Production of electricity	F.C.	75.00	100.00	53	—
Jicarilla Solar 1 Class B LLC (5)	Repsol Renewables North America, Inc	United States	Portfolio company	F.C.	75.00	100.00	71	71
Jicarilla Solar 1 Holdings LLC (5)	Jicarilla Solar 1 Class B LLC	United States	Portfolio company	F.C.	75.00	100.00	71	71
Jicarilla Solar 2 LLC	Jicarilla Solar 2 Holdings LLC	United States	Production of electricity	F.C.	75.00	100.00	50	—
Jicarilla Solar 2 Bond Purchaser LLC	Jicarilla Solar 2 LLC	United States	Portfolio company	F.C.	75.00	100.00	—	—
Jicarilla Solar 2 Holdings LLC	Jicarilla Solar 2 Class B LLC	United States	Portfolio company	F.C.	75.00	100.00	35	32
Jicarilla Solar 2 Class B LLC	Repsol Renewables North America, Inc	United States	Portfolio company	F.C.	75.00	100.00	38	38
Jicarilla Storage 1 LLC	Jicarilla Solar 1 Holdings, LLC	United States	Energy storage	F.C.	75.00	100.00	15	—
Jicarilla Solar 1 Bond Purchaser LLC	Jicarilla Solar 1 LLC	United States	Portfolio company	F.C.	75.00	100.00	—	—
Jicarilla Storage 1 Bond Purchaser LLC	Jicarilla Storage 1 LLC	United States	Portfolio company	F.C.	75.00	100.00	—	—
Keith S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
KI 1 SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
Lanas Servas SAS (5)	Aneto SAS	France	Production of electricity	F.C.	75.00	100.00	(5)	5
LCG Renewables Energies Spain, S.L.U. (5) (18)	Repsol Renovables, S.A.	Spain	Portfolio company	F.C.	75.00	100.00	118	—
LCG Renewables Energies France Limited (5) (19)	LCG Renewables Energies Spain, S.L.U.	United Kingdom	Portfolio company	F.C.	75.00	100.00	69	1
LCG Sunproject Uno S.r.l. (5) (20)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—

Lorenzo S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	1	—
Mafra Solar S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Michelangelo S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	1	—
Natural Power Development, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Nesa Vento Galego 1, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Nesa Vento Galego 2, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Nesa Vento Galego 3, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
New Energy Viven S.r.l. (5)	PI Italy 2 S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	2	—
Nudo Manzanares 220 KV, A.I.E.	Tramperase, S.L.	Spain	Common electricity evacuation infrastructures	E.M.	10.56	27.60	5	—
Paolo S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Parque Eólico Antofagasta, SpA	Eólica de Taltal, SpA	Chile	Production of electricity	F.C. (37)	75.00	100.00	—	—
Parque Eólico Atacama SPA	Repsol Ibereólica Renovables Chile SpA	Chile	Production of electricity	E.M.	37.50	100.00	21	21
Parque Eólico Valle de Iguña, S.L. (5)	Repsol Ureño, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Parque FV Centauro, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Parque FV Hercules, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Parque FV Orion, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Parque FV Taurus, S.L.U. (5)	Iberia Solar Brownfield 1, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Paul S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	(1)	—
PE Cabo Leones III SpA	Repsol Ibereólica Renovables Chile SpA	Chile	Production of electricity	E.M.	37.50	100.00	—	4
PE Levante 4W, S.L.U. (5)	Four Winds Investco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
PE Mistral 4W, S.L.U. (5)	Four Winds Investco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
PE Tramontana, S.L.U. (5)	Four Winds Investco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
PI 1 SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
PI Italy S.r.l. (5)	LCG Renewables Energies Spain, S.L.U. (36)	Italy	Portfolio company	F.C.	75.00	100.00	1	—
PI Italy 2 S.r.l. (5)	LCG Renewables Energies Spain, S.L.U. (36)	Italy	Portfolio company	F.C.	75.00	100.00	—	—
Pieter S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	1	—
Prejeance Industrial SAS (5)	LCG Renewables Energies France Limited	France	Portfolio company	F.C.	75.00	100.00	23	4
Promotores Valle- Atalaya, A.I.E. (5)	Repsol Renovables, S.A.	Spain	Common electricity evacuation infrastructures	E.M.	19.50	26.00	—	—
PV Aries S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
PV El Tomillar, S.L. (5)	Generación y Suministro de Energía S.L. (24)	Spain	Production of electricity	F.C.	38.25	100.00	14	—
PV Italy 008 S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
PV Sagittarius S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
PV Scorpio S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	1
PV Taurus S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
PV Virgo S.r.l. (5)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Radira SPV 2021, S.L.U. (5)	Cefiro Holdco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables Cerro Duran, S.L.(5)	Repsol Cerro Comitre, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables de la Bureba, S.L.(5)	Repsol Bureba, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables de Maials, S.L.(5)	Repsol Maials, S.L.U	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables de Olmedilla, S.L.(5)	Repsol Renovables Olmedilla, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables de Paramillos, S.L. (5)	Repsol Paramillos S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—

Renovables de Velilla, S.L. (5)	Repsol Velilla, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables de Villarrobledo, S.L. (5)	Repsol Villarrobledo, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables Vientos del Solano, S.L.(5)	Repsol Vientos del Solano, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovables Arroyo de la Luz, S.L. (5)	Repsol Arroyo de la Luz, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Renovacyl, S.A.	Generación y Suministro de Energía S.L.(23)	Spain	Production of electricity	F.C.	38.25	100.00	20	1
Repsol Ala dei Sardi, S.r.l. (5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Repsol Arroyo de la Luz, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Bureba, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Cerro Comitre, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Chile, SpA	Repsol Renovables, S.A.	Chile	Portfolio company	F.C.	75.00	100.00	172	183
Repsol Financiera Renovables, S.A.	Repsol Renovables, S.A.	Spain	Financial services	F.C.	75.00	100.00	20	15
Repsol Gaude S.r.l.(5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Generación de Ciclos Combinados, S.L.U.	Repsol, S.A.	Spain	Production of electricity	F.C.	100.00	100.00	200	8
Repsol Generación Eléctrica, S.A.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	842	468
Repsol Ibereólica Renovables Chile SpA	Repsol Chile, SpA	Chile	Portfolio company	E.M.	37.50	50.00	90	83
Repsol LCG Energies Italia S.r.l. (5) (21)	LCG Renewables Energies Spain, S.L.U.	Italy	Production of electricity	F.C.	75.00	100.00	2	3
Repsol Maials, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Montepuccio 1, S.r.l.(5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Montepuccio 2, S.r.l.(5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Nughedu S.R.L.	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Repsol Orria, S.r.l. (5)	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Repsol Paramillos S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Puertollano Sunrise, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Renewables Development Company LLC	Repsol Renewables North America, Inc	United States	Portfolio company	F.C.	75.00	100.00	5	5
Lighthouse Renewable, Corp (31)	Repsol Renewables North America, Inc	United States	Portfolio company	F.C.	75.00	100.00	—	—
Repsol Renewables Italia S.R.L.	Repsol Renovables, S.A.	Italy	Development of greenfield projects and production of electricity	F.C.	75.00	100.00	4	4
Repsol Renewables North America, Inc	Repsol Renovables, S.A.	United States	Portfolio company	F.C.	75.00	100.00	1,005	—
Repsol Renovables Olmedilla, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Renovables, S.A.	Repsol, S.A.	Spain	Portfolio company	F.C.	75.00	75.00	2,083	258
Repsol San Mauro S.R.L.	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Repsol Servicios Renovables, S.A.	Repsol Renovables, S.A.	Spain	Representative in electricity market and provision of services to Group companies	F.C.	75.00	100.00	13	2
Repsol Ureño, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Uta S.R.L.	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	1	1
Repsol Velilla, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Venosa S.R.L.	Repsol Renovables, S.A.	Italy	Production of electricity	F.C.	75.00	100.00	2	2
Repsol Vientos del Solano S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Villarrobledo, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Virgen de Peñarroya, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Repsol Wind and Solar Spain, S.L.U. (5)	Repsol Renovables, S.A.	Spain	Portfolio company	F.C.	75.00	100.00	244	—
Set Colectora Valle, A.I.E. (5)	Repsol Renovables, S.A.	Spain	Common electricity evacuation infrastructures	E.M.	26.51	35.34	—	—
Set Promotores Sax, A.I.E.	Repsol Renovables, S.A.	Spain	Common electricity evacuation infrastructures	E.M.	12.87	17.15	—	—

Sidney S.r.l. (5)	Jackson S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	2	—
Societa Agricola Edward S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Solar Antofagasta SpA	Repsol Ibereólica Renovables Chile SpA	Chile	Production of electricity	E.M.	37.50	100.00	7	7
Solar Elena SpA	Repsol Ibereólica Renovables Chile SpA	Chile	Production of electricity	E.M.	37.50	100.00	62	62
Solar Fotovoltaica Villena, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Soluciones Tecnológicas de Energías Verdes, S.L.U	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Sunnprod SAS (5)	Aneto SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
Tramperase, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	23	—
Trillo Solar Fotovoltaica, S.L.U.(5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Trillo Solar Fotovoltaica 2, S.L.U.(5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Trillo Solar Fotovoltaica 3, S.L.U.(5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Trillo Solar Fotovoltaica 4, S.L.U.(5)	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Valdesolar Hive, S.L.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	38.25	51.00	31	—
Vento Continuo Galego, S.L.U.	Repsol Renovables, S.A.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
Vincent S.r.l. (5)	PI Italy S.r.l.	Italy	Production of electricity	F.C.	75.00	100.00	—	—
Viveiro PE Galicia, S.L.U. (5)	Four Winds Investco, S.L.U.	Spain	Production of electricity	F.C.	75.00	100.00	—	—
VOLT SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
VOLT II SAS (5)	Cinto SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
VOLT III SAS (5)	Prejeance Industrial SAS	France	Production of electricity	F.C.	75.00	100.00	—	—
Volt B SAS (5)	Prejeance Industrial SAS	France	Portfolio company	F.C.	75.00	100.00	(1)	—
CORPORATE								
Albatros, S.A.R.L.	Repsol, S.A.	Luxembourg	Portfolio company	F.C.	100.00	100.00	8,346	—
Begas Motor, S.L.	Repsol Energy Ventures, S.A.	Spain	Manufacture, transformation and sale of motor vehicles; manufacture of electrical equipment, parts and accessories	E.M.	17.12	17.12	1	—
DACMa, GmbH (5)	Repsol Energy Ventures S.A.	Germany	Development and marketing of technology for direct capture of CO_2	E.M.	10.00	10.00	1	—
Ezzing Renewable Energies S.L.	Repsol Energy Ventures, S.A.	Spain	Development of photovoltaic projects	E.M.	24.03	24.03	—	—
FEHI Holding, S.a.r.l.	Repsol Exploración, S.A.U.	Luxembourg	Portfolio company	F.C.	75.00	100.00	3,898	202
Finboot Ltd.	Repsol Energy Ventures, S.A.	United Kingdom	Blockchain technology for energy, retail and automotive sectors	E.M.	8.99	8.99	—	—
Gaviota RE, S.A. (7)	Albatros, S.A.R.L.	Luxembourg	Insurance and reinsurance	F.C.	100.00	100.00	525	1
Greenstone Assurance, Ltd.	Gaviota RE, S.A.	Bermuda	Insurance and reinsurance (11)	F.C.	100.00	100.00	—	33
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.	8.99	8.99	—	—
Net Zero Ventures, S.L.	Repsol Energy Ventures, S.A.	Spain	Investment advice to the manager of the two venture capital entities	E.M.	50.00	50.00	—	—
Repsol Energy Ventures, S.A.U.	Repsol Technology and Ventures, S.L.U	Spain	Development of new energy projects	F.C.	100.00	100.00	16	3
Repsol Exploration Advanced Services, A.G.	Repsol Exploración, S.A.U.	Switzerland	Company providing human resource services	F.C.	75.00	100.00	1	1
Repsol Europe Finance S.A.R.L.	Albatros, S.A.R.L.	Luxembourg	Financial services and holding company	F.C.	100.00	100.00	6,864	4,198
Repsol Finance Brasil S.A.R.L.	Repsol Exploração Brasil Ltda.	Luxembourg	Financial services and holding company	F.C.	100.00	100.00	1,076	4
Repsol Gestión de Divisa, S.L.	Repsol, S.A.	Spain	Financial services	F.C.	100.00	100.00	129	—
Repsol International Finance, B.V.	Repsol, S.A.	Netherlands	Financial services and holding of shares	F.C.	100.00	100.00	704	301

Repsol Technology and Ventures, S.L.U	Repsol, S.A.	Spain	Shared services company	F.C.	100.00	100.00	19	—
Repsol Tesorería y Gestión Financiera, S.A.	Repsol, S.A.	Spain	Financial services	F.C.	100.00	100.00	510	—
OGCI Climate Investments LLP	Repsol Energy Ventures, S.A.	United Kingdom	Technology development	E.M.	9.09	9.09	53	55
Ovalo, S.a.r.l (5)	Albatros, S.A.R.L.	Luxembourg	Financial services	F.C.	100.00	100.00	—	—
Perseo Biotechnology S.L.U.	Repsol Energy Ventures, S.A.	Spain	Manufacture, distribution and sale of biofuels	E.M.	24.99	24.99	1	2
Rocsole OY	Repsol Energy Ventures, S.A.	Finland	Technology development	E.M.	15.34	15.34	—	—
Smarkia Energy, S.L.	Repsol Energy Ventures, S.A.	Spain	Provision of energy efficiency services on a Cloud platform	E.M.	33.51	33.51	2	—
Sunrgyze, S.L.	Repsol Energy Ventures, S.A.	Spain	Development and scale-up of artificial photosynthesis technology for hydrogen production	E.M.	50.00	50.00	—	—
Recreus Industries, S.L.	Repsol Energy Ventures, S.A.	Spain	Distribution and sale of oil products	E.M.	16.67	16.67	—	—
Trovant Technology S.L.	Repsol Energy Ventures, S.A.	Spain	Consulting, advice and training in the field of biotechnology with environmental applications. Research and development activities related to the application and scaling of environmental biotechnology	E.M.	9.81	9.81	—	—

