2019 MANAGEMENT REPORT AND ANNUAL CONSOLIDATED FINANCIAL STATEMENTS

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01 MANAGEMENT REPORT

1 ENGIE 2019 RESULTS

The previously published financial data presented hereafter have been restated to take into account impacts resulting from the transition method used for the application of IFRS 16 – Leases. A reconciliation of the reported data with the restated comparative data is presented in section 6 of the management report for key financial indicators and Note 1 "Accounting framework and basis for preparing the consolidated financial statements".

ENGIE financial information at December 31, 2019

2019 net recurring income Group share guidance achieved

EUR 0.80 dividend per share to be proposed at the AGM (+7% vs. 2018)

- **Net recurring income Group share (NRIgs) of €2.7 billion, up 9%, and 11% on an organic [1] basis.**
- **Current operating income (COI) of €5.7 billion, up 11%, and 14% on an organic1 basis, mainly driven by Nuclear, Others (notably Energy Management), Thermal and Renewables, partially offset by Supply and Networks. EBITDA of €10.4 billion, up 7%, and 8% on an organic basis.**
- **Financial net debt increased by €2.7 billion mainly due to growth investments, notably the TAG acquisition, which closed in H1. Financial net debt / EBITDA ratio of 2.5x.**
- **For fiscal year 2019, it will be proposed to the AGM to increase the dividend to €0.80 per share, up 7% versus 2018 ordinary dividend.**
- **2020 net recurring income Group share (NRIgs) expected to be between €2.7 billion – €2.9 billion [2]. For 2022, ENGIE anticipates a NRIgs CAGR in the range of 6-8% (to reach €3.2 billion and €3.4 billion).**

Key Financial data at December 31, 2019

In billions of euros	Dec. 31 , 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	60.1	57.0	+5.4%	+4.1%
Adjusted revenues [1]	64.1	60.6	+5.8%	+4.7%
EBITDA	10.4	9.7	+6.8%	+8.1%
CURRENT OPERATING INCOME (COI)	5.7	5.2	+11.1%	+14.4%
Net recurring income relating to continued operations, Group share [1]	2.7	2.5	+9.3%	+11.1%
Net income, Group share	1.0	1.0		
Cash Flow From Operations (CFFO) [2]	7.6	7.7	(0.2)	
Financial net debt	25.9	23.3	2.7 vs Dec. 31, 2018	

(1) In Q4 2019, the Group has implemented a new IFRS pronouncement related to commodity derivatives and requiring a change in presentation of Revenues with no impact on other performance indicators. For comparability with previous communications, adjusted revenues are also provided based on the former definition. For more information please refer to Note 1 to the 2019 consolidated financial statements.

(2) Cash flow from operations = Free cash flow before maintenance Capex.

In 2019, the drivers of the gross COI evolution were as follows:

- **Nuclear** was driven by higher availability of Belgian production units and slightly more favorable achieved prices;
- In business line **Others**, increasing Energy Management results were mainly driven by the partial sale of a gas supply contract, performance of market activities and gas contract renegotiations;

(1) Organic variation: gross variation without scope and foreign exchange effect.

(2) These targets and this indication assume average weather conditions in France, full pass through of supply costs in French regulated gas tariffs, no significant accounting changes, no major regulatory or macroeconomic changes, commodity price assumptions based on market conditions as of December 31, 2019 for the non-hedged part of the production, no change in the nuclear provision legal and regulatory framework, average foreign exchange rates as follows for 2020: €/USD: 1.13; €/BRL: 4.57 and dilution from the €4 billion disposal plan for 2020-22.

- **Client Solutions** results benefited from the contribution of acquisitions and the performance of decentralized energy activities, partly offset by investments in business development capability and some operational restructuring actions;
- **Networks** was impacted by several negative effects outside France (mainly one-offs and temperature) as well as several adverse factors in France that were expected and are mostly temporary (mainly tariff smoothing in transmission). Networks also benefited from the first year contribution of the TAG gas transmission pipeline in Brazil, acquired in mid-2019;
- **Renewables** benefited from higher Brazilian hydro prices and increasing commissioning of renewable capacity (3.0 GW in 2019). The target of 9 GW to be commissioned from 2019 to 2021 is now fully secured;
- Supply activities continued to be impacted by a difficult market context, mainly from margin contractions in French retail, by positive 2018 one-offs in Benelux and adverse temperature effects in Australia and France;
- **Thermal** was impacted by the disposal of Glow partly offset by Power Purchase Agreement (PPA) performance and positive market price conditions in Chile as well as the reinstatement of the capacity remuneration mechanism in the United Kingdom.

ENGIE continued to pursue its strategic focus on the energy transition in 2019.

In **Client Solutions**, ENGIE and its partners won commercial contracts for the University of Iowa (United States), government buildings in Ottawa (Canada), a “smart region” around Angers (France) and industrial buildings in Singapore. In addition, ENGIE made several acquisitions including Conti in North America, Otto Industries in Germany and Powerlines in Austria. ENGIE Impact was created to bring large customers with solutions to build their sustainability roadmap and accelerate their energy transition.

In **Networks**, ENGIE announced on June 13, 2019 that the consortium in which it holds a majority stake completed the acquisition of a 90% shareholding in TAG, the largest gas transmission network owner in Brazil. TAG has a portfolio of long-term contracts providing an attractive earnings stream and improves diversification of ENGIE’s geographic footprint in Networks activities. In January 2020, ENGIE also further strengthened its position in Brazil by announcing the acquisition of a project of a 1,800 km power transmission line. Finally, ENGIE gained visibility on the financial outlook of its French gas networks activities with the conclusion of the regulatory reviews between the end of 2019 and the beginning of 2020.

In **Renewables**, 3.0 GW of renewable capacity was commissioned and the 9 GW commissioning target, over 2019-21, is now fully secured. The new joint-venture in Mexico with Tokyo Gas and the strategic partnership signed with Edelweiss Infrastructures Yield in India at the beginning of 2020 demonstrate ENGIE’s ability to deploy the DBSO [(1)] model and attract partners for the development of its portfolio. In addition, ENGIE, along with financial partners, won a bid to acquire a 1.7 GW hydroelectric portfolio from EDP in Portugal. Finally, in January 2020, ENGIE reached an agreement with EDPR for the 50/50 joint-venture in offshore wind to create a global offshore wind player.

In **Thermal**, ENGIE continued to execute its carbon footprint reduction strategy, with coal now approximately 4% of global power generation capacity, following the disposal of its 69.1% stake in Glow in Thailand and Laos (3.2 GW of generation capacity, of which 1.0 GW is coal), ending its participation in coal in the Asia-Pacific region, and the disposal of its German and Dutch coal assets (capacity of 2.3 GW).

In **Nuclear**, an arrangement on Belgian nuclear provisions was reached reducing uncertainty for all parties regarding the level of provisions and their funding.

1.1 Analysis of financial results at December 31, 2019

1.1.1. Revenues of €60,1 billion

Revenues were €60.1 billion, up 5.4% on a gross basis and 4.1% on an organic basis.

(1) Develop, Build, Share & Operate.

Reported revenue growth was driven by scope effects, including various acquisitions in Client Solutions (primarily in the United States with Conti, France and Latin America with CAM) and in BtoB Supply in the US, partially offset by the disposals of ENGIE's stake in Glow in Thailand in March 2019 and of BtoB Supply activities in Germany at the end of 2018. This growth also includes a slightly positive foreign exchange effect, mainly due to the appreciation of the US dollar, partly offset by the depreciation of the Argentinian peso and the Brazilian real against the euro.

Organic revenue growth was primarily driven by Supply revenues in North America, France and Europe, growth in Client Solutions in Europe, energy management services and favorable market conditions for Global Energy Management (GEM) activities and strong momentum in Latin America (PPA portfolio growth in Chile as well as commissioning of new wind and solar farms in Brazil). This growth was partially offset by lower revenues from Supply activities in the UK and Australia and from Thermal activities in Europe.

Clients Solutions revenues were up 11% on a gross basis and 3% on an organic basis, benefiting from a positive effect of acquisitions and favorable market context for industrial clients in Europe.

1.1.2. EBITDA of €10.4 billion

EBITDA was €0.4 billion, up 6.8% on a gross basis and 8.1% on an organic basis.
These gross and organic variations are overall in line with the current operating income growth, except for the increase in depreciation mainly due to the commissioning of assets in Latin America and in France, especially in Networks which are not taken into account at EBITDA level.
In addition, Lean 2021, which contributes to the organic increase at EBITDA and COI levels, exceeded the 2019 targets and is on track to meet the target set for 2021.

1.1.3. Current operating income (COI) of €5.7 billion

Current operating income amounted to €5.7 billion, up 11.1% on a reported basis and 14.4% on an organic basis.

The reported COI growth includes a positive foreign exchange effect, mainly due to the appreciation of the US dollar, partly offset by the depreciation of the Argentinian peso and the Brazilian real against the euro This positive effect is partly offset by an aggregate negative scope effect, including the disposal of the 69.1% stake in Glow in Thailand and Laos, partly offset by various acquisitions predominantly in Networks (TAG) and in Client Solutions.

Organic COI performance varied across the Group's business lines:

In millions of euros	Dec. 31 , 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Client Solutions	1,090	1,010	+7.9%[(1)]	-0.9%
Networks	2,327	2,401	-3.1%	-5.6%
Renewables	1,190	1,129	+5.4%	+7.5%
Thermal	1,260	1,423	-11.5%	+7.2%
Nuclear	(314)	(1,051)	+70.1%	+70.1%
Supply	345	539	-36.0%	-33.5%
Others	(172)	(297)	+42.1%	+41.6%
TOTAL	**5,726**	**5,154**	**+11.1%**	**+14.4%**

(1) Excluding the impact from the 2019 SUEZ one-offs, this gross evolution would have been c. +7% (c. € +10 million net positive impact: positive outcome on Argentina court case, restructuring costs and asset write-downs).