(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 related adjustments. 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 euros has been rounded down to zero).
(4) Interests in joint operations (see Appendix IIB) which are structured through a company and where 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 2023 (see Appendix IIC).
(6) Company in the process of liquidation.
(7) This company holds a non-controlling interest in Everen Limited (5.03%), domiciled in Bermuda.
(8) This company, legally incorporated in the Bahamas, is registered for tax purposes in the United Kingdom.
(9) This company, legally incorporated in the British Virgin Islands, is registered for tax purposes in the United Kingdom.
(10) This company, legally incorporated in Barbados, is registered for tax purposes in the Netherlands.
(11) Inactive company.
(12) The figures on Share Capital and Equity relate to 2022.
(13) The equity corresponds to the value of the consolidated subgroup.
(14) Equity value included in its parent company.
(15) In December, the 22% interest held by Enerkem Spain Holding S.L.U. was transferred to Repsol Industrial Transformation S.L.U.
(16) The company was formerly known as Repsol Lux E&P S.a.r.l. The change took place in February 2023.
(17) The company was formerly known as Tucan LNG S.a.r.l. The change took place in June 2023.
(18) The company was formerly known as Asterion Energies, S.L. The change took place in June 2023.
(19) The company was formerly known as Asterion Renewables France Limited. The change took place in June 2023.
(20) The company was formerly known as Asterion Sunproject Uno S.r.l. The change took place in June 2023.
(21) The company was formerly known as Asterion Energies Italia, S.r.l. The change took place in June 2023.
(22) The parent company of this company was previously Repsol Industrial Transformation. The change took place in June 2023.
(23) The parent company of this company was previously Repsol Wind and Solar, S.L.U. The change took place in November 2023, and the parent company was previously Iberen Renovables, S.A. The change took place in June 2023.
(24) The parent company of this company was previously Repsol Wind and Solar, S.L.U. The change took place in November 2023, and the parent company was previously Eólica Montesinos, S.L. The change took place in June 2023.
(25) The parent company of this company was previously Repsol Renovables, S.A. The change took place in June 2023.
(26) The parent company of this company was previously Talisman International (Luxembourg) S.a.r.L. The change took place in June 2023.
(27) The parent company of this company was previously Repsol Upstream Inversiones, S.A. The change took place in August 2023.
(28) In the process of dissolution and liquidation of Repsol Oil & Gas Canada, Inc., the parent company changed in September 2023.
(29) In the process of dissolution and liquidation of Repsol Oil & Gas Canada, Inc., the parent company changed in October 2023.
(30) The parent company of this company was previously Alba Emission Free Energy, S.A. The change took place in October 2023.
(31) The company was formerly known as Repsol Renewables Development Holdings Corp. The change took place in July 2023.
(32) The company was formerly known as Dominicana Offshore Wind, LLC. The change took place in August 2023.
(33) The parent company of this company was previously Repsol Wind and Solar, S.L.U. The change took place in November 2023, and the parent company was previously Repsol Renovables, S.A. The change took place in June 2023.
(34) The parent company of this company was previously Talisman International Holding, BV. The change took place in December 2023.
(35) The parent company of this company was previously Repsol Exploração Brasil Ltda. The change took place in December 2023.
(36) The parent company of this company was previously Prejeance Industrial SAS. The change took place in December 2023.
(37) This company changed its consolidation method from E.M. to F.C. as a result of the shareholding increase of its parent company (Eólica de Taltal, SpA).

Appendix IIB: Joint operations of the Repsol Group at December 31, 2023

The Repsol Group's main Joint Operations (see Note 4.4) are shown below (including those in which the Group is involved through a joint arrangement)[58]:

Name	Interest % (1)	Operator	Activity (5)
UPSTREAM			
Algeria			
Block 405a	35.00%	Pertamina	Development/Production
Reggane Nord	36.00%	Groupement Reggane Nord	Development/Production
Australia (4)			
JPDA 06-105 PSC	25.00%	ENI	In the process of exiting
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
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
Caipipendi (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 (2)			
Albacora Leste	6.00%	Petro Rio	Development/Production
BM-C-33 (C-M-539)	21.00%	Equinor	Development/Production
BM-S-50 (S-M-623) Sagitario	12.00%	Petrobras	Exploration
BM-S-9 Sapinhoá Concession	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	50.00%	Repsol	Exploration
S-M-764	50.00%	Chevron	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%	SierraCol	Development/Production
CPE-8	50.00%	Repsol	Exploration
CPO-9 - Exploration Area	45.00%	Ecopetrol	Exploration
Cravo Norte	5.63%	SierraCol	Development/Production
Cosecha	17.50%	SierraCol	Development/Production
Rondón	4.38%	SierraCol	Development/Production

[58] 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.

España [4]			
Albatros	82.00%	Repsol	In the process of exiting
Angula	53.85%	Repsol	In the process of exiting
Boquerón	61.95%	Repsol	In the process of exiting
Casablanca-Montanazo Unificado	68.67%	Repsol	In the process of exiting
Casablanca No Unificado	67.35%	Repsol	In the process of exiting
Montanazo D	72.44%	Repsol	In the process of exiting
Rodaballo	65.42%	Repsol	In the process of exiting
Barracuda	60.21%	Repsol	In the process of exiting
Estados Unidos [3]			
Alaska			
Horseshoe Unit	49.00%	Santos	Exploration
Pikka Unit	49.00%	Santos	Development/Production
Quokka	44.77%	Santos	Exploration
Alignment Agreement Area	49.00%	Santos	Exploration
Gulf of Mexico			
Blacktip North - AC 335	50.00%	Llog	Exploration
Stingray	20.00%	Shell	Exploration
Shenzy Unit	28.00%	Woodside	Development/Production
Blacktip	50.00%	Llog	Exploration
Bobcat	25.00%	Shell	Exploration
Buckshot	50.00%	Llog	Exploration
Buckskin Unit	22.50%	Llog	Development/Production
Buckskin North	22.50%	Llog	Exploration
Leon Unit	50.00%	Llog	Development/Production
Lucille	25.00%	Shell	Exploration
Mocassin North	50.00%	Llog	Exploration
Castile	35.63%	Llog	Development/Production
Monument	20.00%	Beacon	Exploration
Mollerussa	20.00%	Shell	Exploration
Noel	50.00%	Llog	Exploration
Green Canyon 608 (Shenzi Unit)	28.00%	Woodside	Development/Production
Christmas Bay	20.00%	Shell	Exploration
La Sal	20.00%	Shell	Exploration
Vonnegut	33.00%	Llog	Exploration
Steinbeck	33.00%	Llog	Exploration
PHOBOS PROJECT	50.00%	Llog	Exploration
DUNHARROW	40.00%	Talos	Exploration
LEMO	50.00%	Llog	Exploration
Sicily	33.00%	Llog	Exploration
Monument Walker Ridge 314	20.00%	Beacon	Exploration
MONUMENT BLOCK 271 UNIT	20.00%	Beacon	Exploration
Eagle Ford			
Eagle Ford Texas	89.84%	Repsol	Development/Production
Marcellus			
Marcellus New York (*) Exploration Unconventional	99.71%	Repsol	Exploration
Marcellus New York	86.19%	Repsol	Development/Production
Marcellus Pennsylvania	84.92%	Repsol	Development/Production
Indonesia			
Corridor PSC	24.00%	Medco	Development/Production
South Sakakemang	80.00%	Repsol	Exploration
Sakakemang	45.00%	Repsol	Exploration
South East Jambi	40.00%	Repsol	Exploration
Libya			
NC115 Development	20.00%	Akakus	Development/Production
NC115 Exploration	40.00%	Repsol	Exploration

NC186 Development	16.00%	Akakus	Development/Production
NC186 Exploration	32.00%	Repsol	Exploration
Mexico			
Bloque 9	50.00%	Eni	Exploration
Bloque 29	30.00%	Repsol	Exploration
Norway			
PL 019 G	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 092	7.65%	Equinor	Development/Production
PL 120	11.00%	Equinor	Development/Production
PL 120 CS	11.00%	Equinor	Development/Production
PL 121	7.65%	Equinor	Development/Production
PL 187	15.00%	Equinor	Development/Production
PL 316	55.00%	Repsol	Development/Production
PL 316B	55.00%	Repsol	Development/Production
Peru			
Bloque 56	10.00%	Pluspetrol	Development/Production
Bloque 57	53.84%	Repsol	Development/Production
Bloque 88	10.00%	Pluspetrol	Development/Production
Iraq (4)			
Topkhana	80.00%	Repsol	In the process of exiting
United Kingdom			
P019 (22/17n)	58.97%	Repsol	Development/Production
P020 (22/18n)	58.97%	Repsol	Development/Production
P101 (13/24a Blake)	67.71%	Repsol	Development/Production
P111 (30/3a Blane Field)	43.00%	Repsol	Development/Production
P111 (30/3a Upper)	30.49%	Repsol	Development/Production
P185 (30/11b)	60.00%	Repsol	Development/Production
P185 (30/12b inc. Halley field)	60.00%	Repsol	Development/Production
P201 (16/21a)	15.00%	Premier	Development/Production
P201 (16/21d)	15.00%	Premier	Development/Production
P219 (16/13a)	38.18%	Repsol	Development/Production
P225 (16/27a- Contract Area 3 Andrew Field Area)	9.86%	BP	Development/Production
P225 (16/27a- Contract Area 3)	26.48%	JX Nippon	Exploration
P240 (16/22a- non Arundel Area)	36.98%	Repsol	Development/Production
P249 (14/19n_F1- Claymore)	92.48%	Repsol	Development/Production
P291 (22/17s)	58.97%	Repsol	Development/Production
P291 (22/22a)	58.97%	Repsol	Development/Production
P291 (22/23a)	58.97%	Repsol	Development/Production
P292 (22/18a)	58.97%	Repsol	Development/Production
P297 (13/28a Ross)	69.18%	Repsol	Development/Production
P297 (13/28a)	64.75%	Repsol	Development/Production
P307 (13/29a Ross)	69.18%	Repsol	Development/Production
P307 (13/29a)	71.67%	Repsol	Development/Production
P324 (14/20b)	50.00%	Repsol	Development/Production
P344 (16/21b Rest of Block)	60.00%	Repsol	Development/Production
P344 (16/21b_F1*-Balmoral Field Area)	15.80%	Premier	Development/Production
P344 (16/21c*- Rest of block excluding Stirling)	60.00%	Repsol	Development/Production
P344 (16/21c_f1*)	15.32%	Premier	Development/Production
P344 (16/21c_f1*-Balmoral)	15.80%	Premier	Development/Production
P534 (98/06a-Wareham)	5.00%	Perenco	Development/Production
P534 (98/06a-Wych Farm UOA)	4.95%	Perenco	Development/Production
P729 (13/29b - Blake Ext Non Skate_Devel.)	80.00%	Repsol	Development/Production
P729 (13/29b - Ross Unitised Field UUOA interests)	69.18%	Repsol	Development/Production
P729 (13/29b - Ross Field Area)	80.00%	Repsol	Exploration
P810 (13/24b Blake Area)	67.70%	Repsol	Development/Production

P810 (13/24b North)	69.18%	Repsol	Development/Production
P973 (13/28c)	69.18%	Repsol	Development/Production
PL089 (SZ/8, SY/88b, SY/98a)	5.00%	Perenco	Development/Production
Trinidad and Tobago			
5B Manakin	30.00%	BP	Development/Production
East Block	30.00%	BP	Development/Production
S.E.C.C. Ibis	10.80%	EOG	Development/Production
West Block	30.00%	BP	Development/Production
Venezuela			
Barua Motatán	40.00%	Petroquiriquire	Development/Production
Carabobo	11.00%	Petrocarabobo	Development/Production
Cardon IV	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
INDUSTRIAL			
Spain			
Asfaltos Españoles, S.A.	50.00%	Repsol	Asphalts
Iberian Lube Base Oils Company, S.A.	30.00%	SK Lubricants	Lubricants and specialized products
Remolcadores Portuarios de Tarragona, S.L.	38.00%	Remolques y Navegación, S.A.	Maritime services

(1) Corresponds to the Group company's interest in the joint arrangement.
(2) On January 26, 2023, PetroRio bought the shareholding of Petrobras, replacing it as operator of Albacora Leste.
(3) Mining domain rights the United States are structured over a large number of Joint Operating Agreements (JOAs). They have been grouped by geographical area and Repsol's interest.
(4) Countries in the process of exiting.
(5) Where the activity is Development/Production, there is at least one asset for which a final investment decision (FID) has been reached. However, there may be areas with exploration activity, or where abandonment has occurred.

Appendix IIC: Main changes in the perimeter of the Group in 2023

For the year ended December 31, 2023

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

					2023		
Name	**Country**	**Parent company**	**Description**	**Date**	**Method of consolidation (1)**	**% voting rights acquired**	**% total voting rights following acquisition (2)**
Repsol Eagle Ford North LLC.	United States	Repsol Oil & Gas USA, LLC.	Acquisition	January 23	F.C.	100.00 %	100.00 %
Energía Eólica Foque, S.L.U.	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Energía Eólica La Mayor, S.L.U.	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Energía Eólica Timón, S.L.U.	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Energía Electrones, S.L.U.	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Energía Célula, S.L.U.	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Jicarilla Solar 1 Class B LLC	United States	Repsol Renewables North America, Inc	Incorporation	February 23	F.C.	100.00 %	100.00 %
Jicarilla Solar 1 Holdings LLC	United States	Jicarilla Solar 1 Class B LLC	Incorporation	February 23	F.C.	100.00 %	100.00 %
Begas Motor, S.L.	Spain	Repsol Energy Ventures, S.A.	Shareholding increase	February 23	E.M.	0.01 %	17.12 %
Asterion Energies, S.L. (3)	Spain	Repsol Renovables, S.A.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Agrovolt 01 S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Asterion Energies Italia S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Asterion Renewables France Limited (3)	United Kingdom	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Asterion Energies Sunproject Uno S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco, S.L.U. (3)	Spain	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Eólica Montesinos, S.L.U. (3)	Spain	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Four Winds Investco, S.L.U. (3)	Spain	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Gemini Wind S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Gruppo Visconti Turi S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Iberia Solar Brownfield 1, S.L.U. (3)	Spain	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Mafra Solar S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Aries S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Italy 008 S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Sagittarius S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Scorpio S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Taurus S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV Virgo S.r.l. (3)	Italy	Asterion Energies, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Araste SPV 2021, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 1, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 2, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 3, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 4, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 5, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 6, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 7, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 8, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %

Cefiro Holdco 9, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 10, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 11, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cefiro Holdco 12, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Gimsan SPV 2021, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Radira SPV 2021, S.L.U. (3)	Spain	Cefiro Holdco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 1, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 2, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 3, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 4, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 5, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 6, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 8, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 9, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 10, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 11, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 13, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 17, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 18, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 19, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 20, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 24, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
ISC Greenfield 25, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Parque FV Centauro, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Parque FV Hercules, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Parque FV Orion, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Parque FV Taurus, S.L.U. (3)	Spain	Iberia Solar Brownfield 1, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PE Levante 4W, S.L.U. (3)	Spain	Four Winds Investco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PE Mistral 4W, S.L.U. (3)	Spain	Four Winds Investco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PE Tramontana, S.L.U. (3)	Spain	Four Winds Investco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Viveiro PE Galicia, S.L.U. (3)	Spain	Four Winds Investco, S.L.U.	Acquisition	February 23	F.C.	100.00 %	100.00 %
PV El Tomillar, S.L. (3)	Spain	Eólica Montesinos, S.L.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Prejeance Industrial SAS (3)	France	Asterion Renewables France Limited	Acquisition	February 23	F.C.	100.00 %	100.00 %
Aneto SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL III SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL IV SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL V SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL VI SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL VII SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL VIII SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cinto SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %

KI 1 SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
PI 1 SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
PI Italy S.r.l. (3)	Italy	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
PI Italy 2 S.r.l. (3)	Italy	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
VOLT SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
VOLT III SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Volt B SAS (3)	France	Prejeance Industrial SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Boethia SAS (3)	France	Aneto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL II SAS (3)	France	Aneto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Lanas Servas SAS (3)	France	Aneto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Sunnprod SAS (3)	France	Aneto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
CAL SAS (3)	France	Aneto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Innea Project 2 SAS (3)	France	Cinto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
VOLT II SAS (3)	France	Cinto SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Sidney S.r.l. (3)	Italy	Jackson S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
BPC Energy S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Clemer S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cyrasol Energia I S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cyrasol Energia III S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Cyrasol Energia IV S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Damien S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Georges S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Giovanni S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Gustave S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Jackson S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Jasper S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Keith S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Lorenzo S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Michelangelo S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Paolo S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Paul S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Pieter S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Societa Agricola Edward S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Vincent S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Baschenis S.r.l. (3)	Italy	PI Italy S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
New Energy Viven S.r.l. (3)	Italy	PI Italy 2 S.r.l.	Acquisition	February 23	F.C.	100.00 %	100.00 %
Corsica Optimum 2 SAS (3)	France	Volt B SAS	Acquisition	February 23	F.C.	100.00 %	100.00 %
Repsol Ala dei Sardi, S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	March 23	F.C.	100.00 %	100.00 %
Repsol Monti, S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	March 23	F.C.	100.00 %	100.00 %
Repsol Orria, S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	March 23	F.C.	100.00 %	100.00 %
Biscay Eco Aggregates, S.L.	Spain	Alba Emission Free Energy, S.A.	Incorporation	March 23	F.C.	100.00 %	100.00 %

Biscay Pyrolytic Ecofuels, S.L.	Spain	Alba Emission Free Energy, S.A.	Incorporation	March 23	F.C.	100.00 %	100.00 %
Remolcadores Puerto A Coruña, A.I.E.	Spain	Repsol Petróleo, S.A.	Incorporation	March 23	P.C.	60.00 %	60.00 %
Dominicana Offshore Wind LLC.	United States	Repsol Renewables North America, Inc	Incorporation	April 23	F.C.	100.00 %	100.00 %
Gulf Coast Offshore Wind LLC.	United States	Repsol Renewables North America, Inc	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Arroyo de la Luz, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Bureba, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Cerro Comitre, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Maials, S.L.U	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Paramillos S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Renovables Olmedilla, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Ureño, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Velilla, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Vientos del Solano S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Repsol Villarrobledo, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	April 23	F.C.	100.00 %	100.00 %
Eólica de Taltal, SpA	Chile	Repsol Chile, SpA	Shareholding increase	May 23	E.M.	35.00 %	50.00 %
Societat Catalana de Petrolis, S.A.U.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Shareholding increase	May 23	F.C.	5.06 %	100.00 %
Repsol Puertollano Sunrise, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	May 23	F.C.	100.00 %	100.00 %
Repsol Virgen de Peñarroya, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	May 23	F.C.	100.00 %	100.00 %
Promotores Valle- Atalaya, A.I.E.	Spain	Repsol Renovables, S.A.	Acquisition	May 23	E.M.	26.00 %	26.00 %
Repsol Wind and Solar Spain, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	June 23	F.C.	100.00 %	100.00 %
Set Colectora Valle, A.I.E.	Spain	Repsol Renovables, S.A.	Acquisition	June 23	E.M.	35.34 %	35.34 %
Pacific Compass, LLC	United States	Repsol E&P USA, LLC	Incorporation	June 23	E.M.(J.V.)	49.00 %	49.00 %
Eólica de Taltal, SpA	Chile	Repsol Chile, SpA	Shareholding increase	July 23	F.C. (4)	50.00 %	100.00 %
Cide HCEnergía, S.A.	Spain	Repsol Customer Centric, S.L.	Acquisition	July 23	E.M.	50.01 %	50.01 %
Comercializador de Referencia Energético, S.L.U.	Spain	Cide HCenergía, S.A.	Acquisition	July 23	E.M.	100.00 %	100.00 %
Tucan LNG S.a.r.l.	Luxembourg	Repsol Industrial Transformation, S.L	Incorporation	August 23	F.C.	100.00 %	100.00 %
Trillo Solar Fotovoltaica, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Trillo Solar Fotovoltaica 2, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Trillo Solar Fotovoltaica 3, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Trillo Solar Fotovoltaica 4, S.L.U.	Spain	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Repsol Gaude S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Repsol Montepuccio 1, S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Repsol Montepuccio 2, S.r.l.	Italy	Repsol Renovables, S.A.	Incorporation	September 23	F.C.	100.00 %	100.00 %
Synkedia Biscay, AIE	Spain	Alba Emission free Energy, S.A.	Incorporation	September 23	E.M.(J.V.)	50.00 %	50.00 %
Repsol Sinopec Resources UK, Ltd.	United Kingdom	Repsol Upstream BV (6)	Shareholding increase	October 23	F.C. (5)	49.00 %	100.00 %
DACMa, GmbH	Germany	Repsol Energy Ventures S.A.	Acquisition	October 23	E.M.	10.00 %	10.00 %
Be.Na S.r.l	Italy	LCG Renewables Energies Spain, S.L.U.	Acquisition	November 23	F.C.	60.00 %	60.00 %
Renovables Vientos del Solano, S.L.	Spain	Repsol Vientos del Solano S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables Arroyo de la Luz, S.L.	Spain	Repsol Arroyo de la Luz, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables Cerro Duran, S.L.	Spain	Repsol Cerro Comitre, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables de Olmedilla, S.L.	Spain	Repsol Renovables Olmedilla, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %

Renovables de Villarrobledo, S.L.	Spain	Repsol Villarrobledo, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables de Paramillos, S.L.	Spain	Repsol Paramillos S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables de Velilla, S.L.	Spain	Repsol Velilla, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables de Maials, S.L.	Spain	Repsol Maials, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Renovables de la Bureba, S.L.	Spain	Repsol Bureba, S.L.U.	Incorporation	November 23	F.C.	100.00 %	100.00 %
Ekiluz Energía Comercializadora, S.L.	Spain	Repsol Customer Centric, S.L.	Shareholding increase	November 23	F.C. (4)	51.00 %	100.00 %
Ekiluz Promoción, S.L.	Spain	Repsol Customer Centric, S.L.	Shareholding increase	November 23	F.C. (4)	51.00 %	100.00 %
Finboot Ltd.	United Kingdom	Repsol Energy Ventures, S.A.	Shareholding increase	November 23	E.M.	8.54 %	8.99 %
Ovalo, S.a.r.l	Luxembourg	Albatros, S.A.R.L.	Incorporation	December 23	F.C.	100.00 %	100.00 %
SPK Águila, S.L.U.	Spain	Ekiluz Promoción S.L.	Acquisition	December 23	F.C.	100.00 %	100.00 %
Parque Eólico Valle de Iguña, S.L.	Spain	Repsol Ureño, S.L.U.	Incorporation	December 23	F.C.	100.00 %	100.00 %
MUVEXT, S.A	Portugal	Repsol Portuguesa, Lda	Acquisition	December 23	E.M.	72.83 %	72.83 %
Repsol Earth Solutions USA, LLC	United States	Repsol Oil & Gas Holding USA, Inc	Incorporation	December 23	F.C.	100.00 %	100.00 %
Ibero Waste Trading S.L.	Spain	Repsol Industrial Transformación S.L.U.	Acquisition	December 23	E.M.(J.V.)	55.00 %	55.00 %
Gestión de Puntos de Venta, Gespevesa, S.A.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Shareholding increase	December 23	F.C. (5)	50.00 %	95.00 %
Gaolania Servicios, S.L.	Spain	Repsol Customer Centric, S.L.	Shareholding increase	December 23	F.C. (4)	20.00 %	90.00 %

(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) Forms part of the Asterion Energies group acquired in the first quarter of 2023.
(4) This company changed its consolidation method from E.M. to F.C. as a result of the shareholding increase.
(5) This company changed its consolidation method from E.M. (JV) to F.C. as a result of the shareholding increase.
(6) In December, 49% was transferred from Repsol Upstream B.V. to Talisman Colombia Holdco, Lt.

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

						2023	
Name	**Country**	**Parent company**	**Description**	**Date**	**Method of consolidation (1)**	**% voting rights disposed of or derecognized**	**% total voting rights in entity following disposal**
Ampere Power Energy, S.L.	Spain	Repsol Energy Ventures S.A.	Disposal	January-23	E.M.	7.33 %	— %
Repsol Exploración Atlas, S.A.	Bolivia	Repsol E&P Bolivia, S.A.	Absorption	January-23	F.C.	100.00 %	— %
Enerkem Inc.	Canada	Repsol Química, S.A.	Shareholding reduction	February 23	E.M.	0.05 %	14.15 %
Repsol E&P S.a.r.l. (2)	Luxembourg	Repsol Upstream B.V.	Shareholding reduction	March 23	F.C.	25.00 %	75.00 %
504744 Alberta, Ltd. (7)	Canada	Repsol Canada Energy Partnership	Winding-up	July 23	F.C.	100.00 %	— %
8441251 Canada, Ltd. (7)	Canada	Repsol Oil & Gas Canada, Inc.	Winding-up	July 23	F.C.	100.00 %	— %
Repsol Alberta Shale Partnership (7)	Canada	Repsol Oil & Gas Canada, Inc.	Winding-up	July 23	F.C.	100.00 %	— %
Belmont Technology Inc.	United States	Repsol Energy Ventures, S.A.	Winding-up	July 23	E.M.	12.90 %	— %
Repsol Upstream Inversiones, S.A. (3)	Spain	Repsol E&P S.a.r.l.	Absorption	August 23	F.C.	100.00 %	0.00 %
Enerkem Inc.	Canada	Repsol Química, S.A.	Shareholding reduction	September 23	E.M.	0.03 %	14.12 %
Repsol Canada Energy Partnership (6)	Canada	Repsol Oil & Gas Canada, Inc.	Disposal	October 23	F.C.	100.00 %	— %
7308051 Canada, Ltd. (7)	Canada	Repsol Oil & Gas Canada, Inc.	Winding-up	October 23	F.C.	100.00 %	— %
Generación y Suministro de Energía, S.L.U	Spain	Repsol Wind and Solar Spain, S.L.U.	Shareholding reduction	November 23	F.C.	49.00 %	51.00 %
Ekiprojects Construcción y O&M, S.L.	Spain	Repsol Customer Centric, S.L.	Disposal	November 23	E.M.	49.00 %	— %
Repsol Mar de Cortés, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Repsol Mar de Cortés Estaciones de Servicio, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Combustibles Sureños, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Estación de Servicio Bahía Asunción, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Palmira Market, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Gutsa Servicios, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Autoservicio Sargento, S.A. de C.V.	Mexico	Repsol Downstream Internacional, S.A.	Disposal	November 23	E.M.(J.V.)	50.00 %	— %
Enerkem Inc.	Canada	Repsol Química, S.A.	Shareholding reduction	December 23	E.M.	0.01 %	14.11 %
Salamanca Infrastructure, LLC	United States	Repsol Salamanca Midstream, LLC	Shareholding reduction	December 23	E.M.	20.00 %	2.50 %
Repsol Oil & Gas Canada, Inc. (7)	Canada	Repsol Exploración, S.A.U.	Winding-up	December 23	F.C.	100.00 %	— %
Repsol Exploración Karabashsky, B.V.	Netherlands	Repsol Greece Ionian, S.L.U.	Winding-up	December 23	F.C.	100.00 %	— %
Talisman International Holdings, B.V.	Netherlands	Repsol Exploración, S.A.U.	Winding-up	December 23	F.C.	100.00 %	— %
Talisman Vietnam 146-147, B.V.	Netherlands	Repsol Greece Ionian, S.L.U.	Winding-up	December 23	F.C.	100.00 %	— %
Talisman International (Luxembourg), S.a.r.l. (4)	Luxembourg	Repsol Exploración, S.A.U.	Absorption	December 23	F.C.	100.00 %	— %
Energy Express, S.L.U.(5)	Spain	Societat Catalana de Petrolis, S.A.	Absorption	December 23	F.C.	100.00 %	— %

(1) Method of consolidation:
F.C.: Full consolidation.
E.M.: Equity method. Joint ventures are identified as "JV".
(2) Company formerly known as Repsol Lux E&P S.a.r.l. Change in February 2023.
(3) Absorbed by Repsol Exploración, S.A.
(4) Absorbed by FEHI Holding, S.a.r.l
(5) Absorbed by Sociedad Catalana de Petrolis, S.A.
(6) Company transferred to third parties in the context of the process of terminating the activities of the Exploration and Production business in Canada.
(7) Company liquidated in the context of the process of terminating the activities of the Exploration and Production business in Canada.