- **Client Solutions** reported a 1% organic COI decrease, impacted by headwinds in specific segments and an increase in development costs notably on newer growth businesses. These effects were partly offset by an increased contribution from SUEZ and decentralized energy activities.
- **Networks** reported a 6% organic COI decrease, mainly due to gas distribution activities with 2018-19 negative one-off effects recorded outside of France and negative temperature effects in France and in Europe, only partially offset by a commissioning costs provision reversal and tariff increases in France. Gas transmission activities in France also suffered from a negative volume effect due to the merger of the North and South gas market zones and from a negative price effect resulting from tariff smoothing.

- **Renewables** reported an 8% organic COI increase, primarily driven by higher prices for hydroelectric power generation in Brazil and in France and the 3.0 GW commissioning of new capacities since January 1, 2019, notably in Brazil (0.5 GW), the United States (0.5 GW), Spain (0.4 GW), Mexico (0.3 GW), India (0.3 GW), France (0.3 GW) and Egypt (0.3 GW). These positive effects were partly offset by lower DBSO margins compared to the high level of DBSO transactions in 2018 and lower hydroelectric power generation in France.
- **Thermal** showed a 7% organic COI increase, mainly attributable to the PPA portfolio growth and positive market price conditions in Chile. In addition, the reinstatement of the capacity remuneration mechanism in the United Kingdom, as well as and the favorable impact of the gas spreads in Europe were positive. These effects were partially offset by the expiry of a PPA in Turkey in April 2019. The amount of liquidated damages received was roughly stable in 2019 versus 2018.
- **Nuclear** delivered a 70% organic COI growth, benefiting from higher availability rates in Belgium following 2018 unplanned outages (+2,720bps and +62% volumes produced) and better achieved prices (+2€/MWh).
- **Supply** COI reduced by 34% on an organic basis, primarily driven by margin pressures on French gas and electricity retail contracts, a commissioning costs accrual reversal (related to the coverage of the cost to serve customers handled by energy suppliers during the French market opening, from 2007 to 2016, fully offset by a symmetrical provision reversal for Gas distribution in France), 2018 positive one-offs in Benelux and negative temperature effects in Australia and in France. These effects were partly offset by higher business margins in France.
- **Others** business line delivered 42% organic COI growth, mainly reflecting GEM's good performance coming from the partial sale of a gas supply contract to Shell and a positive impact from gas contract renegotiations and overall favorable market conditions, as well as lower Corporate costs.

Organic COI performance varied across segments:

In millions of euros	Dec. 31 , 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
France	2,861	3,057	-6.4%	-7.0%
France excluding Infrastructures	*903*	*1,039*	*-13.1%*	*-15.2%*
France Infrastructures	*1,957*	*2,018*	*-3.0%*	*-2.8%*
Rest of Europe	684	46	+1,400.5%	+1,121.9%
Latin America	1,694	1,359	+24.6%	+20.2%
USA & Canada	159	153	+3.9%	-5.5%
Middle East, Asia & Africa	559	896	-37.6%	-9.1%
Others	(231)	(357)		
TOTAL	**5,726**	**5,154**	**+11.1%**	**+14.4%**

Based on the reportable segments, the organic COI growth was led by the **Rest of Europe** (mainly driven by the recovery of Nuclear activities with better availability and higher prices, the reinstatement of the capacity remuneration mechanism in the United Kingdom, the favorable impact of gas spreads in Europe; partly offset by 2018 positive one-offs including Liquidated Damages received, difficulties in Benelux and the UK in Supply activities and in Client Solutions with some loss-making contracts), by the **Others** segment (mainly due to GEM's good performance in market activities and an increased contribution from SUEZ) and by **Latin America** (notably due to the favorable impact of LDs received in Thermal activities in 2019, higher prices for hydroelectric power generation and commissioning of new wind and solar assets in Brazil and in Mexico as well as PPA portfolio growth in Chile).

These positive impacts were partly offset by an organic COI decrease in **Middle East, Africa & Asia** (mainly driven by headwinds in Supply in Australia and Africa, in Networks in Turkey, partly offset by positive contribution of Thermal generation and Renewables activities), in France (for France excluding Infrastructures, mainly due to lower DBSO margins compared to the 2018 high level, margin pressure in Supply activities and lower hydroelectric power generation partly offset by higher hydro prices, increased wind and solar contributions and improved profitability in Client Solutions activities; for France Infrastructures, mainly due to the lower contribution of transmission and distribution activities) and in **USA & Canada** (mainly driven by Client Solutions, notably due to negative one-offs booked in 2019, lower contribution from Thermal activities due to lower capacity prices; partly offset by higher DBSO margins and commissioned asset contributions in Renewable activities).

1.1.4. Net recurring income relating to continued operations, Group share of €2.7 billion and Net income Group share of €1.0 billion

Net recurring income relating to continued operations, Group share amounted to €2.7 billion compared with €2.5 billion in 2018. This increase was mainly driven by the continued improvement in the current operating income partly offset by higher taxes, mainly due to the 2018 positive effect from the recognition of deferred tax assets and slightly higher recurring financial costs, reflecting the modification in the business mix (higher debt in Brazil).

Net income Group share amounted to €1.0 billion in 2019, stable year-on-year, as a result of the increase in Net recurring income and gains on disposals, mainly resulting from the Glow transaction, which offset the impact of the triennial review of nuclear provisions in Belgium and minor negative mark-to-market variation.

1.1.5. Financial net debt of €25.9 billion

Financial net debt stood at €25.9 billion, up €2.7 billion compared to December 31, 2018. This variation is attributed to (i) capital expenditures over the period (EUR 10.0 billion [(1)], including the €1.5 billion expenditures for the TAG transaction in Brazil), (ii) dividends paid to ENGIE SA shareholders (€1.8 billion) and to non-controlling interests (€0.7 billion) and (iii) other elements (€0.6 billion) mainly related to foreign exchange rates, new right-of-use assets and mark-to-market variations. These items were partly offset by (i) cash flow from operations (€7.6 billion) and (ii) the impacts of the portfolio rotation program (€2.8 billion, mainly related to the Glow disposal).

Cash flow from operations [(2)] amounted to €7.6 billion, down €0.2 billion. The decrease stemmed predominantly from working capital requirement variations (€1.3 billion negative impact), mainly caused by margin calls on derivatives and mark-to-market variation of financial derivatives, partly offset by the increase of operating cash flow (€0.9 billion) and lower tax and interests payments (€0.2 billion).

At the end of December 2019, the **financial net debt to EBITDA** ratio amounted to 2.5x. Excluding the TAG acquisition which was not included in the 2019 guidance and which contributed only partially to the 2019 EBITDA, this ratio amounted to 2.4x, stable compared to the end of 2018 and on the target of less than or equal to 2.5x. The average cost of gross debt was 2.70%, slightly up compared to the end of 2018, notably due to new borrowings in Brazil.

At the end of December 2019, **the economic net debt** [(3)] **to EBITDA ratio** stood at 4.0x. Excluding the TAG acquisition, this ratio stood at 3.8x, slightly increasing compared to December 2018.

1.2 Financial targets

The targets for the financial years ended 31 December 2020 and 2022 set forth below are based on data, assumptions and estimates considered to be reasonable by the Group at the date of issuance of this document.

These data and assumptions may evolve or be amended due to uncertainties related to the economic, financial, accounting, competitive, regulatory and tax environment or other factors that the Group may not be aware of at the date of registration of the management report. In addition, the fulfilment of forecasts requires the success of the Group's strategy. The Group therefore makes no commitment or warranty regarding the fulfilment of the forecasts set out in this section.

The targets presented below and the underlying assumptions, also been prepared in accordance with the provisions of Delegated Regulation (EU) No 2019/980 supplementing Regulation (EU) No 2017/1129 and the ESMA recommendations on forecasts.

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(1) Net of DBSO partial sell-downs.

(2) Cash flow from operations = Free cash flow before maintenance CAPEX.

(3) Economic net debt amounted to €41.1 billion at the end of December 2019 (compared with €35.7 billion at the end of December 2018); it includes, in particular, nuclear provisions and post-employment benefits.

The targets presented below result from the budget and medium-term plan process as described in Note 13 to the consolidated financial statements; they have been prepared on a comparable basis with historical financial information and in accordance with the accounting methods applied to the Group's consolidated financial statements for the year ended December 31, 2019 (including IFRS 16 and IFRIC 23, which the Group has applied as from January 1, 2019) described in the consolidated financial statements.

Assumptions

- strategy: confirmation and deepening of the Group ambition to establish ENGIE as a leading force in the energy and climate transition;
- acquisitions and disposals: no significant change in the Group scope of consolidation beyond acquisitions or disposals already announced or impacts specifically mentioned in the targets below;
- foreign exchange rates:
  - 2020: average annual €/US Dollar and €/Brazilian real foreign exchange rates at 1.13 and 4.57 respectively,
  - 2021 and 2022: average annual €/US Dollar and €/Brazilian real foreign exchange rates at 1.16 and 4.57, respectively;
- Belgium nuclear assets availability: 74%, 93% and 94% for 2020, 2021 and 2022, respectively (rates computed on the basis of the installed capacity, assuming Doel 3 closure in October 2022);
- regulated tariffs in France Infrastructures:
  - distribution, transport and storage : tariffs as published by the CRE in January 2020,
  - regasification: estimated updated tariffs as from 2021; the CRE tariff review will take place in 2020;
- regulated gas & power tariffs in France: full pass through of supply costs;
- commodity prices: based on market conditions as of December 31, 2019 (notably for European outright power, forwards at 44, 47, 48 €/MWh in 2020, 2021 and 2022 respectively) for the non-hedged part of the production (20%, 46% and 77% in 2020, 2021 and 2022 respectively);
- climate: normalized conditions in France (gas distribution and energy supply + normalized hydro production), hydrology in Brazil to improve by 2022;
- recurring effective tax rate: 31% in 2020, reducing by ~300bps through 2022;
- employee benefit provisions discount rates: based on market conditions as of December 31, 2019, as disclosed in Note 20 to the consolidated financial statements;
- no significant accounting changes compared to 2019;
- no major regulatory and macro-economic changes compared to 2019.