For the year ended December 31, 2022

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

						2022	
Name	**Country**	**Parent company**	**Description**	**Date**	**Method of consolidation (1)**	**% voting rights acquired**	**% total voting rights following acquisition (2)**
Repsol Shale Oil & Gas LLC	United States	Repsol E&P USA Holdings Inc.	Incorporation	January 22	F.C.	100.00%	100.00%
Jicarilla Solar 2 Holdings LLC	United States	Jicarilla Solar 2 Class B LLC	Incorporation	February 22	F.C.	100.00%	100.00%
Jicarilla Solar 2 Class B LLC	United States	Repsol Renewables North America, Inc	Incorporation	February 22	F.C.	100.00%	100.00%
Medusa Alternativas Suministro Eléctrico, S.L.	Spain	Repsol Customer Centric, S.L. (3)	Acquisition	February 22	E.M.	33.00%	33.00%
Jicarilla Solar 1 LLC	United States	Repsol Renewables Development Company LLC	Acquisition	March 22	F.C.	100.00%	100.00%
Jicarilla Storage 1 LLC	United States	Repsol Renewables Development Company LLC	Acquisition	March 22	F.C.	100.00%	100.00%
Jicarilla Solar 1 Bond Purchaser LLC	United States	Jicarilla Solar 1 LLC	Acquisition	March 22	F.C.	100.00%	100.00%
Jicarilla Storage Bond Purchaser LLC	United States	Jicarilla Storage 1 LLC	Acquisition	March 22	F.C.	100.00%	100.00%
Enerkem Inc.	Canada	Repsol Química, S.A.	Acquisition	March 22	E.M.	14.21%	14.21%
Hecate Energy Frye Solar LLC	United States	Repsol Renewables Development Company LLC	Acquisition	April 22	F.C.	100.00%	100.00%
Repsol Renewables Italia S.R.L.	Italy	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol Nughedu S.R.L.	Italy	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol Uta S.R.L.	Italy	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol Venosa S.R.L.	Italy	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol San Mauro S.R.L.	Italy	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol Salamanca Midstream, LLC	United States	Repsol Oil & Gas Gulf of México, LLC	Incorporation	May 22	F.C.	100.00%	100.00%
Salamanca Infrastructure, LLC	United States	Repsol Salamanca Midstream, LLC	Incorporation	May 22	E.M.	22.50%	22.50%
Basque Hydrogen, S.L.	Spain	Alba Emission free Energy, S.A.	Incorporation	May 22	F.C.	100.00%	100.00%
Repsol Financiera Renovables, S.A.	Spain	Repsol Renovables, S.A.U. (4)	Incorporation	May 22	F.C.	100.00%	100.00%
Ampere Power Energy S.L.	Spain	Repsol Energy Ventures, S.A.	Shareholding increase	May 22	E.M.	0.46%	7.10%
Arcos 400 Renovables, A.I.E.	Spain	Arco Energía 1, S.L.U.	Acquisition	June 22	E.M.	49.05%	49.05%
Nesa Vento Galego 1, S.L.	Spain	Repsol Renovables, S.A.U. (4)	Acquisition	June 22	F.C.	100.00%	100.00%
Nesa Vento Galego 2, S.L.	Spain	Repsol Renovables, S.A.U. (4)	Acquisition	June 22	F.C.	100.00%	100.00%
Nesa Vento Galego 3, S.L.	Spain	Repsol Renovables, S.A.U. (4)	Acquisition	June 22	F.C.	100.00%	100.00%
Solar 360 de Repsol y Movistar, S.L.	Spain	Repsol Customer Centric, S.L. (3)	Acquisition	June 22	E.M. (J.V.)	50.00%	50.00%

(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.

b) Reduction in interest in subsidiaries, joint ventures, and/or associates and other similar transactions:

					2022		
Name	**Country**	**Parent company**	**Description**	**Date**	**Method of consolidation (1)**	**% voting rights disposed of or derecognized**	**% total voting rights in entity following disposal**
Nanogap Sub N-M Powder	Spain	Repsol Energy Ventures S.A.	Shareholding reduction	January 22	E.M.	2.67 %	9.85 %
Repsol Oil & Gas Malaysia (PM3), Ltd.	Barbados	Fortuna International Petroleum Corporation	Disposal	January 22	F.C.	100.00 %	— %
Repsol Oil & Gas Malaysia, Ltd.	Barbados	Fortuna International Petroleum Corporation	Disposal	January 22	F.C.	100.00 %	— %
Fortuna International Petroleum Corporation	Barbados	Repsol Exploración, S.A.	Disposal	January 22	F.C.	100.00 %	— %
Talisman Vietnam, Ltd.	Barbados	Fortuna International Petroleum Corporation	Disposal	January 22	F.C.	100.00 %	— %
Repsol Ecuador, S.A.	Spain	Repsol Exploración, S.A.	Disposal	January 22	F.C.	98.36 %	— %
JSC Eurotek - Yugra	Russia	Repsol Exploración Karabashsky, B.V.	Disposal	January 22	E.M. (J.V.)	67.40 %	— %
ASB GEO	Russia	Repsol Exploración, S.A.	Disposal	February 22	E.M. (J.V.)	50.01 %	0.00 %
Valdesolar Hive, S.L.	Spain	Repsol Renovables, S.A.U.	Shareholding reduction	March 22	F.C.	49.00 %	51.00 %
Nanogap Therapeutics, S.L.U.	Spain	Nanogap Sub n-m Powder, S.A.	Shareholding reduction	May 22	E.M.	36.77 %	63.23 %
Sorbwater Technology A.S	Norway	Repsol Energy Ventures, S.A.	Disposal	May 22	E.M.	30.78 %	— %
Talisman (Sumatra), Ltd.	Canada	Repsol Oil & Gas Canada, Inc.	Winding-up	May 22	F.C.	100.00 %	— %
Begas Motor, S.L.	Spain	Repsol Energy Ventures S.A.	Shareholding reduction	June 22	E.M.	1.79 %	17.12 %
Gestión Activa de Pedidos S.L.	Spain	Repsol Comercial de Productos Petrolíferos, S.A.	Disposal	July 22	F.C.	100.00 %	— %
Ezzing Renewable Energies S.L.	Spain	Repsol Energy Ventures, S.A.	Shareholding reduction	August 22	E.M.	0.29 %	24.03 %
Basque Hydrogen, S.L	Spain	Alba Emission free Energy, SA	Shareholding reduction	August 22	E.M. (J.V.) (2)	49.00 %	51.00 %
Nanogap Sub n-m Powder, S.A.	Spain	Repsol Energy Ventures, S.A.	Shareholding reduction	August 22	E.M.	0.90 %	8.95 %
Tramperase, S.L.	Spain	Repsol Renovables, S.A.U.	Shareholding reduction	August 22	F.C.	49.00 %	51.00 %
Net Zero Ventures, S.L.	Spain	Repsol Energy Ventures, S.A.	Shareholding reduction	September 22	E.M. (2)	50.00 %	50.00 %
Repsol Renovables, S.A.U	Spain	Repsol, S.A.	Shareholding reduction	September 22	F.C.	25.00 %	75.00 %
Enerkem Inc.	Canada	Repsol Química, S.A.	Shareholding reduction	November 22	E.M.	0.01 %	14.20 %
Caiageste - Gestão de Areas de Serviço, Ltda.	Portugal	GESPOST	Winding-up	December 22	E.M.	50.00 %	— %
Talisman Vietnam 07/03, B.V.	Netherlands	Repsol Greece Ionian, S.L.	Winding-up	December 22	F.C.	100.00 %	— %
Talisman Vietnam 135-136, B.V.	Vietnam	Repsol Greece Ionian, S.L.	Winding-up	December 22	F.C.	100.00 %	— %

(1) Method of consolidation:
F.C.: Full consolidation.
E.M.: Equity method. Joint ventures are identified as “JV”.

Appendix III: Regulatory framework

The activities of Repsol, S.A. and its subsidiaries are subject to extensive regulation, the key aspects of which are in this note. Of special note is the regulation related to climate change and decarbonization of the economy, for which the general framework is described below and the impacts on business activity are described in the Appendix by geographical region.

Climate change

Following the Paris Agreement, the commitments assumed by the signatories under their respective National Determined Contributions had a significant impact on the development of new climate policies and on the approval of new regulations.

European Union

The European Union, also a signatory to the Agreement, undertook the commitment to reach 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: (i) the European Climate Law that entered into force on July 29, 2021, which includes a legally binding target of net zero greenhouse gas emissions by 2050; and (ii) the "Fit for 55" package of proposals presented in July 2021 to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

On March 8, 2022, the RePowerEU communication (joint European action for more affordable, safe and sustainable energy) was published, and on May 18, 2022 the RePowerEU Plan. The plan aims to reduce dependence on fossil fuels from Russia and accelerate the green transition for 2030. The plan focuses on diversifying energy sources, accelerating the green transition and renewable energies, incentivizing energy savings, and it also establishes investment measures in addition to those envisaged in the Fit for 55. These proposals are interconnected and stretch across a variety of policy areas and economic sectors.

In particular, and as part of the "Fit for 55" package of proposals, on October 18, 2023, Regulation (EU) 2023/2405 of the European Parliament and of the Council on ensuring a level playing field for sustainable air transport (ReFuelEU Aviation) was published to establish harmonized rules on the use and supply of sustainable aviation fuels, applicable, among others, to aviation fuel suppliers.

Spain

In Spain, the "Strategic Framework for Energy and Climate" includes the following fundamental pillars: (i) the National Integrated Energy and Climate Plan (currently under review pursuant to Regulation (EU) 2018/1999), (ii) the Just Transition Mechanism, and (iii) Law 7/2021, of May 20, on climate change and the energy transition, which establishes, at the country level, minimum targets for reducing greenhouse gas emissions, the penetration of renewable energies and energy efficiency improvements by 2030 with a commitment to achieving climate neutrality by 2050 or in the shortest possible time frame.

Spain

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 oversight body in charge 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 Commission.

Royal Decree Law 1/2019, of January 11, brings the powers of the CNMC into line with the requirements of EU law in relation to Directives 2009/72/EC and 2009/73/EC of the European Parliament and Council of July 13, 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 and the Demographic Challenge (MITERD). It devises a new ex post regime with respect to certain transactions by either requiring the buyer to notify MITERD of the execution of certain transactions or by imposing certain 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

From the entry into force of Law 7/2021 on climate change and the energy transition, on May 22, 2021, no new exploration authorizations, hydrocarbon research permits or hydrocarbon exploitation concessions will be granted in Spain, including the territorial sea, the exclusive economic zone and the continental shelf, as regulated under the Hydrocarbon Sector Law, Royal Decree Law 16/2017, of November 17, establishing safety provisions for hydrocarbon research and operation in the marine environment, or for any activity for hydrocarbon operations in which the use of high-volume hydraulic fracturing is envisaged.

For those concessions currently in force, Royal Decree Law 16/2017 should be taken into account, which establishes safety provisions for hydrocarbon research and operation in the marine environment, implemented by Royal Decree 1339/2018, of October 29, transposing Directive 2013/30/EU of June 12, 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 the abandonment and decommissioning of facilities, in order to prevent serious accidents and limit their consequences.

Oil products

The price of oil products is deregulated, with the exception of LPG (see specific information below).

On 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. This legislation also bans clauses that set, recommend or influence, directly or indirectly, the price at which fuel is sold to the public. Likewise, exclusive supply contracts are prohibited from containing exclusivity clauses with regard to the provision of charging services to electric vehicles.

There are limits on growth in the number of fuel supply facilities of wholesalers with provincial market shares of over 30%. Law 8/2015 stipulates that this market share will 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.

In order to mitigate the impact on companies and families of the rise in fuel prices caused by the military aggression against Ukraine, Royal Decree Law 6/2022, of March 29, created an extraordinary temporary bonus of €0.20 per liter/kilogram on the price of certain energy products applicable from April 1, 2022 to June 30, 2022, which was subsequently extended to December 31, 2022 by Royal Decree Law 11/2022, of June 25. In order to contribute to the previous measure, a non-tax public equity benefit provision was also created and imposed on wholesale operators of oil products with refining capacity in Spain and with an annual turnover of more than €750 million. Such operators, including Repsol, could be exempted from this provision if they unequivocally undertook to give a discount of a minimum amount equivalent to €0.05 per liter/kilogram on sales to end consumers of the energy products covered by the bonus. This commitment was assumed by Repsol and had been renewed prior to July 1, 2022. The National Markets and Competition Commission was the body in charge of verifying effective compliance with the discount commitment. Royal Decree Law 20/2022, of December 27, replaced the general bonus of €0.20 per liter on certain fuels with more specific measures aimed at promoting the use of public transportation and aid for sectors that are most dependent on the use of fuel and so have greater exposure to price fluctuations, such as transportation, agriculture and fishing. Notwithstanding the above, Repsol maintained its discount of €0.10 per liter of fuel for Waylet users from January 1 until March 31, 2023 and, subsequently, until April 1, 2023 where it launched its Energías Repsol program with discounts ranging from €0.05 per liter to €0.22 per liter, associated with the loyalty of customers to the different Repsol energies. Since September 6, 2023, these discounts have been doubled.

Minimum stocks

The Hydrocarbons Sector Law establishes obligations to maintain minimum security stocks that affect oil products and natural gas, given their special importance for the development of economic life.