2020 and 2022 financial targets

ENGIE anticipates 2020 **net recurring income, Group share to be between €2.7 and €2.9 billion**.

This guidance is based on an indicative EBITDA range of €10.5 to €10.9 billion and COI range of €5.8 to €6.2 billion.

COI Indicative expectations by Business Line for 2020:

In millions of euros	Dec. 31, 2019	COI 2019-2020 (1)	Key drivers
Client Solutions	1,090	+	Organic revenues and margin growth, new acquisitions
Networks	2,327	-	Increase from TAG offset by decreases in new remuneration rates
Renewables	1,190	+ +	Hydro volume and prices in France and decision in Brazil on compensation for past losses due to low hydro dispatch. Wind & Solar increase due to DBSO and COD of assets
Thermal	1,260	- -	Scope impact and decreasing spreads
Nuclear	(314)	+	Higher achieved prices, lower volumes
Supply	345	+ +	Positive effect from negative 2019 one-offs and normalized temperatures in 2020

(1) A single + or – sign accounts for single digit growth or decrease; double ++ or -- signs account for a double-digit growth or decrease.

For 2020 and over the long term, ENGIE anticipates an economic net debt/EBITDA ratio below or equal to 4.0x and remains committed to a strong investment grade rating.

For 2022, ENGIE anticipates **net recurring income, Group share to grow at a CAGR** [(1)] **range of 6-8%** (i.e. between €3.2 and 3.4 billion). This guidance is based on an indicative CAGR range for EBITDA between 2-4% and for COI between 4-6%.

For the 2020-2022 period, ENGIE expects to invest €10 billion [(2)] in growth, €8 billion in maintenance and €4 billion in the Synatom financial Capex for the full funding of the nuclear waste provision by 2025. Disposals are expected to amount to €4 billion, primarily aiming at further reducing CO_2 emissions and simplifying geographical footprint and structure.

1.3 Dividend policy

For **fiscal year 2019**, ENGIE confirms the payment of a **€0.80 per share dividend** representing a payout ratio of 72%, **payable in cash**.

The annual dividend will be paid at one time, after the Ordinary General Meeting (OGM) approving the annual accounts.

For the future, ENGIE confirms the **medium-term dividend policy, in the range of 65 to 75% NRIgs payout ratio**.

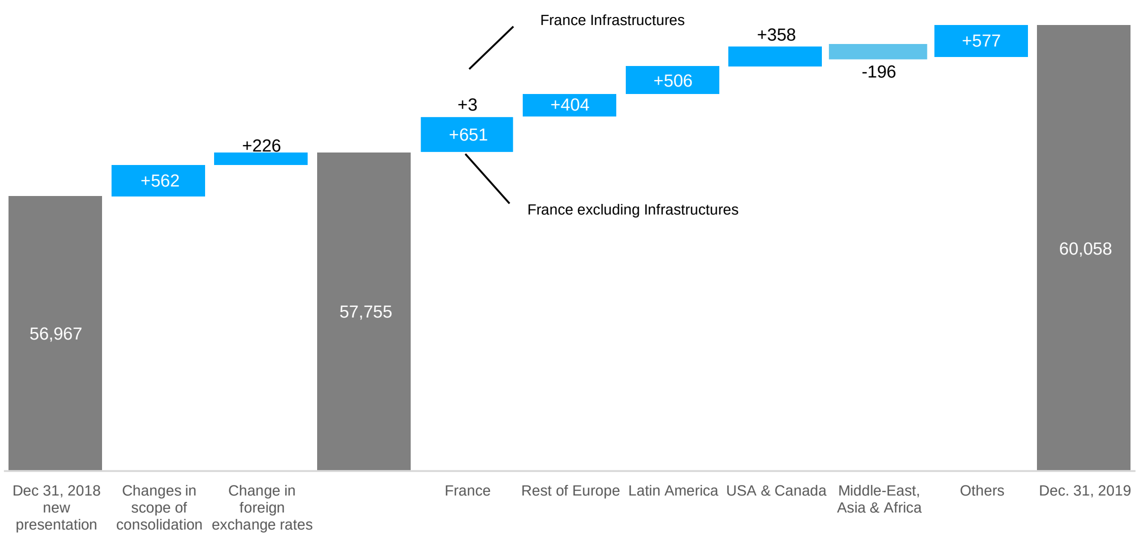
(1) CAGR: Compound Annual Growth Rate.
(2) Net of DBSO partial sell-downs.

2 BUSINESS TRENDS

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	60,058	56,967	+5.4%	+4.1%
EBITDA	10,366	9,702	+6.8%	+8.1%
Net depreciation and amortization/Other	(4,640)	(4,548)		
CURRENT OPERATING INCOME (COI)	5,726	5,154	+11.1%	+14.4%

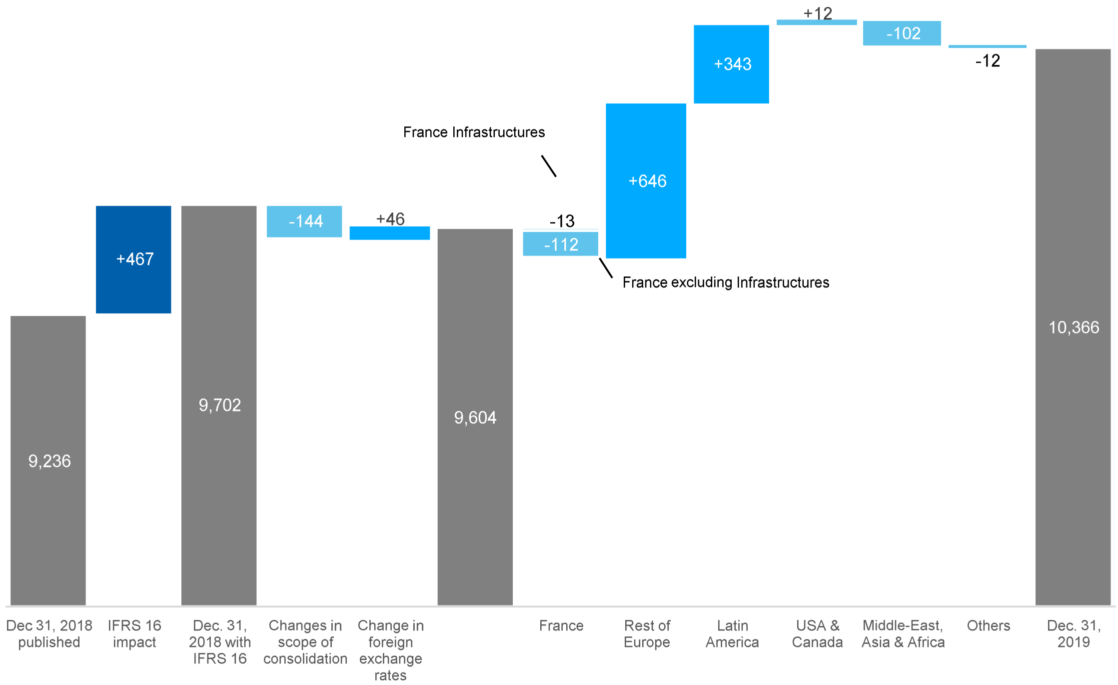
REVENUE TRENDS

In millions of euros



EBITDA TRENDS

In millions of euros



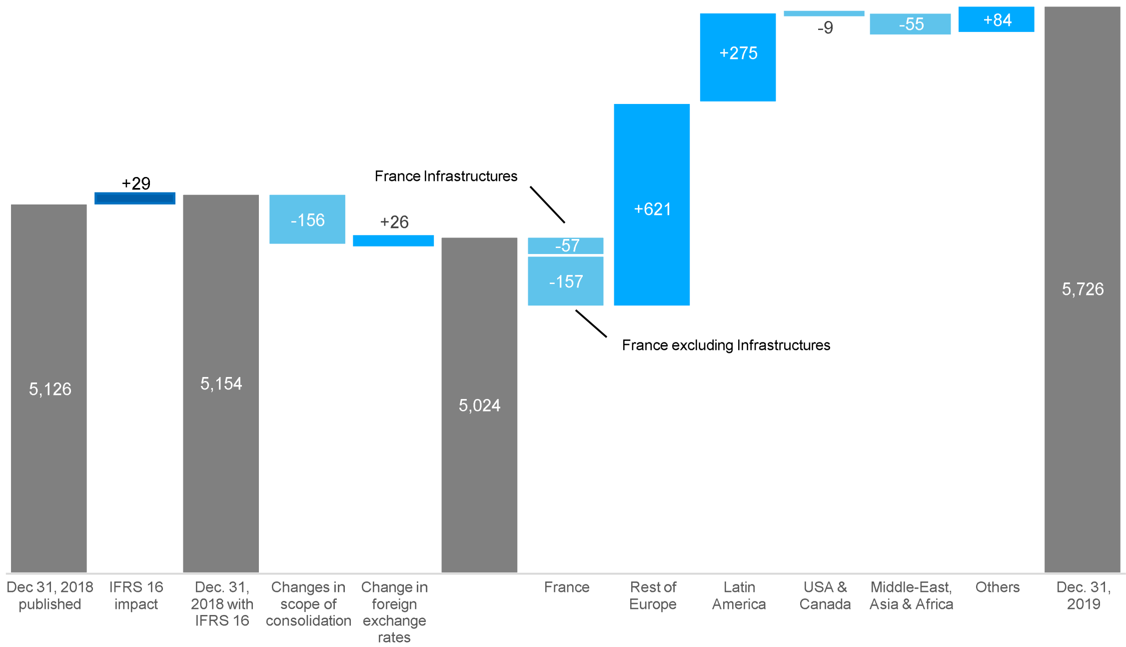
Geography/Business Line matrix

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec 31, 2019
France	959	3,537	421	-	-	294	-	**5,211**
Rest of Europe	577	137	145	442	192	256	-	**1,750**
Latin America	35	339	1,035	750	-	62	-	**2,221**
USA & Canada	64	1	70	32	-	63	61	**291**
Middle East, Asia & Africa	44	17	97	563	-	6	-	**727**
Others	156	(8)	(43)	(23)	-	(42)	125	**166**
TOTAL EBITDA	**1,835**	**4,024**	**1,725**	**1,765**	**192**	**639**	**186**	**10,366**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec. 31, 2018 with IFRS 16
France	920	3,554	503	-	-	352	-	**5,329**
Rest of Europe	552	151	125	515	(555)	294	-	**1,081**
Latin America	11	280	901	554	-	43	-	**1,789**
USA & Canada	70	1	5	64	-	37	74	**252**
Middle East, Asia & Africa	40	57	82	898	-	57	-	**1,133**
Others	137	(7)	(27)	9	-	-	6	**119**
TOTAL EBITDA	**1,730**	**4,035**	**1,589**	**2,040**	**(555)**	**783**	**81**	**9,702**

CURRENT OPERATING INCOME (COI) TRENDS

In millions of euros



Geography/Business Line matrix

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec 31, 2019
France	574	1,957	181	-	-	149	-	**2,861**
Rest of Europe	345	82	88	293	(314)	190	-	**684**
Latin America	-	280	849	504	-	61	-	**1,694**
USA & Canada	13	1	45	26	-	25	49	**159**
Middle East, Asia & Africa	25	15	72	460	-	(13)	-	**559**
Others	132	(8)	(45)	(23)	-	(65)	(222)	**(231)**
TOTAL COI	**1,090**	**2,327**	**1,190**	**1,260**	**(314)**	**345**	**(172)**	**5,726**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec. 31, 2018 with IFRS 16
France	552	2,018	259	-	-	227	-	**3,057**
Rest of Europe	341	108	70	342	(1,051)	235	-	**46**
Latin America	(1)	227	749	342	-	42	-	**1,359**
USA & Canada	24	1	(5)	59	-	13	60	**153**
Middle East, Asia & Africa	32	54	63	708	-	40	-	**896**
Others	44	(7)	(28)	9	-	(19)	(356)	**(357)**
TOTAL COI	**993**	**2,402**	**1,109**	**1,460**	**(1,051)**	**538**	**(296)**	**5,154**

2.1 France

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	21,423	20,448	+4.8%	+3.2%
Total revenues (incl. intra-group transactions)	22,736	21,760	+4.5%	
EBITDA	5,211	5,329	-2.2%	-2.4%
Net depreciation and amortization/Other	(2,351)	(2,272)		
CURRENT OPERATING INCOME (COI)	2,861	3,057	-6.4%	-7.0%

2.1.1. France excluding Infrastructures

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	15,854	14,998	+5.7%	+4.4%
EBITDA	1,672	1,775	-5.8%	-6.5%
Net depreciation and amortization/Other	(769)	(736)		
CURRENT OPERATING INCOME (COI)	903	1,039	-13.1%	-15.2%

Volumes sold

In TWh	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)
Gas sales	83.2	88.3	-5.8%
Electricity sales	38.8	39.0	-0.5%

France climatic adjustment

In TWh	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	Total change in TWh
Climate adjustment volumes (negative figure = warm climate, positive figure = cold climate)	(3.6)	(2.9)	(0.7)

Revenues in the France excluding Infrastructures segment amounted to €15,854 million, up 5.7% on a reported basis and 4.4% on an organic basis. Organic growth can be explained by higher revenues in the BtoC power segment and BtoB services businesses. Acquisitions in BtoB services also contributed significantly to growth on a reported basis (in particular Powerlines, Pierre Guerin, Endel SRA and Sodelem).

Gas sales volumes in the BtoC segment decreased by 5.1 TWh compared to 2018, of which 0.7 TWh related to a negative temperature effect, mainly as a result of the end of regulated gas tariffs. The BtoC power portfolio recorded a significant increase of 1.6 TWh, whereas volumes produced by power generation and France Networks dropped by 1.8 TWh.

Current operating income was €903 million, down 13.1% on a reported basis and 15.2% on an organic basis. This drop was mainly due to lower DBSO (Develop, Build, Share & Operate) margins in 2019, and higher operating expenses (OPEX) in the BtoC segment to support the development of gas and power market offers. 2019 results were also affected by the impact of lower hydroelectric power generation. These underperformances were partly offset by higher prices for hydro power, higher wind and solar production, and a good organic performance in BtoB activities thanks to new contracts and increased profitability.

2.1.2. France Infrastructures

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	5,569	5,450	+2.2%	+0.1%
Total revenues (incl. intra-group transactions)	6,548	6,575	-0.4%	
EBITDA	3,539	3,554	-0.4%	-0.4%
Net depreciation and amortization/Other	(1,582)	(1,536)		
CURRENT OPERATING INCOME (COI)	1,957	2,018	-3.0%	-2.8%

Revenues in the France Infrastructures segment amounted to €5,569 million, €119 million above 2018. The increase was driven by terminalling activities, which benefited from the outsourcing of LNG activities as well as tariff increases in distribution activities, and by transmission activities, although growth was limited by tariff smoothing and lower subscribed capacity. These favorable impacts were partly offset by a decrease in storage activities with a reduction in buy/sale operations in France following the introduction of new regulations in 2018, offset by international activities.

Current operating income for the period was €1,957 million, down 2.8% on an organic basis. In transmission activities, this decrease was due to negative price effects in France – mainly tariff smoothing – and Germany. To a lesser extent, storage activities were impacted by customer penalties in France due to a temporarily deteriorated operating performance as well as to negative price effects in Germany, while terminalling activities were impacted by tariff changes. Growth in distribution activities partly offset these effects, with tariff hikes more than offsetting mild climate and other changes in OPEX.

2.2 Rest of Europe

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	17,270	16,946	+1.9%	+2.4%
EBITDA	1,750	1,081	+61.9%	+59.4%
Net depreciation and amortization/Other	(1,066)	(1,036)		
CURRENT OPERATING INCOME (COI)	684	46		

Revenues in the Rest of Europe segment amounted to €17,270 million, up 2.4% on an organic basis. This growth was driven by Supply and Client Solutions activities, whereas Thermal revenues decreased.

Supply activities benefited from positive price effects in Belgium, the Netherlands and Romania, partly offset by Supply activities in the United Kingdom and Germany due to the divestments in the German Retail BtoB portfolio in 2018.

The increase in Client Solutions mainly arose from Belgium’s installation and energy efficiency segments, Central Europe which benefited from positive scope effects in Germany as a result notably of the acquisition of OTTO (January 2019), and organic growth in Spain mainly in installation activities.

Current operating income amounted to €684 million. The reported growth of €639 million was mainly driven by Nuclear activities and a slight increase in Renewables. Client Solutions remained stable compared to last year, while Supply, Networks and Thermal activities were down.

Nuclear activities benefited from higher availability rates in Belgium (2018 had been impacted by a high number of days of unplanned outages) and better achieved prices. Renewable activities benefited from good performances in wind onshore activities in Benelux.

Client Solutions reported a lower contribution from asset-light activities as a result of a significant drop notably in the United Kingdom and Benelux due to contract renegotiations and legacy loss-making contracts, but achieved a better performance in asset-based activities mainly in the Generation Europe BU through its cogeneration units as well as in the North, South and Eastern Europe BU in Italy and Germany.

The decrease in Thermal activities mainly arose from higher positive one-offs in 2018, lower coal spreads partially offset by better gas spreads, and capacity market reinstatement in the United Kingdom. Supply activities decreased in Benelux and the United Kingdom, and Networks activities decreased in Germany.

2.3 Latin America

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	5,341	4,639	+15.1%	+10.9%
EBITDA	2,221	1,789	+24.2%	+19.1%
Net depreciation and amortization/Other	(527)	(430)		
CURRENT OPERATING INCOME (COI)	1,694	1,359	+24.6%	+20.2%

Revenues in the Latin America segment totaled €5,341 million, up 15.1% on a reported basis and 10.9% organically. Reported growth comprises the positive effect of a Client Solutions entity acquired at the end of last year (CAM), partially offset by a negative net foreign exchange effect, with the depreciation of the Brazilian real (-2.4%) and Argentinian peso (-36.0%) being partially offset by the appreciation of the US dollar (+5.5%), Mexican peso (+5.3%) and Peruvian sol (+3.9%). In Chile, business was positively impacted by the ramp-up of new Power Purchase Agreements with distribution companies. In Brazil, organic growth was mainly driven by the commissioning of wind and solar farms and a new thermal unit, and the effect of inflation on PPA contracts.

Current operating income totaled €1,694 million, up 24.6% on a reported basis and 20.2% on an organic basis. Reported growth benefited from the positive impact of the acquisition in June 2019 of a gas transportation entity in Brazil (TAG). The organic growth was due to the favorable impact of liquidated damages received in Chile and Brazil in 2019, and the positive organic effects mentioned above for revenues. These impacts were partially offset by a positive one-off recorded in 2018 in Mexico.

2.4 USA & Canada

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	4,545	3,355	+35.5%	+10.1%
EBITDA	291	252	+15.6%	+4.5%
Net depreciation and amortization/Other	(132)	(99)		
CURRENT OPERATING INCOME (COI)	159	153	+3.9%	-5.5%

Revenues in the USA & Canada segment came in at €4,545 million, up 35.5% on a reported basis. In addition to positive foreign exchange effects, revenues benefited from scope-in effects relating to recent acquisitions in Client Solutions and Retail BtoB (Plymouth Rock) in the United States. The 10.1% organic growth was mainly the result of positive price effects on BtoB power sales in the United States with no effect at current operating income level.

Current operating income totaled €159 million, down 5.5% on an organic basis compared to 2018. The main reasons for the decrease were a lower operational performance in Client Solutions due to loss-making contracts, set-up costs for ENGIE Impact and lower capacity prices in Thermal activities. These effects were partly offset by the progressive ramp-up of Renewables activities in the United States, including the DBSO sell down of a wind project (Live Oak) and contributions from two wind projects commissioned in 2019.