Regarding oil products, Royal Decree Law 15/2013, of December 13, introduced an amendment to the Hydrocarbons Sector Law, which indicates that regulations must establish the administrative procedures and obligations necessary to permanently guarantee a level of minimum stocks equivalent to, at least, the greater of the following two quantities: the equivalent of 90 days of average daily net imports or 61 days of average daily domestic consumption in the reference year, in oil equivalent.

Royal Decree 1716/2004, in the wording given by 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 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. Based on this consumption calculated, Repsol must maintain at all times 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.

For oil products, the obligation regarding minimum stocks has been decreasing as a consequence of the invasion of Ukraine by Russia.

The last modification took place through Ministerial Order TED/725/2022, of July 27, completing the release of minimum stocks of oil products within the framework of the second coordinated action of the International Energy Agency in response to the war in Ukraine. It establishes a transitory reduction from 86.4 days to 84.2 days, until, in the terms provided in the third section of the Agreement of the Council of Ministers dated May 17, it is decided to restore the obligation to the level determined.

Regarding natural gas, Royal Decree Law 6/2022 has modified the obligations of security reserves provided for in Royal Decree 1716/2004 by expanding the obligation to maintain minimum stocks of entities involved in the natural gas sector from 20 days to 27.5 days of their firm sales or consumption in the previous calendar year.

Of these, the minimum stocks of a strategic nature equivalent to 10 days of firm sales or consumption in the previous calendar year will be kept in underground storage of the basic network. In addition to strategic stocks, all entities required to maintain minimum stocks of natural gas must have operational stocks in underground storage: at all times for a volume of gas equivalent to 10 days of firm sales or consumption in the previous calendar year, to which on November 1 at least a volume of gas equivalent to 7.5 days of its firm sales or consumption in the previous calendar year is added.

Mobility and alternative fuels:

In relation to mobility, the Law on Climate Change and Energy Transition establishes:

- Annual targets for the integration of renewable energies and the supply of sustainable alternative fuels in transport, with a special emphasis on advanced biofuels and other renewable fuels of non-biological origin.
- The obligation of public authorities to adopt the necessary measures, in accordance with that established in EU regulations, in order to: (i) ensure that passenger cars and light commercial vehicles do not have direct CO_2 emissions by 2050, and (ii) gradually reduce the emissions of new passenger cars and light commercial vehicles, excluding those registered as historic vehicles, not intended for commercial uses, so that these vehicles have emissions of 0 g CO_2/km no later than 2040.
- The obligation for owners of vehicle fuel and fuel supply facilities to install infrastructure for alternative fuels.
- The following are also noteworthy: (i) the Hydrogen Roadmap (published in October 2020), which focuses on the development of renewable hydrogen, with the aim of positioning Spain as a technological benchmark in the production and use of renewable hydrogen, while at the same time contributing to achieving objectives such as reaching climate neutrality, the use of surplus renewable energy or the decarbonization of sectors where electrification is not viable or profitable; and (ii) the 2050 Long-Term Decarbonization Strategy (published on November 3, 2020), to move toward climate neutrality by 2050, with milestones in 2030 and 2040.

Royal Decree Law 6/2022 transposes into Spanish law Article 7 bis of Directive 98/70/EC of the European Parliament and of the Council of October 13, 1998 relating to the quality of petrol and diesel fuels and amending Directive 93/12/EEC of the Council (FQD Directive), establishing a new obligatory target of reducing the intensity of greenhouse gas emissions by 6% in the transport life cycle per unit of fuel and energy supplied in transport. This measure applies to (i) wholesale operators and retail distributors of oil products, (ii) consumers of oil products in the part of consumption not covered by the above, (iii) wholesale operators and LPG retail sellers, (iv) LPG consumers in the part of consumption not covered by the above, (v) natural gas sellers, and (vi) direct consumers in the market in the part of consumption not covered by the above.

Directive 2018/2001, on the promotion of the use of energy from renewable sources, amended by Directive (EU) 2023/2413 of October 18, 2023 provides that, in order to integrate the use of renewable energy in the transport sector, each Member State will impose an obligation on fuel suppliers to ensure that the quota of renewable energy in final energy consumption in the transport sector is at least 14.5% by 2030, at the latest.

This Directive is partially incorporated into Spanish law through Royal Decree 376/2022, of May 17, which regulates the criteria for sustainability and reduction of greenhouse gas emissions from biofuels, bioliquids and biomass fuels, as well as the system of guarantees regarding the origin of renewable gases (amending Royal Decree 1085/2015, of December 4, on the promotion of biofuels). It establishes minimum obligatory targets for the sale or consumption of biofuels for 2023, 2024, 2025 and 2026 of 10.5%, 11%, 11.5% and 12%, in energy content, respectively. The target for biofuels and biogas for transportation purposes for 2026 will be applied in successive years for as long as new targets are not regulated.

Royal Decree 639/2016, of December 9, established a framework of measures for the implementation of infrastructure for alternative fuels, including charging points for electric vehicles and natural gas and hydrogen refueling points. To ensure that there are sufficient electrical charging facilities, the Law on Climate Change and Energy Transition introduces obligations to install electrical charging infrastructure at gas stations with annual sales of gasoline and diesel of more than 5 million liters. This charging infrastructure must have a power output equal to or greater than 150 kW or 50 kW in direct current depending on the volume of sales (greater than 10 or 5 million liters sold in 2019). The minimum power for new installations as of 2021, or those that undertake a reform of their installation that requires the administrative title to be reviewed, will be direct current of 50 kW. Finally, note should be taken of Decree 184/2022, of March 8, which regulates the activity of providing energy recharging services for electric vehicles.

Liquefied petroleum gas

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, which 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 consolidates users' right to home delivery of containers weighing between 8 kg and 20 kg by requiring the LPG wholesalers with the biggest market shares in the corresponding mainland, island territories and autonomous communities to perform this home-delivery service. Failure to fulfill this obligation constitutes a very serious offense. The list of LPG wholesalers so required 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.

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.

Royal Decree Law 11/2022, of June 25, adopting and extending certain measures to respond to the economic and social consequences of the war in Ukraine, to address situations of social and economic vulnerability, and for the economic and social recovery of the island of La Palma, established a maximum sale price for LPG containers of 8 kg or more and less than 20 kg, the price of which is reviewed every two months, which is set at €19.55. This measure is extended by Royal Decree Law 20/2022, of December 27, and by Royal Decree Law 5/2023, of June 28, adopting and extending certain measures in response to the economic and social consequences of the war in Ukraine, to support the reconstruction of the island of La Palma and other situations of vulnerability; transposing EU Directives on structural modifications of mercantile companies and reconciliation of family and professional life of parents and caregivers; and executing and complying with European Union Law, extending until December 31, 2023 the temporary scope of the limitation of the maximum sale price of liquefied petroleum gases in containers.

Lastly, Royal Decree Law 20/2022, of December 27, established that the corresponding revisions of the maximum sale price, before tax, of liquefied petroleum gases that are approved following the entry into force of the Royal Decree Law until June 30, 2023, and of bottled liquefied petroleum gases resulting from the application of the system established in Ministerial Order IET/389/2015, may not exceed the maximum price, before tax, established by the Resolution of May 12, 2022 of the General Directorate of Energy Policy and Mines, which publishes the new maximum sales prices, before tax, of bottled liquefied petroleum gases, in containers of a load equal to or greater than 8 kg, and less than 20 kg, excluding LPG mixes intended for use for fuel purposes.

Natural gas

Law 12/2007, of July 2, which amended the Hydrocarbon Sector Law, incorporated measures for achieving a completely deregulated 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 MITERD. 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 sale of natural gas. The Natural Gas System Operator, Enagás S.A., is responsible for 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 tariffs. In particular, the methodology for determining access tariffs to regasification facilities, with the exception of the tariff for other regasification costs, entered into force on October 1, 2020. The methodologies for the remaining tariffs will take effect as of October 1, 2021, and until this date the current tariff structure and billing rules will continue to apply. The access tariffs to the transmission networks, local networks and regasification for gas year 2022 were established by CNMC Resolution of May 27, 2021.

Accordingly, MITERD approved Royal Decree 1184/2020, of December 29, which establishes the methodologies for calculating the gas system charges, the regulated remuneration of basic underground storage and the fees applied for their use, which was first applied in 2022 through the publication of Ministerial Order TED/929/2022, of September 27, which establishes the charges for the gas system and the remuneration and fees for basic underground storage for gas year 2023.

On December 16, 2021, the CNMC approved the resolution establishing the list of dominant operators in the energy sectors, including the Repsol Group among the dominant operators in the natural gas market. Subsequently, the Resolution of the Council of Ministers dated February 2, 2021 established Repsol's obligation to act as a market maker in the Spanish Organized Gas Market. The conditions for the participation of the Repsol Group were established in the Resolution dated July 9, 2021 of the Secretary of State for Energy, which establishes the terms and conditions governing the service making it mandatory for dominant operators to act as market makers in the natural gas market.

Through Resolutions of December 16, 2021 and November 24, 2022, the CNMC updated the information on the dominant operators in the energy sectors, with the Repsol Group appearing in both cases as the dominant operator of the aforementioned market.

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. Accordingly, power supply is classified as a service of general economic interest.

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.

There are numerous regulatory provisions that have implemented the legal and economic regime applicable to production technologies from renewable energy sources, cogeneration and waste with a priority economic regime since the entry into force of Royal Decree Law 9/2013, the most notable of which is Royal Decree 413/2014, governing the production of electricity from renewable sources, cogeneration and waste, applicable to the Repsol Group's cogeneration facilities, formerly part of the now-defunct special regime and assimilated into the ordinary regime. Also worth mentioning is Ministerial Order IET/1045/2014, of June 16 (which approves the remuneration parameters of standard facilities), Ministerial Order ETU/130/2017, of February 17 (which updates the remuneration parameters for the purposes of the regulatory half-period starting on January 1, 2017), Royal Decree Law 17/2019, of November 22 (which updates the value of the reasonable return to be applied during the second regulatory period), Ministerial Order TED/171/2020, of February 24 (which updates the remuneration parameters to be applied in the second regulatory period starting on January 1, 2020), Royal Decree Law 6/2022, of March 29 (which updates the remuneration parameters for 2022), Royal Decree Law 10/2022, of May 13 (which includes references to forward market products in the adjustment mechanism for deviations in the market price that will apply to RECORE energy generated in 2023 and subsequent years) and Ministerial Order TED/741/2023, of June 30 (which updates the remuneration parameters for the regulatory half-period starting on January 1, 2023).

Royal Decree 413/2014, of June 6, established the possibility for the specific remuneration system to be granted through a competitive tender procedure. In application of the principle, three auctions were held for this purpose in 2016 and 2017.

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. It therefore provides for competitive tender procedures, in which the product to be auctioned is energy, installed capacity or a combination of the two. In this regard, Royal Decree 960/2020, of November 3, has been approved, which regulates this 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.

The first auction for the concession of this economic regime was called by the Resolution of December 10, 2020, of the Secretary of State for Energy, with a product quota of 3,000 MW of installed power. In 2021, a second auction was called by the Resolution of September 8, of the General Directorate of Energy Policy and Mines, for which a product is established aimed at facilities generating electricity from renewable energy sources composed of one or more of the photovoltaic and wind technologies located on land, and a product quota of 3,300 MW to be auctioned. This tender specifically established four minimum reserves to be awarded to various technologies or categories of different special characteristics. These included an accelerated availability reserve aimed at facilities in an advanced stage of processing and another reserve for local distributed generation photovoltaic facilities. The subsidiary Repsol Renovables, S.A. was awarded a total of 3 bids and 138 MW. In 2022, two more auctions, the third and fourth, were called by Resolutions of July 18 and August 2, respectively, for a total of 3,820 MW.

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 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.

Royal Decree 413/2014 regulates the legal and economic regime governing the production of electricity from renewable energy sources, cogeneration and waste, applicable to the Repsol Group's cogeneration facilities, formerly part of the now-defunct special regime and assimilated into the ordinary regime. Ministerial Order IET/1045/2014, of June 16, approves the remuneration parameters for standard facilities applicable to certain facilities producing electrical energy from renewable energy sources, cogeneration and waste.

As a result of the upward trend in the price of electricity in the wholesale market which, due to the trend in the price of natural gas and CO_2 emission allowances, has been occurring since the end of 2020 and more intensely since March 2021, the government approved, through Royal Decree Law 12/2021, of June 24, the exemption during the third quarter of 2021 of the Tax on the Value of Electricity Production. This temporary suspension of the tax has been subject to successive extensions until the end of 2023 by Royal Decree Laws 17/2021, 29/2021, 6/2022, 11/2022 and 20/2022.

Royal Decree 900/2015, of October 9, regulating the administrative, technical and economic conditions of the modalities of electricity supply and production with self-consumption was substantially amended by Royal Decree Law 15/2018, and subsequently repealed by Royal Decree 244/2019, of April 5, which regulates the administrative, technical and economic conditions of self-consumption in Spain. The latter regulation supplements the regulatory framework established by Royal Decree Law 15/2018, the main measure of which was the repeal of what is commonly called the "sun tax," and represented a new energy panorama that is committed to a model based on distributed generation and renewable energy. Among the aspects introduced by this Royal Decree 244/2019, the following are worth highlighting:

- Self-consumed energy of renewable origin, cogeneration or waste, will be exempt from all types of charges and tolls.
- Recognition of shared self-consumption, which makes it possible for several users to benefit from the same generating facility.
- Simplification of procedures and bureaucratic deadlines for the legalization of the facilities.
- Introduction of simplified compensation for surplus generation.

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 implemented 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 called last resort tariffs, as the maximum prices that the reference resellers may charge to consumers who use them. Initially conceived as a dynamic price that internalizes the volatility of the price signal of the wholesale electricity market, the Voluntary Price for the Small Consumer (PVPC) has been reformed by Royal Decree 446/2023 of June 13, which, as of January 1, 2024, limits the category of consumers who can contract this regulated price (individuals and micro-enterprises with contracted power not exceeding 10 kW and connected at low voltage) and introduces a price signal for forward products (monthly, quarterly and annual products of the Iberian Energy Market Operator (OMIP)) in the PVPC calculation formula.

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 PVPC in the 2014-2018 period, which result from applying the new approved methodology. The value of the marketing costs to be included in the calculation of the PVPC has been extended repeatedly since 2018, and is pending update.

The criteria for designating reference resellers and their obligations in relation to the supply to certain groups of consumers are established in the aforementioned Royal Decree 216/2014.

Furthermore, the term last resort tariffs is reserved for two groups of consumers: the so-called vulnerable consumers (the regulatory framework for which is established by Law 24/2013, of December 26, and Royal Decree 897/2017, of October 6) and those consumers who, without being entitled to voluntary prices for the small consumer, temporarily do not have a supply contract with a retailer. Vulnerable consumers can avail themselves of the subsidy, defined as a discount on the PVPC, upon application and verification of certain personal and income requirements. As a result of the energy crisis, the Spanish government adopted measures to strengthen the subsidy, including an increase in the percentage discount on the PVPC until the end of 2023 (initially established by Royal Decree Law 23/2021 and subsequently extended) and the creation of a new temporary type of vulnerable consumers established in Royal Decree Law 18/2022).

In January 2022, the Supreme Court declared the regime for financing the subsidy and the cost of electricity supply for consumers at risk of social exclusion established in Article 45.4 of Law 24/2013 and implemented in Royal Decree 897/2017 to be unenforceable, on the grounds that it was incompatible with European Union Law. Consequently, Royal Decree Law 6/2022, of March 29, has introduced a new financing model for the subsidy, whereby all parties involved in the activities of the electricity supply chain (including producers and suppliers) become funders. In particular, the amounts to be financed are distributed, for producers, in proportion to their production and, for suppliers, in proportion to the share of customers to whom they supply electricity. For this purpose, a unit value of funding is defined annually by Ministerial Order. The unit values for 2023 were set by Ministerial Order TED/81/2023, of January 27.

Royal Decree Law 6/2022, of March 29, adopting urgent measures in the framework of the national response plan to the economic and social consequences of the war in Ukraine, establishes the need to introduce a forward price signal in the voluntary prices for the small consumer (PVPC) that encourages the contracting of hedging instruments on the demand side by the reference resellers, which as a whole enables the entry of liquidity in the forward markets and minimizes the volatility of these prices. In order to comply with the mandate of Royal Decree Law 6/2022, Royal Decree 446/2023, of June 13, was approved, amending Royal Decree 216/2014, of March 28, which establishes the methodology for calculating voluntary prices for small electricity consumers and their legal contracting regime, for the indexation of voluntary prices for small electricity consumers to term signals and reduction of their volatility.

Royal Decree Law 3/2023, of March 28, extending the production cost adjustment mechanism to reduce the price of electricity in the wholesale market regulated in Royal Decree Law 10/2022, extended the adjustment mechanism until December 31, 2023.

Lastly, Royal Decree Law 17/2022, of September 20, adopting urgent measures in the field of energy, in the application of the remuneration system to cogeneration facilities, created an active demand response service (SRAD) for the Spanish mainland electricity system, set up, according to the justification given by the regulation, as a specific balancing product to deal with situations of shortage of balancing energy provided by other standard manual activation services already in operation. This Royal Decree Law established the creation of the SRAD in its first additional provision and set out the technical details of the service's operation in Appendix II. In addition, it was established that such product should be operational from November 1, 2022, and that it should be allocated through an annual auction prior to the beginning of the period in which service is provided. Thus, in October 2022, the system operator organized the first auction of the active demand response service, allocating the service to demand facilities for a total of 490 MW, with delivery between November 1, 2022 and October 31, 2023.

Contributions to the national energy efficiency fund

Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 on energy efficiency makes it binding on member states to justify a quantity of energy savings by 2020, obliging each state to establish energy efficiency obligation schemes such that energy distributors and/or retailers are required to achieve a cumulative quantity of energy savings by year-end 2020 through 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 are allocated an annual energy saving target at the national level, known as savings obligations, which is quantified in financial terms.

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.

Royal Decree 36/2023, of January 24, establishing a system of Energy Savings Certificates, implements paragraph 2 of Article 71 of Law 18/2014, of October 15, approving urgent measures for growth, competitiveness and efficiency, which enables and establishes, within the scope of the National System of Energy Efficiency Obligations (SNOEE), a mechanism for documenting the achievement of energy savings through the presentation of Energy Savings Certificates (CAE).

Emergency intervention in the energy market

On October 7, 2022, Regulation (EU) 2022/1854 came into force regarding an emergency intervention to provide a coordinated response, at European Union level, to the high energy prices, through which several temporary measures were established: (i) a cap of €180 per MWh on income from electricity generation applied to certain electricity producers designated in the Regulation; (ii) a temporary solidarity contribution from companies and permanent establishments of the European Union operating in the crude oil, natural gas, coal, and refinery sectors from profits earned in the 2022 and/or 2023 tax years that are above a 20% increase on the average of the taxable profits generated in the four tax years beginning on or after January 1, 2018, and; (iii) measures to reduce demand through a binding target to reduce gross monthly energy consumption by 10% compared to the average gross electricity consumption in the corresponding months of the reference period (from November 1 to March 31 in each of the five consecutive years prior to the effective date of Regulation 2022/1854, starting from the period between November 1, 2017 and March 31, 2018) and a reduction in gross electricity consumption during peak hours.

In Spain, Law 38/2022 was published on December 28, 2022, which provides that the main operators in the energy sector must pay a levy (non-tax public levy) on a temporary basis. For more information, see Note 22.

In addition, Royal Decree Law 17/2021, of September 14, on urgent measures to mitigate the impact of the escalation of natural gas prices in the retail gas and electricity markets, established a temporary mechanism to reduce the remuneration received by non-emitting plants with a capacity of more than 10 MW and without RECORE as a result of the marginal operation of the market. Royal Decree Law 23/2021, of October 26, introduced a qualification regarding the scope of application of the aforementioned mechanism for reducing remuneration. It exempted energy that is covered by a forward contracting instrument when the hedging price is fixed and was entered into prior to the entry into force of the Royal Decree Law or when, having been entered into after the entry into force of this Royal Decree Law, its hedging period is also longer than one year. Subsequently, Royal Decree Law 6/2022 amended this scope of application, so that energy covered by a forward contracting instrument entered into after March 31, 2022, with a hedging price equal to or lower than €67/MWh, or with an equivalent price at the end consumer in the case of intra-group instruments between companies belonging to the same vertically integrated group, would be exempt. Likewise, the temporary scope of application of the mechanism has been extended until December 31, 2023 by Royal Decree Law 6/2022 and subsequently by Royal Decree Laws 11/2022 and 18/2022.

Ministerial Order TED/517/2022, of June 8, setting the date of entry into operation of the production cost adjustment mechanism to reduce the wholesale market electricity price regulated in Royal Decree Law 10/2022, of May 13, disseminates the decision of the European Commission that authorizes this mechanism. According to this Order, the adjustment mechanism provided for in Royal Decree Law 10/2022, affecting the wholesale electricity market's clearing price, becomes applicable on June 14. The purpose of this Royal Decree Law is to reduce the margin price of electricity in the wholesale markets of the Iberian Peninsula (Spain and Portugal) and, ultimately, to promote a reduction in the retail prices paid by all end consumers of electricity. The measure uses a mathematical formula to limit the price of gas passed on by thermal power plants in the offers that set the price of the wholesale electricity market. The gas reference price established in the mechanism is variable, starting at a value of €40/MWh for the first six months and increasing in successive monthly steps. The amounts corresponding to this mechanism are financed by consumers who benefit from it, with forward hedging instruments signed prior to April 26, 2022 being exempt from payment. Royal Decree Law 3/2023, of March 28, extended this mechanism until December 31, 2023. Consequently, the linear path of the natural gas reference price to be used was set for the end of 2023 and the exemption was allowed for forward hedging instruments signed prior to March 7, 2023.

Royal Decree Law 17/2022, of September 20, regulated a new type of voluntary waiver of the specific remuneration system for cogeneration and slurry and olive oil sludge treatment facilities, so that facilities that waive the specific remuneration system may request inclusion in the adjustment mechanism regulated in Royal Decree Law 10/2022, of May 13, provided that this adjustment mechanism is in force.

Bolivia

The 2009 Bolivian Constitution establishes that the National Oil company Yacimientos Petrolíferos Fiscales Bolivianos (YPFB) is authorized to enter into service agreements with companies to undertake exploration and operation 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 767 for the promotion of investment in hydrocarbon exploration and operation was enacted. This Law was regulated by Supreme Decree 2830 dated July 6, 2016 and subsequently amended by Supreme Decree 4616 dated November 10, 2021.

Operating Contracts and Oil Service Contracts

According to the Hydrocarbons Law, 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. Article 362 of the Bolivian Constitution (CPE) 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, taxes and production shares plus the corresponding taxes. 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 service 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.

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.

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 upstream

With regard to US onshore upstream 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, upstream 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 upstream activities.

Federal authorities do have jurisdiction over certain environmental aspects that affect the gas and oil sector. The U.S. Environmental Protection Agency 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 FERC the exclusive power to regulate facilities 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.

Renewable energies and storage batteries

There are federal laws and policies that promote wholesale market competition, renewable energy and energy efficiency, such as (i) the Public Utility Regulatory Policies Act of 1978 (PURPA) which requires utilities to purchase electricity generated by non-utilities and grants special rates and regulatory treatment to encourage renewable energy production; and (ii) the Energy Policy Act of 1992 (as amended by the Federal Power Act, the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007) which gives the U.S. Federal Energy Regulatory Commission (FERC) the power to promote competition in wholesale energy markets through open access to transmission facilities.

FERC is charged with issuing rules to encourage the production of these new types of non-utility independent power producers, which industry stakeholders often refer to simply as "qualified facilities" or "QFs".

The Inflation Reduction Act (IRA) directs new federal spending toward reducing carbon emissions, reducing health care costs, funding the Internal Revenue Service (IRS), creating a 15% minimum corporate tax rate and boosting tax incentives for renewable energies. The IRA has therefore become a key component for the development of wind and photovoltaic technology projects by extending and even increasing investment tax credits (ITC) and production tax credits (PTC) related to these technologies based on parameters such as job creation, domestic manufacturing or investment in depressed or economically dependent fossil fuel regions.

As long as certain wage and training requirements are met, the ITC offers a general 30% tax credit on qualifying investments (generally 95% of the total investment) and the PTC a tax credit on electricity production for 10 years based on actual production each year (3 cts/Kwh, updated with inflation). These loans can be increased up to 70% (ITC) and a further 40% (PTC 4.2 cts/Kwh) depending on the degree to which certain conditions are met (e.g.: investment in regions with certain characteristics, or the use of raw materials or elements of domestic manufacture). In short, the IRA structures the tax provisions with the goal that new clean energy projects will create good-paying jobs, a national supply chain, and accelerate clean energy deployment in energy communities. Depending on the characteristics of each clean energy project, the tax credits could finance between 30 and 70 percent of the required investments. The IRA also allows for the transfer of tax credits to third parties (monetization of credits) who will be able to offset them with the taxable profits they obtain, simplifying the current structures with partners (tax equity), which are more complex and have greater legal and commercial requirements, whereby a credit market is expected to develop in the coming years.

Solar energy and storage projects are also regulated by the laws of each state, with the exception of certain environmental issues and operations on federal lands. At present, the Company has operations in New Mexico and Texas.

In Texas, renewable energy activities are regulated by the Public Utility Commission of Texas and the Electric Reliability Council of Texas (ERCOT). On June 7, 2023, following the end of the 88th Texas Legislative Session, Governor Abbott signed into law House Bill 1500, which addresses several market reforms that will have a significant effect on the Texas electricity market with respect to the following:

- HB1500 gives guidance to the Public Utility Commission of Texas (PUCT) regarding the implementation of the Performance Credit Mechanism (PCM) that was proposed by the PUCT in early 2023. Under the PCM, certain electricity generators (mainly fossil fuel generators) could earn a performance credit for being available when demand surges. HB1500 (a) caps this financial tool to $1 billion annually and (b) provides that the credits are available only for dispatchable facilities (i.e., wind and solar will not be eligible for these credits).
- It creates an ancillary services program that will allow power generators to bid on a day-ahead and real-time basis if they can provide at least four hours of power that could turn on within two hours of being called for deployment and have dispatchable flexibility to address inter-hour operational changes.
- Generation facilities (including renewable energy producers, other than a battery energy storage resource) signed for interconnection after January 1, 2027, will be required to maintain electricity output during peak demand periods (i.e., "firming"). A generation facility may satisfy this requirement by using on-site or off-site resources, including battery energy

storage (a win for battery energy storage, though this will overall add an additional cost for renewables-generated power).

- It establishes an allowance for the cost of building and interconnecting new transmission lines to the grid. This would limit how much electricity consumers would be required to pay for ERCOT's grid connection costs and would require the rest of the bill to be picked up by the power generators. Previously, interconnection costs would be covered by the ratepayers. With the added limitation, there will be a more significant impact on new projects and the renewable energy developers who (1) often do not build as close to the existing power grid and (2) generally incur larger grid connection costs.
- The PUCT is required to study ancillary and reliability services cost allocation “on a semi-annual basis among electric generation facilities and load-serving entities in proportion to their contribution to unreliability during the times of highest reliability risk due to low operating reserves by season” in order to determine whether renewables should pay higher ancillary and reliability service costs.

For the cost allocation methodology, HB1500 requires the PUCT to define how ERCOT should calculate and allocate the cost of providing ancillary reliability services, including the requirement that ERCOT allocate these costs on a semi-annual basis. The PUCT is to submit a report on the evaluation to the Legislature no later than December 1, 2026.

In New Mexico, the Group's current renewable energy activities are regulated by the Public Regulation Commission, the Public Service Company of New Mexico (PNM) and the laws of the Jicarilla Apache Nation (JANPA), as it is located on tribal lands.

Federal authorities do have jurisdiction over certain environmental aspects that affect the renewable energy sector. The U.S. Environmental Protection Agency (EPA) enforces laws and regulations such as the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act.