2.5 Middle East, Asia & Africa

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	2,914	4,014	-27.4%	-6.7%
EBITDA	727	1,133	-35.9%	-12.5%
Net depreciation and amortization/Other	(168)	(237)		
CURRENT OPERATING INCOME (COI)	559	896	-37.6%	-9.1%

Revenues for the Middle East, Africa & Asia segment totaled €2,914 million, down 27.4% on a reported basis and 6.7% organically. The reported decrease was mainly due to the disposal of Glow (Thailand) in March 2019, a weakened performance in Supply (mainly Simply Energy in Australia), as well as lower revenues in Client Solutions in Africa and Australia. The decrease was partly offset by acquisitions in the Middle East (Cofely Besix) and Asia (RCS Engineering), and positive foreign exchange effects.

Electricity sales decreased by 27 TWh to 16.8 TWh, with reduced volumes mostly due to the sale of Glow and Loy Yang B.

Current operating income totaled €559 million, down 37.6% on a reported basis and 9.1% organically. The gross reported decrease was due to the negative impact of the disposal of Glow and Loy Yang B, partly offset by positive foreign exchange effects. The organic decrease notably reflects difficulties (i) in Supply in Australia and Africa, (ii) in Networks partly related to a positive provision reversal in Turkey in 2018, and to a lesser extent (iii) in Services activities. The decrease was partly offset by the positive contribution of Thermal Generation and the positive impact of Renewables activities, including liquidated damages for the Willogoleche wind farm in Australia.

2.6 Others

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)	% change (organic basis)
Revenues	8,565	7,565	+13.2%	+7.5%
EBITDA	166	119	+39.7%	-9.9%
Net depreciation and amortization/Other	(397)	(476)		
CURRENT OPERATING INCOME/(LOSS) (COI)	(231)	(357)	+35.4%	+23.5%

The Others reportable segment includes (i) GEM, (ii) Tractebel, (iii) GTT, (iv) Hydrogen, as well as (v) the Group's holding and corporate activities which include the entities centralizing the Group's financing requirements, *Entreprises & Collectivités (E&C)* and the contribution of SUEZ (associate).

Revenues for the Others reportable segment amounted to €8,565 million. The 13.2% reported growth compared to 2018 represented €1,000 million, mainly driven by GEM due to a favorable market context and E&C mainly due to an increase in power volumes and average prices (up €910 million gross for both GEM & E&C).

Current operating loss amounted to €231 million euros, representing a €126 million improvement compared to 2018. This improvement was mainly due to a strong performance by GEM in market activities, the partial transfer of a gas supply contract, gas contract renegotiations and the Certinergy acquisition in February 2019, partially offset by a sluggish performance by storage activities in bearish markets. Current operating income/(loss) also benefited from positive one-offs at SUEZ and in connection with the Link 2018 employee shareholding plan. These favorable impacts were partly offset by a decline in margins for Tractebel Engineering.

3 OTHER INCOME STATEMENT ITEMS

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 with IFRS 16	% change (reported basis)
CURRENT OPERATING INCOME (COI)	**5,726**	**5,154**	**+11.1%**
(+) Mark-to-Market on commodity contracts other than trading instruments	(426)	(223)	
Current operating income including operating MtM and share in net income of equity method entities	**5,300**	**4,932**	**+7.5%**
Impairment losses	(1,770)	(1,798)	
Restructuring costs	(218)	(162)	
Changes in scope of consolidation	1,604	(150)	
Other non-recurring items	(1,240)	(147)	
Income/(loss) from operating activities	**3,676**	**2,674**	**+37.5%**
Net financial income/(loss)	(1,387)	(1,414)	
Income tax benefit/(expense)	(640)	(702)	
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS	**1,649**	**558**	
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS	**-**	**1,067**	
NET INCOME/(LOSS)	**1,649**	**1,624**	**+1.5%**
Net income/(loss) Group share	**984**	**1,029**	
Of which Net income/(loss) relating to continued operations, Group share	*984*	*(14)*	
Of which Net income/(loss) relating to discontinued operations, Group share	*-*	*1,043*	
Non-controlling interests	**664**	**595**	
Of which Non-controlling interests relating to continued operations	*664*	*572*	
Of which Non-controlling interests relating to discontinued operations	*-*	*24*	

Income from operating activities amounted to €3,676 million in 2019, representing an increase compared with 2018, mainly due to (i) gains on asset disposals (principally relating to the disposal of ENGIE's interest in Glow), (ii) the improvement in current operating income, (iii) partly offset by the recognition of additional costs related to the triennial review of nuclear provisions in Belgium.

Income from operating activities was also affected by:

- net impairment losses of €1,770 million in 2019 compared with €1,798 million in 2018, mainly relating to Belgian nuclear power assets (including €638 million on dismantling assets for nuclear facilities whose operating life may not be extended, recognized against the provision, as part of the triennial review of nuclear provisions) and thermal power generation assets in Latin America and the Middle East (*see Note 9.1*);
- restructuring costs of €218 million (compared with €162 million in 2018) (*see Note 9.2*);
- positive scope effects of €1,604 million, mainly relating to the disposal of ENGIE's interest in Glow;
- other non-recurring items for a negative €1,240 million, mainly including the €1,166 million net expense related to additions to provisions for the back-end of the nuclear fuel cycle as part of the triennial review of nuclear provisions in Belgium.

The **net financial loss** amounted to €1,387 million in 2019, compared with €1,414 million the previous year (*see Note 10*).

The **income tax expense** for 2019 amounted to €640 million (versus €702 million in 2018). It includes an income tax benefit of €471 million arising on non-recurring taxable items (versus €147 million in 2018), mainly comprising mark-to-market losses recognized by ENGIE SA. The effective tax rate decreased significantly in 2019 (35.8% versus 78.1% in 2018), mainly due to the non-taxation of proceeds from the Glow disposal. Adjusted for these non-recurring items, the effective recurring tax rate was 28.2%, up on the 2018 rate of 23.7% mainly due to the impact of more positive one-off effects in 2018 than in 2019.

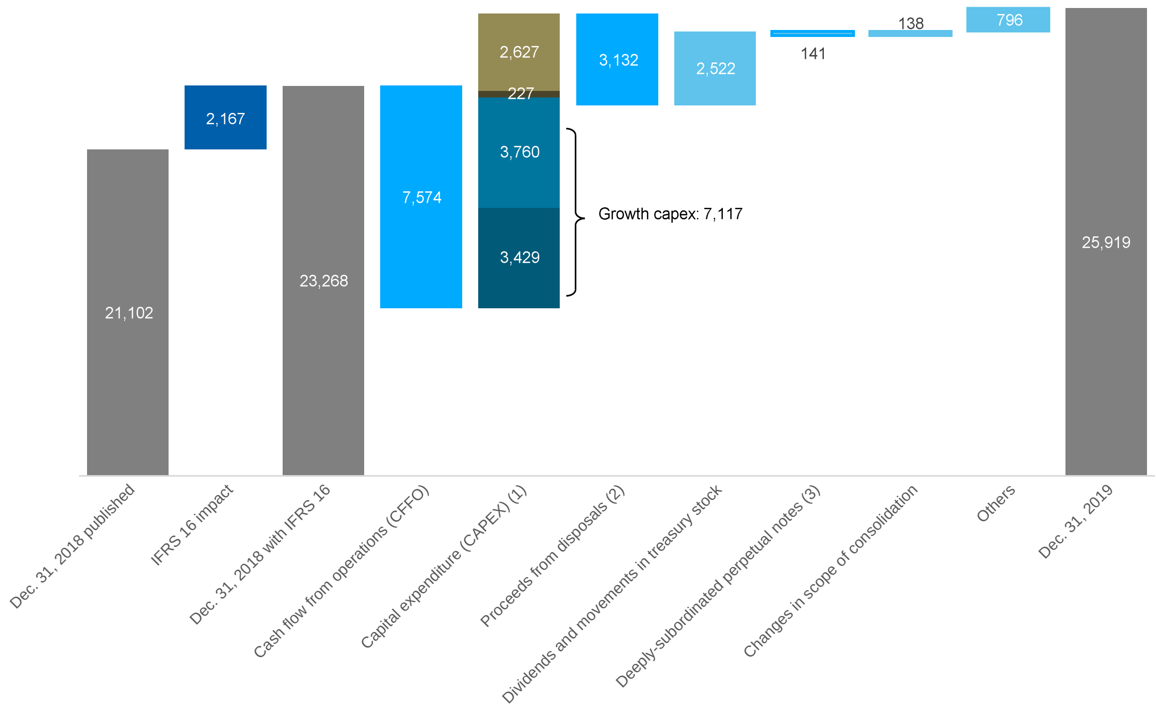
Net income relating to continued operations attributable to non-controlling interests amounted to €664 million, compared with €595 million in 2018. The increase was mainly due to lower impairment losses compared to the previous year on coal assets in Germany, partly offset by the deconsolidation of ENGIE's interest in Glow as from March 14, 2019 following its disposal.

4 CHANGES IN NET FINANCIAL DEBT

Net financial debt stood at €25.9 billion, up 2.7 billion compared to December 31, 2018. This increase is mainly attributable to (i) capital expenditure over the period (€10.0 billion[1], including €1.5 billion in expenditure for the TAG transaction in Brazil), (ii) dividends paid to ENGIE SA shareholders (€1.8 billion) and to non-controlling interests (€0.7 billion) and (iii) other items (€0.6 billion) mainly related to foreign exchange rates, new leased right-of-use assets and mark-to-market variations. These items were partly offset by (i) cash flow from operations (€7.6 billion) and (ii) the impacts of the portfolio rotation program (€3.0 billion, mainly related to the completion of the disposal of the stake in Glow).

Changes in net financial debt break down as follows:

In millions of euros



(1) Capital expenditure net of DBSO proceeds.
(2) Excluding DBSO proceeds.
(3) See Note 18.2.1 "Issuance of deeply-subordinated perpetual notes".

(1) Net of DBSO proceeds.

The net financial debt to EBITDA ratio came out at 2.50 at December 31, 2019.

In millions of euros	Dec. 31, 2019	Jan. 1, 2019 with IFRS 16
Net financial debt	25,919	23,268
EBITDA	10,366	9,702
NET DEBT/EBITDA RATIO	**2.50**	**2.40**

The economic net debt to EBITDA ratio stood at 3.96 at December 31, 2019.

In millions of euros	Dec. 31, 2019	Jan. 1, 2019 with IFRS 16
Economic net debt	41,078	35,669
EBITDA	10,366	9,702
ECONOMIC NET DEBT/EBITDA RATIO	**3.96**	**3.68**

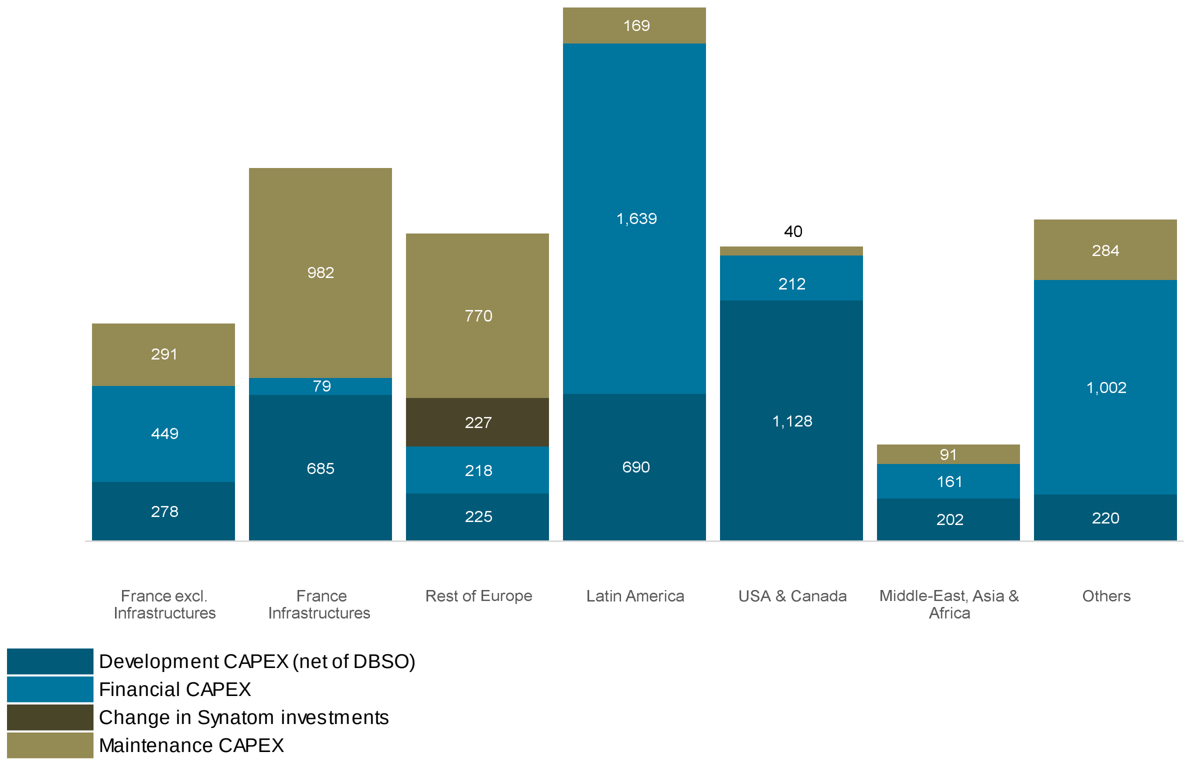
4.1 Cash flow from operations (CFFO)

Cash flow from operations (CFFO) amounted to €7.6 billion, down €0.2 billion. The decrease stemmed predominantly from working capital requirement variations (€1.2 billion negative impact) caused by margin calls on derivatives and mark-to-market variation of financial derivatives, partly offset by the increase of operating cash flow (€0.9 billion) and lower tax and interests paid (€0.2 billion).

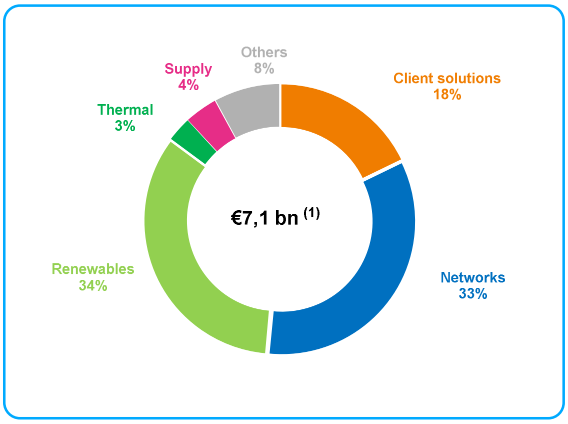
4.2 Net investments

Capital expenditure (CAPEX) amounted to €10,042 million, breaking down as follows by segment:

In millions of euros



Growth capital expenditure amounted to €7,117 million, breaking down as follows by Business Line:



Main projects (€bn)

Client Solutions	~	**1.3**
France - Powerlines & Pierre Guerin acquisition	~	**0.3**
North America - CONTI acquisition	~	**0.2**
NECST – OTTO Luft-und Klimatechnik GmbH & Co acquisition	~	**0.2**
North America - Genbright & Systecon acquisition	~	**0.1**
GEM & E&C – Certinergy acquisition	~	**0.1**
Networks	~	**2.4**
TAG acquisition	~	**1.5**
GRDF (Gazpar & Networks development)	~	**0.5**
Renewables	~	**2.4**
North America - Wind Onshore development	~	**0.8**
France Renewables, incl. Vol-V acquisition	~	**0.4**
Brazil – Umburanas, Campo Largo & Jirau	~	**0.3**
North America - Solar development	~	**0.2**
Latin America - Mexican Solar	~	**0.2**
MESCAT, incl. Kadapa	~	**0.2**

(1) Net of disposals under DBSO operations, excluding Corporate, and Synatom reallocated to maintenance expenditure.

The **geography/Business Line matrix** for capital expenditures is presented hereunder:

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec. 31, 2019
France	423	1,709	481	-	-	151	-	2,764
Rest of Europe	416	77	42	174	636	95	-	1,440
Latin America	47	1,651	541	254	-	6	-	2,499
USA & Canada	330	1	968	8	-	73	-	1,380
Middle East, Asia & Africa	80	9	271	-	-	93	-	453
Others	325	-	186	81	-	38	876	1,506
TOTAL CAPEX	**1,621**	**3,446**	**2,488**	**517**	**636**	**457**	**876**	**10,042**

In millions of euros	Client Solutions	Networks	Renewables	Thermal	Nuclear	Supply	Others	TOTAL at Dec. 31, 2018
France	469	1,617	237	-	-	148	-	2,471
Rest of Europe	357	58	18	143	750	104	-	1,430
Latin America	145	129	1,024	456	-	4	-	1,758
USA & Canada	350	-	461	1	-	100	5	918
Middle East, Asia & Africa	84	10	239	214	-	69	-	616
Others	131	-	6	-	-	28	284	449
TOTAL CAPEX	**1,537**	**1,814**	**1,986**	**813**	**750**	**454**	**289**	**7,643**

Net investments amounted to €7,586 million and include:

- growth capital expenditure for €7,117 million. This mainly stemmed from (i) the acquisition in Infrastructures, in consortium with the Caisse de Dépôt et Placement du Québec (CDPQ), of a 90% stake in Transportadora Associada de Gás S.A. (TAG) in Brazil (€1,557 million, including acquisition costs), of the energy services company Conti in North America (€178 million), and in Client Solutions of the OTTO Luft-und Klimatechnik GmbH & Co facilities and services company in Germany (€149 million), (ii) the development in Infrastructures of blending and development projects in the natural gas distribution and transportation network in France (€685 million), (iii) investments in Renewables relating to the development of wind and photovoltaic farms in the United States (approximately €1 billion), Mexico (€345 million), Brazil (€307 million) and India (€139 million), and (iv) the financing of the Nord Stream 2 pipeline project (€433 million);
- gross maintenance capital expenditure amounting to €2,627 million;
- the €227 million increase in Synatom investments;
- new leased right-of-use assets recognized over the period (€539 million);

- changes in the scope of consolidation for the period relating to acquisitions and disposals of subsidiaries for €138 million; and
- proceeds from disposals representing an inflow of €3,132 million, mainly relating to the disposal of ENGIE's interest in Glow in Thailand.

4.3 Dividends and movements in treasury stock

Dividends and movements in treasury stock during the period amounted to €2,522 million and included:

- €1,833 million in dividends paid by ENGIE SA to its shareholders, which corresponds to the balance of the 2018 dividend (€0.75 per share for shares with rights to an ordinary and exceptional dividend and €0.86 per share for shares with rights to a dividend mark-up) paid in May 2019;
- dividends paid by various subsidiaries to their non-controlling interests in an amount of €538 million, the payment of interest on hybrid debt for €150 million and movements in treasury stock.

4.4 Net financial debt at December 31, 2019

Excluding amortized cost but including the impact of foreign currency derivatives, at December 31, 2019 a total of 74% of net financial debt was denominated in euros, 15% in US dollars and 10% in Brazilian real.

Including the impact of financial instruments, 79% of net financial debt is at fixed rates.

The average maturity of the Group's net financial debt is 11.2 years.

At December 31, 2019, the Group had total undrawn confirmed credit lines of €13.0 billion.