Investigation of panel imports

In 2012, the U.S. Department of Commerce (DOC) imposed anti-dumping duties on Chinese solar PV cells, modules and panels and countervailing duties on Chinese solar PV cells, modules and panels. The duties varied among different manufacturers and were determined based on the findings of the countervailing duty investigation conducted by the U.S. International Trade Commission (USITC). The duties were intended to counteract alleged unfair subsidies received by Chinese manufacturers.

In 2018, the Trump administration imposed a safeguard tariff on imported solar cells and modules. The tariff initially set a rate of 30%, which was gradually reduced over four years. The tariff affected all countries that export solar cells and modules to the United States, including China.

In February 2022, President Biden signed Proclamation 10339 "To Continue Facilitating Positive Adjustment to Competition from Imports of Certain Crystalline Silicon Photovoltaic Cells (Whether or not Partially or Fully Assembled into Other Products)" under Section 201 of the Trade Act of 1974, which establishes a tariff rate quota for crystalline silicon photovoltaic (CSPV) cells and an additional duty on modules composed of CSPV cells.

In parallel, Auxin, a US-based solar manufacturer, issued a formal petition requesting a circumvention investigation to determine whether imports of CSPV cells imported from Cambodia, Malaysia, Thailand or Vietnam are circumventing anti-dumping and countervailing duty orders. In March 2022, the Department of Commerce (DOC) initiated a circumvention investigation and found (preliminarily) that certain companies were attempting to circumvent existing orders for solar cells and modules from China. In August 2023, the DOC issued its final determination stating that it found circumvention at the national level in all four countries under investigation.

Aware of the risk to the solar industry, the solar industry lobby responded by asking President Biden not to impose tariffs. In June 2022, President Biden issued a proclamation granting a 24-month exemption from anti-dumping and countervailing duties on CSPV completed in Cambodia, Malaysia, Thailand or Vietnam and using parts and components manufactured in China.

Peru

The Constitution includes the main bases of its legal framework governing the hydrocarbons market in Peru. The Constitution establishes that the State 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 Mines (MINEM), in charge of drafting, approving, proposing and applying the Sector's policy; the Supervisory Agency for Investment in Energy and Mining (OSINERGMIN), in charge of supervising natural or legal persons that carry out activities related to the electricity and hydrocarbons subsectors and imposing sanctions for non-compliance with legal and technical obligations issued by MINEM and PERUPETRO S.A. The Environmental Assessment and Control Agency (OEFA) of the Ministry of the Environment is the specialized technical institution for ensuring compliance with the standards, obligations and incentives established in environmental regulations.

Upstream

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 OHL created PERUPETRO, S.A., 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, S.A. 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 the MINEM.

Refining and sale of oil and gas

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 rules specifically established by the MINEM.

In Peru, the trading of hydrocarbon derivatives is regulated by supply and demand. However, Emergency Decree 010-2004 created the Fund for the Stabilization of Petroleum Derived Fuel Prices (FEPC) as an intangible fund to prevent the high volatility of oil prices and its derivatives from being passed on to consumers.

The FEPC’s operating mechanism established by Emergency Decree 010-2004 and its Regulations indicates that when the import or export parity price, as the case may be, is higher than the upper limit of the corresponding price band, the producers and importers could apply a discount in the prices of the products for the same value defined by the compensation factor approved by the General Directorate of Hydrocarbons of the Ministry of Energy and Mines, whereby the FEPC would have a debt with these producers and importers for the amount of the applied compensations. Conversely, when the import or export parity price, as the case may be, is lower than the lower limit of the corresponding price band, an obligation would be generated for the producers and importers with the FEPC defined by the contribution factor. Article 10 of Emergency Decree 010-2004 establishes that each company will freely determine, in accordance with their commercial policies, the premiums or discounts to be applied for each product and customer over OSINERGMIN's reference prices, while maintaining the freedom to set the sales prices with its customers.

Although the FEPC has been applied for many years, Diesel and LPG were excluded from the FEPC in March 2020. However, in March 2021, the Ministry of Energy and Mines approved Supreme Decree No. 006-2021-EM, extended by Supreme Decree No. 015-2021-EM, which temporarily included diesel for vehicle use in the FEPC (during the period from March 27 to August 27, 2021). The most significant changes to the mechanism include the fact that compensation from the Fund will only be given to companies that maintain their primary sales price stable and without any change with regard to the primary sales price in effect on the date of publication of the aforementioned decree. This provision makes compensation conditional on maintaining fixed prices, which contravenes the freedom of contract, as well as Article 77 of the OHL, which establishes that the prices of crude oil and its derivatives are governed by supply and demand and distorts the FEPC.

Subsequently, Supreme Decree No. 025-2021-EM, of November 9, 2021, included diesel for vehicle use in the FEPC for an indefinite period of time. It also indicated that the primary sale price of such fuel must remain stable, i.e., it must not be above the corresponding target price band (defined by OSINERGMIN), which represents a change in relation to the wording of the supreme decrees of 2021 mentioned above, but it still violates principles such as the freedom of contract and free pricing of crude oil and its derivatives based on supply and demand as established in current regulations, since it establishes a maximum price for its sale, thus violating the freedom of companies to establish their prices in the market. A similar situation is occurring with LPG, which has been incorporated into the FEPC since September 2021. Through Supreme Decree 002-2022-EM, dated March 28, 2022, 84 and 90 octane gasolines and 84 octane gasohols were incorporated to the FEPC. Currently, by virtue of Supreme Decree 014-2021-EM, dated May 21, 2021, the production of gasoline and gasohol has been modified to two types: Regular (octane rating below 95) and Premium (octane rating above 95).

Environmental regulation

Peru has a broad environmental regulatory system. The General Environmental Law - Law No. 28611, dated October 15, 2005, establishes that all human activities involving construction, works, and services, including hydrocarbon activities, are liable to cause significant environmental impacts and are subject to the National Environmental Impact Assessment System; and that the ministries and their respective decentralized public agencies, as well as regulatory or supervisory agencies, must exercise environmental functions and powers.

Subsequently, via Legislative Decree No. 1013, dated May 14, 2008, the OEFA was created as a specialized technical public agency, with legal status under domestic public law, and was established as a budgetary agency under the Ministry of the Environment and in charge of environmental inspection functions. Later, through the Law of the National System of Environmental Evaluation and Control - Law No. 29325, dated March 5, 2009, the OEFA was made the governing body of the aforementioned environmental evaluation and control system.

Within the framework of its functions, the OEFA is empowered to issue administrative measures, such as preventive measures, special orders, among others. The OEFA is also empowered to supervise compliance with the obligations contained in environmental regulations, environmental management instruments, administrative measures and other sources of environmental obligation. And, among other matters, it is empowered to initiate administrative sanctioning procedures, issue precautionary measures before the initiation or during the administrative sanctioning procedure when necessary to prevent irreparable damage to the environment, natural resources or human health.

Supreme Decree No. 039-2014-EM, dated November 12, 2014, approved the Regulation on Environmental Protection in Hydrocarbon Activities (RPAAH), which establishes that all holders of hydrocarbon activities are responsible for complying with the provisions of the current environmental legal framework in environmental studies and/or approved supplementary environmental management instruments and any other additional regulations provided by the competent environmental authority.

Likewise, the RPAAH states that the owners of hydrocarbon activities are responsible for atmospheric emissions, liquid effluent discharges, solid waste disposal and noise emissions from the facilities they build or operate directly or through third parties, particularly those that exceed the Maximum Permissible Limits (MPL) and the Environmental Quality Standards (EQS) in force, provided that in the latter case it is shown that there is a causal relationship between the actions of the holder of the hydrocarbon activities and the violation of such standards. It should be noted that each of the above-mentioned parameters for the control of hydrocarbon activities has a specialized environmental regulation that must be complied with.

Portugal

Chemicals

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 of crude oil and oil products 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. Pursuant to Law No. 69-A/2021, of October 21, the government has the power to intervene, on an exceptional basis, in setting maximum margins for any of the commercial components of the retail price of simple fuels or bottled LPG. These maximum margins may be established, with a specific duration, for any of the activities in the value chain of simple fuels or bottled LPG, being set by Ministerial Order issued by the members of government responsible for the areas of economy and energy, following the proposal of the Portuguese Energy Services Regulatory Authority (ERSE) and consultation to the Portuguese Competition Authority (AdC).

Sales, which include wholesale and retail trade activity, are freely carried out, but depend 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 seller's good standing.

On December 7, 2022, ERSE approved the Regulation on Supervision of the National Petroleum System (SPN) (ERSE Regulation No. 4/2022), which defines the supervision model for the sector, establishing a methodology for the definition and monitoring of reference costs throughout the SPN value chain, as well as the rules for the provision of information by market operators.

The new regulation establishes the following: (i) the reference price and cost construction models for the different activities in the value chain of simple automotive fuels and bottled LPG, as well as the respective underlying commercial margins; (ii) the monitoring methodology and the list of parameters applied to them; (iii) the reporting obligations of SPN operators; (iv) the information to be published by ERSE, while ensuring the confidentiality of commercially sensitive information.

On July 18, 2023, the parameters of the SPN supervision methodology were published through ERSE Directive No. 11/2023, defining the maximum limits of commercial margins in refining, incorporation of biofuels, primary logistics and retail activities and in accordance with that established by the SPN Supervision Regulation. The parameters applicable to the SPN's supervisory activity, including the respective setting and review process, are subject to ordinary reviews to be carried out every three years.

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.

Liquefied petroleum gas

LPG – piped, bottled and bulk – is regulated by Decree Law No. 57-A/2018, of July 13, and is subject to control by the Portuguese Energy Services Regulatory Authority (ERSE), which assumed the functions of the Portuguese Competition Authority (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 gas 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 bottled LPG at all gas stations in Portugal and determines that the regulations on essential public services apply to bottled LPG 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 competent Minister, 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 supervision conditions for tax audits are defined in the revised version of Decree Law No. 267/2002.

The storage of liquid fuels, LPG and other petroleum derived gases, solid fuels and other oil products is regulated by Decree Law No. 267/2002, of November 26, as revised in Ministerial Order No. 1188/2003, of October 10 and Order No. 1515/2007, of November 30, regulating fuel license applications for license-exempt facilities and simplified license applications.

The regulations establish the right of access for third parties to large storage facilities which are 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.

Gas stations

Gas stations are subject to licensing, in accordance with the revised version of Decree Law No. 267/2002, of November 26. The revised version of Law No. 6/2015, of January 16, requires all gas 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 gas station monoliths 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, on the Legal Regime of Environmental Impact Assessments — as regards public or private projects that may damage or significantly impact the environment — 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 impose conditioning and/or compensatory measures, while Decree Law No. 152-B/2017 stipulates that climate changes, population, human health and soil should be assessed in future procedures. This regime, as well as that applicable to water resources, was amended by Decree Law No. 87/2023, of October 10.

Decree Law No. 127/2013, of August 30, establishes the industrial emissions regime, with the aim of preventing and reducing emissions, for integrated emission prevention and control 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. 150/2015, of August 5, establishes the regime for the prevention of major accidents involving hazardous substances and limitations of their consequences for human health and environment.

Decree Law No.12/2020, of April 6, establishes the legal regime for trade in greenhouse gas licenses, and 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 Ministerial Order No. 420-B/2015, of December 31, imposes additional taxes on CO2 emissions on certain 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 on the basis of the general principal of the polluter pays, 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 "Legal Framework of Environmental Administrative Offenses" published by Law No. 50/2006, of August 29, which sets fines with maximum limits of up to €5 million in the case of very serious sanctioning procedures and in offenses committed with malice, in addition to the possibility of applying additional sanctions such as the cancellation of permits and licenses granted, cessation or closure of the activity.

Decree Law No. 75/2015, of May 11, established the Single Environmental Certificate to simplify environmental licensing procedures and regimes, regulating the issuance of the single environmental certificate (TUA), which contains all the terms and conditions for the construction, operation and monitoring of a project as regards environmental matters and all administrative certificates and permits necessary to carry out the activity.

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 trends in 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. 84/2022, of December 9, establishes the goals for the consumption of energy from renewable sources, transposing the RED II into Portuguese law, which specifies: (i) national targets for the use of renewable energy in energy consumption and for the share of energy from renewable sources for use in transport, to include, in the future, aviation, maritime transport and rail; (ii) sustainability criteria for the production and use of biofuels, bioliquids and biomass fuels; (iii) greenhouse gas reduction criteria for renewable fuels of non-biological origin and recycled carbon fuels; (iv) mechanisms for issuing certificates of origin for electricity produced from renewable sources, heating and cooling energy, low-carbon and renewable energy sources, as well as for cogeneration energy production; and (v) mechanisms for the promotion of biofuels in land transport. The diploma was regulated by Ministerial Order No. 110-A/2023, of April 24, which establishes the calculation formulas for electricity produced from hydro and wind energy, the rules for calculating the impact of biofuels, bioliquids and fossil and biomass fuels on the contribution to greenhouse gases.

Decree Law No. 60/2017, of June 9, establishes the legal framework for the creation of infrastructure for alternative fuels: 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.

The Framework Climate Law (Law No. 98/2021, of December 31) entered into force on February 1, 2022 and establishes the regulatory framework under which Portugal undertakes to achieve carbon neutrality by 2050 through the implementation of energy transition measures and policies. The Law will have to be implemented over the next few years by supplementary legislation that will make changes in the energy sector through the implementation of various energy transition measures and policies: green taxation, carbon taxes on the use of fuel, policies for the use of electric and hybrid vehicles with a view to banning the sale of vehicles powered exclusively by fossil fuels by 2035, restrictive use of fossil fuel natural gas in electricity production, incentives for the use of renewable sources in electricity production, circular economy in industrialization.

Decree Law No. 30-A/2022, of April 18, approved a set of exceptional measures aimed at guaranteeing the simplification of energy production procedures from renewable sources. These measures will be in force for a period of 2 years.