5 OTHER ITEMS IN THE STATEMENT OF FINANCIAL POSITION

In millions of euros	Dec. 31, 2019	Jan. 1, 2019 with IFRS 16 & IFRIC 23	Net change
Non-current assets	**99,297**	**93,818**	**5,479**
Of which goodwill	*18,665*	*17,809*	*856*
Of which property, plant and equipment and intangible assets, net	*58,996*	*57,776*	*1,220*
Of which investments in equity method entities	*9,216*	*7,846*	*1,370*
Current assets	**60,496**	**61,994**	**(1,498)**
Of which assets classified as held for sale	*468*	*3,809*	*(3,340)*
Total equity	**38,037**	**40,930**	**(2,893)**
Provisions	25,115	21,512	3,603
Borrowings	38,544	34,345	4,199
Other liabilities	58,097	59,024	(928)
Of which liabilities directly associated with assets classified as held for sale	*92*	*2,141*	*(2,049)*

The carrying amount of **property, plant and equipment and intangible assets** was €59.0 billion, up €1.2 billion compared with December 31, 2018. The increase was primarily the result of acquisitions and development capital expenditure during the period (€7.4 billion positive impact), translation adjustments (€0.1 billion positive impact), partly offset by depreciation and amortization charges (€4.3 billion negative impact), impairment losses (€1.7 billion negative impact), changes in the scope of consolidation (€0.8 billion negative impact), the classification of renewable energy assets in Mexico and green gas production assets in operation in France as “Assets classified as held for sale” (€0.4 billion negative impact), and disposals (€0.2 billion negative impact).

Goodwill increased by €0.9 billion to €18.7 billion, mainly due to acquisitions made by the following BUs: France BtoB, France Renewables, Northern, Southern and Eastern Europe, and Latin America, partly offset by the recognition of impairment losses on the disposal of the coal-fired power plants in Germany and the Netherlands (*see Note 4.1.2*).

Total equity amounted to €38.0 billion, a decrease of €2.9 billion compared with December 31, 2018. The decrease stemmed mainly from the payment of the cash dividend (€2.3 billion negative impact, including €1.8 billion of dividends paid by ENGIE SA to its shareholders and €0.5 billion paid to non-controlling interests), other items of comprehensive income (€1.8 billion negative impact), and the effect of the deconsolidation of Glow following its disposal (€0.5 billion negative impact), partly offset by net income for the period (€1.6 billion positive impact).

Provisions increased by €3.6 billion to €25.1 billion compared with December 31, 2018. This increase stemmed mainly from the impacts of the triennial review of nuclear provisions in Belgium (which added €2.1 billion to the total amount) (*see Note 19*), actuarial losses on provisions for post-employment benefits and other long-term benefits (which added €1.1 billion to the total amount) owing to the fall in discount rates over the period (*see Note 20*).

At December 31, 2019, assets and liabilities classified under **“Assets classified as held for sale” and “Liabilities directly associated with assets classified as held for sale”** comprised renewable energy assets in Mexico and green gas production assets in operation in France.

6 ADJUSTMENT OF COMPARATIVE INFORMATION

The aforementioned 2018 figures have been adjusted in respect of:

- the application of the IFRIC position on commodity derivative accounting, leading the Group to review the presentation of some items of the income statement (with no impact on net income, equity or the current operating income indicator used in the management dialogue and financial communication) (*see restatements presented in Note 1 to the consolidated financial statements*);
- the transition method used for the application of IFRS 16 – *Leases* (see hereunder);

in order to make them comparable to the 2019 figures.

The adjustments relating to the application of IFRS 16 on the income statement and certain Group key indicators are as follows:

In millions of euros	Dec. 31, 2018 new presentation (1)	IFRS 16	Dec. 31, 2018 new presentation with IFRS 16
Income statement			
REVENUES	**56,967**	**-**	**56,967**
Purchases and operating derivatives	(38,660)	466	(38,194)
Personnel costs	(10,624)	-	(10,624)
Depreciation, amortization and provisions	(3,586)	(438)	(4,024)
Taxes	(1,069)	1	(1,068)
Other operating income	1,514	-	1,514
Current operating income including operating MtM	**4,542**	**29**	**4,571**
Share in net income of equity method entities	361	-	360
Current operating income including operating MtM and share in net income of equity method entities	**4,903**	**29**	**4,932**
Impairment losses	(1,798)	-	(1,798)
Restructuring costs	(162)	-	(162)
Changes in scope of consolidation	(150)	-	(150)
Other non-recurring items	(147)	-	(147)
INCOME/(LOSS) FROM OPERATING ACTIVITIES	**2,645**	**29**	**2,674**
NET FINANCIAL INCOME/(LOSS)	**(1,381)**	**(33)**	**(1,414)**
Income tax expense	(704)	2	(702)
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS	**560**	**(2)**	**558**
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS	**1,069**	**(2)**	**1,067**
NET INCOME/(LOSS)	1,629	(4)	1,624
Net income/(loss) Group share	**1,033**	**(4)**	**1,029**
of which Net income/(loss) relating to continued operations, Group share	*(12)*	*(2)*	*(14)*
of which Net income/(loss) relating to discontinued operations, Group share	*1,045*	*(2)*	*1,043*
Non-controlling interests	**595**	**-**	**595**
of which Non-controlling interests relating to continued operations	*572*	-	*572*
of which Non-controlling interests relating to discontinued operations	*24*	-	*24*
BASIC EARNINGS/(LOSS) PER SHARE (EUROS)	**0.37**	**(0.00)**	**0.37**
of which Basic earnings/(loss) relating to continued operations per share	*(0.07)*	*(0.00)*	*(0.07)*
of which Basic earnings/(loss) relating to discontinued operations per share	*0.44*	*(0.00)*	*0.44*
DILUTED EARNINGS/(LOSS) PER SHARE (EUROS)	**0.37**	**(0.00)**	**0.37**
of which Diluted earnings/(loss) relating to continued operations per share	*(0.07)*	*(0.00)*	*(0.07)*
of which Diluted earnings/(loss) relating to discontinued operations per share	*0.43*	*(0.00)*	*0.43*
EBITDA	**9,236**	**467**	**9,702**
CURRENT OPERATING INCOME (COI)	**5,126**	**29**	**5,154**
NET RECURRING INCOME	**3,238**	**(4)**	**3,234**
NET RECURRING INCOME GROUP SHARE	**2,425**	**(4)**	**2,421**
NET RECURRING INCOME RELATING TO CONTINUED OPERATIONS, GROUP SHARE	**2,458**	**(2)**	**2,455**

(1) *Comparative data at December 31, 2018 have been reclassified in accordance with the new income statement presentation adopted by the Group consequent to the application of the IFRIC position on commodity derivatives.*

In millions of euros	Dec. 31, 2018 published	IFRS 16	Dec. 31, 2018 with IFRS 16
Cash flows			
CASH FLOW FROM OPERATIONS (CFFO)	7,300	437	7,736

In millions of euros	Dec. 31, 2018 published	IFRS 16 & IFRIC 23	Jan. 1, 2019 with IFRS 16 & IFRIC 23
Statement of financial position			
NET DEBT	21,102	2,167	23,268
ECONOMIC NET DEBT	35,590	79	35,669
INDUSTRIAL CAPITAL EMPLOYED	51,412	2,156	53,568

The application of IFRS 16 and its impact on the statement of financial position at January 1, 2019 is presented in Note 1 “Accounting framework and basis for preparing the consolidated financial statements”.

7 PARENT COMPANY FINANCIAL STATEMENTS

The figures provided below relate to the financial statements of ENGIE SA, prepared in accordance with French GAAP and applicable regulations.

Revenues for ENGIE SA in 2019 totaled €17,282 million, a decrease compared to 2018 (€27,833 million), mainly due to lower gas sales to other gas operators.

The net operating loss was €931 million at December 31, 2019, an improvement of €127 million compared with a loss of €1,058 million in 2018. Energy margin increased by €143 million, thanks to lower supply costs and continued growth in the electricity business.

Net financial income amounted to €1,192 million, €2,525 million less than in 2018 when dividend payments and income from receivables were €2,449 million higher.

Non-recurring items represented a loss of €835 million, mainly comprising impairment of equity investments.

The income tax benefit amounted to €377 million compared to a benefit of €549 million in 2018, including a tax consolidation benefit of €294 million.

The net loss for the year came out at €196 million.

Shareholders' equity amounted to €34,594 million at end-2019 compared with €36,616 million at end-2018. The €2,022 million decrease was mainly due to the 2019 net loss of €196 million and to the dividend payment of €1,833 million.

At December 31, 2019, borrowings and debt stood at €39,234 million, and cash and cash equivalents totaled €9,891 million (of which €7,753 relating to subsidiaries' current accounts).

Information relating to payment terms

Pursuant to the application of Article D.441-4 of the French Commercial Code, companies whose annual financial statements are subject to a statutory audit must publish information regarding supplier and customer payment terms. The purpose is to demonstrate that there is no significant failure to comply with such terms.

Information relating to supplier and customer payment terms mentioned in Article D.441-4 of the French Commercial Code

	Article D. 441 I.- 1°: Invoices received, unpaid and overdue at the reporting date						Article D. 441 I.- 2°: Invoices issued, unpaid and overdue at the reporting date					
In millions of euros	0 days (indicative)	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day or more)	0 days (indicative)	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day or more)
(A) By aging category												
Number of invoices	-					34,346	-					5,532,869
Aggregate invoice amount (incl. VAT)	-	132.8	11.4	0.6	86.8	231.5	-	109.9	80.7	42.3	533.8	766.8
Percentage of total amount of purchases (incl. VAT) for the period	-	0.67%	0.06%	0.00%	0.43%	1.16%						
Percentage of total revenues (incl. VAT) for the period							-	0.54%	0.40%	0.21%	2.62%	3.76%
(B) Invoices excluded from (A) relating to disputed or unrecognized receivables and payables												
Number of excluded invoices	325						1,203					
Aggregate amount of excluded invoices	6.7						57.1					
(C) Standard payment terms used (contractual or legal terms - Article L. 441-6 or Article L. 443-1 of the French Commercial Code)												
Payment terms used to calculate late payments	Legal payment terms: 30 days						Contractual payment terms: 14 days Legal payment terms: 30 days					