On October 19, Decree Law No. 72/2022 was approved, which reinforced the exceptional flexibility measures provided for in Decree Law No. 30-A/2022, applicable mainly to installation projects for renewable energy plants (including photovoltaic plants), storage facilities, production units for self-consumption and green hydrogen production units.

The innovations are mainly focused on: (i) streamlining the prior control processes for urban operations; (ii) the creation of a new prioritization criterion for access to capacity reservation agreements with network operators, and (iii) the possibility of extending the pre-commercial operational trial period for power plants that obtained public network reception capacity in the 2019, 2020 and 2021 tenders.

Decree Law No. 11/2023, of February 10, on simplification and reform of environmental licensing, approves measures to simplify the granting of existing licenses, elimination of authorizations, licenses, acts and procedures with little relevance to environmental protection, thus facilitating economic activity without compromising environmental protection. The following are the main changes introduced by this law: (i) changes in the Legal Regime of Environmental Impact Assessments (RJAIA); (ii) changes in the regimes of the National Agricultural Reserve (RAN) and the National Ecological Reserve (REN); (iii) changes in the regime for the protection of the cork oak and the holm oak; (iv) modification of the legal regime for the use of water resources and the water law; and (v) modification of the statute establishing the general principles of action to be followed by the services and agencies of public authorities.

On July 14, 2023, a joint order of the Portuguese Environment Agency and the Directorate General of Energy and Geology (DGEG) was published concerning the projects of facilities producing electricity from renewable energies, in which the presentation of a series of elements is conditional on the continuation of the prior assessment requests for the decision to submit such projects to an Environmental Impact Assessment (EIA).

On September 6, Decree Law No. 80/2023 was published, establishing the allocation of grid connection capacity for electricity consumption facilities in high demand areas (expressly identifying Sines for the application of the special regime) and establishing a special procedure for these situations.

Electricity and natural gas sector regulation

In Portugal, Decree Law No. 15/2022, of January 14, establishes the framework of the National Electricity System and has been implemented and regulated through several administrative regulations.

Decree Law No. 62/2020, of August 28, establishes the framework of the National Gas System and has been implemented and regulated through extensive administrative regulations.

In the framework of Decree Law No. 15/2022, Ministerial Order No. 112/2022, of January 14, approves the Electro-Intensive Customer Statute that establishes a set of obligations and incentives intended to guarantee the facilities that benefit from it conditions of greater equality in terms of competition compared to similar facilities that operate in other EU Member States.

The regime for selling electricity for electric mobility is regulated by Decree Law No. 39/2010, of April 26, which stipulates that the activity may only be carried out by duly licensed operators of charging points.

The prices of electricity and natural gas supplies from market suppliers to their customers are freely agreed between the parties. However, the prices include a portion corresponding to the tariffs established for accessing the networks in accordance with the tariff regulations for the electricity and gas sectors (Regulation No. 828/2023 and Regulation No. 13/2023, of July 25), approved by ERSE.

The electricity tariffs up to December 31, 2022 were approved (under an exceptional approval regime) by Directive No. 14/2023, of July 26. The gas tariffs for the period from October 1, 2023 to September 30, 2024 were approved by Directive No. 135/2023, of July 25.

The sale, which includes wholesale and retail activities, is freely carried out but it is contingent on registration by the Directorate General of Geology and Energy, in addition to compliance with other obligations, supply quality, and the provision of information to various competent administrative bodies, and verification of suppliers' good standing. In order to access the wholesale market scheme, the supplier must have the status of market agent, in accordance with the Regulation on Commercial Relations, and the performance in the wholesale markets is subject to the regime established in Regulation (EU) No 1227/2011 of the European

Parliament and of the Council of October 25, 2011 on wholesale energy market integrity and transparency.

Suppliers enter into contracts with the operators of the electricity transmission and distribution networks and with the operators of the transmission networks, storage and natural gas distribution infrastructure to access the networks in accordance with the Regulation on Commercial Relations in the electricity sector and the gas sector (Regulation No. 827/2023, of July 28), the Regulation on Access to Networks and Interconnections in the electricity sector (Regulation No. 818/2023, of July 27 and the Regulation on Access to Networks and Interconnections in the gas sector (Regulation No. 407/2021, of May 12) approved by ERSE.

Decree Law No. 33/2022, of May 14, established the exceptional and temporary mechanism for the adjustment of electricity generation costs in the Iberian Electricity Market ("MIBEL"). This decree law was published simultaneously with the publication, in Spain, of Royal Decree Law No. 10/2022, of May 13, with a similar objective and content.

The obligation to establish natural gas security reserves is incumbent on market suppliers and suppliers of last resort. The overall minimum security reserves are set by Ministerial Order of the Minister responsible for the energy sector and cannot be less than the quantities necessary to guarantee the consumption of protected customers and to meet the non-interruptible consumption needs of power plants under the ordinary regime in the 12 months prior to the assessment month. In accordance with Ministerial Order No. 297/2011, of November 16 and Order No. 59/2022, of January 28, the minimum security reserves are: (i) as of December 31, 2015, 24 days of average consumption, (ii) as of December 31, 2020, 30 days of average consumption, (iii) as of December 31, 2022, (a) 45 days of average annual consumption of protected customers; and (b) 16 days of consumption equivalent to the maximum capacity of non-interruptible combined cycle plants, and (iv) as of December 31, 2025, 35 days of average consumption.

In the period from October 1 to March 31 of the following year, market agents with a gas consumption portfolio are to create and maintain an additional reserve in the national gas system in the underground gas storage infrastructure.

The amount of additional reserves in the national gas system created by each market agent is phased over this period and is calculated on the basis of the individual consumption portfolios verified in the annual period between May of the previous year and April of the year of publication of this decree.

The overall amount of additional reserves of the national gas system varies over the period from October 1 to March 31 of the following year, and may not exceed a maximum amount of 700 GWh.

Decree Law No. 70/2022, of October 14, establishes the creation of additional strategic reserves of natural gas, belonging to the Portuguese State, and establishes extraordinary and temporary measures for security of the gas supply.

Electricity and natural gas supplies are classified as essential public services and, therefore, subject to the rules on essential public services established in Law No. 23/96, of July 26, which establishes various mechanisms to protect customers, such as the reporting and assistance obligations of suppliers, obligations to give minimum prior notice for supply interruptions, prohibition of minimum consumption and minimum payment periods, and the limitation periods on the right to receive the prices of the services.

The activity of selling electricity and natural gas is subject to compliance with the service quality requirements and standards established in the Regulation on Service Quality approved by ERSE, which establishes the obligation of compensating customers in the event of non-compliance.

The sale of electricity and natural gas is subject to ERSE's regulation and supervision and to the regime of penalties for the energy sector established in Law No. 9/2013, of January 28. As the regulator of the sector, ERSE is the administrative authority with competence regarding supervision and application of penalties as a result of unfair commercial practices, non-compliance in the provision of promotional, informational and support services to consumers and users through call centers, duties related to the complaints book and the rules applicable to guarantees for consumers in supply contracts of public services.

United Kingdom

Principal national laws and main regulators

The principal laws governing the development of oil and natural gas in the United Kingdom is the Petroleum Act 1998 (as amended) (the “Petroleum Act”). In addition to the Petroleum Act, there are various environmental and health and safety legislative provisions that apply to the oil and gas industry.

Under the Petroleum Act, all rights to oil are vested in the Crown. The UK does not have a State-owned oil company and the state does not participate directly in oil and gas production, other than in its capacity as a regulator. The State benefits economically from the industry through its taxation regime.

The Department for Energy Security and Net Zero (“DESNZ”) is the UK government department responsible for overall energy policy, including delivering security of energy supply, ensuring properly functioning energy markets, encouraging greater energy efficiency and seizing the opportunities of net zero. In terms of oil and gas, the DESNZ is responsible for offshore environmental regulation and decommissioning through the Offshore Petroleum Regulator for Environment and Decommissioning (“OPRED”).

The North Sea Transition Authority (“NSTA”) is the operating name for the UK independent regulatory authority responsible for licensing and regulating the exploration and development of the UK's oil and gas resources, carbon capture, usage and storage (CCUS) and offshore gas storage. The legal name of the regulator is the Oil and Gas Authority (“OGA”). The NSTA's main purpose is to maximize the economic recovery of UK petroleum while working to deliver the UK’s net zero emissions target by 2050. The OGA Strategy came into effect on February 11, 2021 and includes a central obligation to maximize economic recovery as well as helping to achieve the net zero target. The OGA Strategy is binding on the Secretary of State, the DESNZ, the NSTA, and all licensees, operators and owners of offshore installations on the UKCS.

The NSTA also has the power to resolve disputes, attend meetings, collect data and samples and impose sanctions to enforce the new regulatory regime.

The Health and Safety Executive (“HSE”) is the independent regulator responsible for enforcing the health and safety regime in the UK. HM Treasury is responsible for fiscal matters and HM Revenue & Customs administers the tax regime.

The objective of the regulatory regime in the United Kingdom is to:

- maximize the economic recovery on the UK's oil and gas reserves while working to deliver the UK's net zero emissions target by 2050,
- prevent environmental damage,
- uphold health and safety and environmental standards, and
- protect the UK taxpayer from any residual liability.

Voluntary codes of practice

Licensees on the UKCS are also expected to comply with various voluntary industry based codes of practice. The Commercial Code of Practice promotes positive commercial behaviors on the UKCS and the Infrastructure Code of Practice facilitates access to infrastructure by third parties.

International treaties and conventions

The UK is a signatory to a number of international treaties and conventions which impact oil and gas regulation in the UK. The UK’s access to its

Continental Shelf and the limit of UK's territorial seas is governed by the 1958 Geneva Convention on the Continental Shelf and the 1982 United Nations Convention on the Law of the Sea ("UNCLOS"). The UK's decommissioning regime is impacted by the 1998 Convention for the Protection of the Marine Environment of North East Atlantic ("OSPAR").

Licensing regime

Regulation in the UK is by a licensing regime rather than a production sharing arrangement.

The power to grant licenses "to search and bore for and get petroleum" in the territorial waters of the UK and on the UKCS is vested in the NSTA.

The license is a contractual deed entered into between the OGA and the licensee (on a joint and several basis if there is more than one licensee). The terms and conditions of the license (referred to as the "Model Clauses") are published in secondary legislation and for offshore licenses are found in the Petroleum Licensing (Production) (Seaward Areas) Regulations 2008.

Environmental and Health and Safety Regulations

Although oil and gas development is mainly regulated and controlled through the terms of the license and the Petroleum Act, there is also a broad framework of environmental and health and safety legislation that licensees must comply with. The main regulators are the OPRED and the HSE, the Environmental Agency and the Scottish Environmental Protection Agency.

In 2015 various UK environmental and health and safety laws were enacted to implement the requirements of the EU Offshore Safety Directive ("OSD"), which was adopted on June 10, 2013 in response to the Deepwater Horizon disaster in the Gulf of Mexico. The OSD required the creation of an offshore Competent Authority ("CA"). Since the UK left the EU, the Offshore Major Accident Regulator (OMAR) is the UK's offshore Competent Authority. The CA functions are carried out by the OPRED and the HSE. The OMAR undertakes certain functions such as accepting, assessing, approving and/or inspecting relevant Safety Cases, Oil Pollution Emergency Plans and Well Notifications.

The Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 have introduced the UK Government's policy on Streamlined Energy and Carbon Reporting (SECR), which came into force on April 1, 2019. SECR, among other things, requires large unquoted companies to report on their annual energy use and greenhouse gas emissions including from gas, electricity and transport fuel as well as an intensity ratio through their company reports.

Decommissioning regulation

The decommissioning of offshore installations and pipelines is regulated under Part IV of the Petroleum Act. The Secretary of State (acting through the DESNZ) has powers under the Petroleum Act to serve notices on a wide range of persons making them jointly and severally liable to carry out and pay for an approved statutory decommissioning program. The main objective of the decommissioning regime is to ensure that the cost of decommissioning is not borne by the Secretary of State and ultimately the UK taxpayer. The UK has also adopted a number of international and regional treaties and agreements including UNCLOS, IMO Guidelines and Standards and OSPAR.

UK Emission Trading Scheme ("UK ETS")

The UK ETS was launched in the UK on January 1, 2021, to replace the UK's participation in the EU ETS and to provide a carbon pricing mechanism as a tool for achieving the UK's net zero target. It is, to a large extent, very similar to the EUETS as it is a cap and trade scheme that seeks to reduce GHG emissions by requiring operators of facilities in certain energy-intensive sectors to surrender a number of emission allowances equal to the total emissions of carbon dioxide (and some other GHGs) from the installation for that year.

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 any other entity that may be created to manage 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 agreements with mixed-owned companies 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 Venezuela 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. The State of Exception and Emergency has been extended consecutively on several occasions, the last of which was Presidential Decree No. 4,440, published on February 23, 2021, in the Official Gazette (Extraordinary) No. 6,615, for sixty (60) days from its publication. 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 required to comply and ensure compliance with the legal documents issued by this 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 this 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. 42,071, dated February 19, 2021, the President of the Republic, through Decree No. 4,436, extended by twelve (12) months the term established in Decree No. 4,268, dated August 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 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 Gazette No. 6,405 the so-called Exchange Agreement No. 1 ("the Exchange Agreement"), 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.

On March 13, 2020 the Venezuelan Central Bank issued a circular allowing authorized banking institutions to sell foreign currency in cash, according to 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 the Banking Sector and authorized as specialized intermediaries to carry out retail foreign exchange transactions 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 transactions. These are transactions to sell foreign currency for amounts equal to or less than €8,500, or its equivalent in another currency.

On August 6, 2021, the National Executive Branch issued Decree No. 4,553, published in Official Gazette No. 42,185 of this same date, which established a new monetary expression of the bolivar, effective as of October 1, 2021, meaning that any amount expressed in local currency prior to this date had to be converted to the new unit by dividing the amount by one million (1,000,000).

Subsequently, the Venezuelan Central Bank issued the Rules Governing the New Monetary Expression (Resolution No. 21-08-01), in Official Gazette No. 42,191 of August 16, 2021, to regulate aspects related to the new monetary scale of the bolivar established in Decree No. 4,553 of the National Executive.