02 CONSOLIDATED FINANCIAL STATEMENTS

INCOME STATEMENT

In millions of euros	Notes	Dec. 31, 2019 (1)	Dec. 31, 2018 (1, 2)
REVENUES	**6.2 & 7**	**60,058**	**56,967**
Purchases and operating derivatives	8.1	(39,950)	(38,660)
Personnel costs	8.2	(11,478)	(10,624)
Depreciation, amortization and provisions	8.3	(4,393)	(3,586)
Taxes		(1,108)	(1,069)
Other operating income		1,670	1,514
Current operating income including operating MtM		**4,800**	**4,542**
Share in net income of equity method entities	6.2	500	361
Current operating income including operating MtM and share in net income of equity method entities	**6.2**	**5,300**	**4,903**
Impairment losses	9.1	(1,770)	(1,798)
Restructuring costs	9.2	(218)	(162)
Changes in scope of consolidation	9.3	1,604	(150)
Other non-recurring items	9.4	(1,240)	(147)
INCOME/(LOSS) FROM OPERATING ACTIVITIES	**9**	**3,676**	**2,645**
Financial expenses		(2,300)	(1,981)
Financial income		913	600
NET FINANCIAL INCOME/(LOSS)	**10**	**(1,387)**	**(1,381)**
Income tax benefit/(expense)	11	(640)	(704)
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS		**1,649**	**560**
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS		**-**	**1,069**
NET INCOME/(LOSS)		**1,649**	**1,629**
Net income/(loss) Group share		**984**	**1,033**
Of which Net income/(loss) relating to continued operations, Group share		*984*	*(12)*
Of which Net income/(loss) relating to discontinued operations, Group share		*-*	*1,045*
Non-controlling interests		**664**	**595**
Of which Non-controlling interests relating to continued operations		*664*	*572*
Of which Non-controlling interests relating to discontinued operations		*-*	*24*
BASIC EARNINGS/(LOSS) PER SHARE (EUROS)	**12**	**0.34**	**0.37**
Of which Basic earnings/(loss) relating to continued operations per share		*0.34*	*(0.07)*
Of which Basic earnings/(loss) relating to discontinued operations per share		*-*	*0.44*
DILUTED EARNINGS/(LOSS) PER SHARE (EUROS)	**12**	**0.34**	**0.37**
Of which Diluted earnings/(loss) relating to continued operations per share		*0.34*	*(0.07)*
Of which Diluted earnings/(loss) relating to discontinued operations per share		*-*	*0.43*

(1) Data presented at December 31, 2019 have been prepared in accordance with the new income statement presentation adopted by the Group. Comparative data at December 31, 2018 have been reclassified in accordance with this new presentation (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

STATEMENT OF COMPREHENSIVE INCOME

In millions of euros	Notes	Dec. 31, 2019	Dec 31, 2019 Owners of the parent	Dec 31, 2019 Non-controlling interests	Dec 31, 2018 [(1)]	Dec 31, 2018 Owners of the parent [(1)]	Dec 31, 2018 Non-controlling interests [(1)]
NET INCOME/(LOSS)		1,649	984	664	1,629	1,033	595
Debt instruments	16.1	48	48	-	29	29	-
Net investment hedges	17	29	29	-	7	7	-
Cash flow hedges (excl. commodity instruments)	17	(229)	(232)	3	(175)	(184)	9
Commodity cash flow hedges	17	(744)	(808)	64	(18)	7	(26)
Deferred tax on items above	11	240	261	(21)	48	43	5
Share of equity method entities in recyclable items, net of tax		(250)	(239)	(11)	201	201	-
Translation adjustments		(45)	32	(78)	22	(54)	77
Recyclable items relating to discontinued operations, net of tax		-	-	-	36	39	(3)
TOTAL RECYCLABLE ITEMS		**(953)**	**(910)**	**(43)**	**150**	**88**	**62**
Equity instruments	16.1	103	103	-	42	42	-
Actuarial gains and losses	20	(1,128)	(1,040)	(88)	(245)	(247)	1
Deferred tax on items above	11	255	232	22	58	58	-
Share of equity method entities in actuarial gains and losses, net of tax		(31)	(31)	-	(43)	(45)	2
Non-recyclable items relating to discontinued operations, net of tax		-	-	-	(3)	(1)	(2)
TOTAL NON-RECYCLABLE ITEMS		**(801)**	**(735)**	**(66)**	**(192)**	**(193)**	**2**
TOTAL COMPREHENSIVE INCOME/(LOSS)		(105)	(660)	555	1,586	928	659

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

STATEMENT OF FINANCIAL POSITION

ASSETS

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 (1)
Non-current assets			
Goodwill	13	18,665	17,809
Intangible assets, net	14	7,038	6,718
Property, plant and equipment, net	15	51,958	48,917
Other financial assets	16	7,022	6,193
Derivative instruments	16	4,137	2,693
Assets from contracts with customers	7	15	-
Investments in equity method entities	3	9,216	7,846
Other non-current assets	24	384	474
Deferred tax assets	11	860	1,066
TOTAL NON-CURRENT ASSETS		**99,297**	**91,716**
Current assets			
Other financial assets	16	2,546	2,290
Derivative instruments	16	10,134	10,679
Trade and other receivables, net	7	15,180	15,613
Assets from contracts with customers	7	7,816	7,411
Inventories	24	3,617	4,158
Other current assets	24	10,216	9,337
Cash and cash equivalents	16	10,519	8,700
Assets classified as held for sale	4.2	468	3,798
TOTAL CURRENT ASSETS		**60,496**	**61,986**
TOTAL ASSETS		**159,793**	**153,702**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 and IFRIC 23 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

LIABILITIES

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 (1)
Shareholders' equity		33,087	35,551
Non-controlling interests	2	4,950	5,391
TOTAL EQUITY	**18**	**38,037**	**40,941**
Non-current liabilities			
Provisions	19	22,817	19,194
Long-term borrowings	16	30,002	26,434
Derivative instruments	16	5,129	2,785
Other financial liabilities	16	38	46
Liabilities from contracts with customers	7	45	36
Other non-current liabilities	24	1,222	960
Deferred tax liabilities	11	4,631	5,415
TOTAL NON-CURRENT LIABILITIES		**63,882**	**54,869**
Current liabilities			
Provisions	19	2,298	2,620
Short-term borrowings	16	8,543	5,745
Derivative instruments	16	10,446	11,510
Trade and other payables	16	19,109	19,759
Liabilities from contracts with customers	7	4,286	3,598
Other current liabilities	24	13,101	12,529
Liabilities directly associated with assets classified as held for sale	4.2	92	2,130
TOTAL CURRENT LIABILITIES		**57,874**	**57,891**
TOTAL EQUITY AND LIABILITIES		**159,793**	**153,702**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 and IFRIC 23 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

STATEMENT OF CHANGES IN EQUITY

In millions of euros	Number of shares	Share capital	Additional paid-in capital	Consolidated reserves	Deeply-subordinated perpetual notes	Changes in fair value and other	Translation adjustments	Treasury stock	Shareholders' equity	Non-controlling interests	Total
EQUITY AT DECEMBER 31, 2017	**2,435,285,011**	**2,435**	**32,506**	**1,455**	**3,129**	**(915)**	**(1,088)**	**(883)**	**36,639**	**5,938**	**42,577**
IFRS 9 & 15 impact (1)	-	-	-	(122)	-	(270)	36	-	(357)	(99)	(455)
Reclassification of premiums and coupons (2)				(570)	570	-	-	-	-	-	-
EQUITY AT JANUARY 1, 2018 (1) (2)	**2,435,285,011**	**2,435**	**32,506**	**763**	**3,699**	**(1,184)**	**(1,053)**	**(883)**	**36,282**	**5,840**	**42,122**
Net income/(loss)				1,033					1,033	595	1,629
Other comprehensive income/(loss)				(193)		165	(78)		(106)	63	(42)
TOTAL COMPREHENSIVE INCOME/(LOSS)				**840**		**165**	**(78)**		**928**	**659**	**1,586**
Employee share issues and share-based payment		6	60	80					146	1	146
Cancellation of treasury stock		(6)	-	(75)	-	-	-	81	-	-	-
Dividends paid in cash				(1,739)					(1,739)	(882)	(2,621)
Purchase/disposal of treasury stock				(236)				342	105	-	105
Deeply-subordinated perpetual notes (2)				(11)	1,000				989	-	989
Reclassification under debt and redemption of deeply-subordinated perpetual notes (2)				(24)	(949)				(973)	-	(973)
Interests on deeply-subordinated perpetual notes				(123)					(123)	-	(123)
Transactions between owners				(34)					(34)	10	(24)
Transactions with impact on non-controlling interests (3)				-					-	(229)	(229)
Share capital increases and decreases subscribed by non-controlling interests									-	(6)	(6)
Other changes				(29)		-			(30)	(2)	(31)
EQUITY AT DECEMBER 31, 2018 (4)	**2,435,285,011**	**2,435**	**32,565**	**(590)**	**3,750**	**(1,019)**	**(1,130)**	**(460)**	**35,551**	**5,391**	**40,941**

(1) Comparative data at January 1, 2018 have been restated due to the application of IFRS 9 and IFRS 15 (see Note 2 "Restatement of 2017 comparative data" to the 2018 consolidated financial statements).

(2) For clarity's sake, it has been decided to present deeply-subordinated perpetual notes at their nominal value instead of their net value (premiums and coupons deducted). This reclassification has no impact on equity. Transactions for the period are presented in Note 19.2.1"Issuance of deeply-subordinated perpetual notes" to the 2018 consolidated financial statements.

(3) Mainly relating to the deconsolidation of the ENGIE E&P International following its disposal (see Note 5.1.2 "Disposal of the exporation-production business" to the 2018 consolidated financial statements) and the change of consolidation method for Hazelwood (see Note 3.1 "List of main subsidiaries at December 31, 2018" to the 2018 consolidated financial statements).

(4) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements")

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

In millions of euros	Number of shares	Share capital	Additional paid-in capital	Consolidated reserves	Deeply-subordinated perpetual notes	Changes in fair value and other	Translation adjustments	Treasury stock	Shareholders' equity	Non-controlling interests	Total
EQUITY AT DECEMBER 31, 2018 [(1)]	**2,435,285,011**	**2,435**	**32,565**	**(590)**	**3,750**	**(1,019)**	**(1,130)**	**(460)**	**35,551**	**5,391**	**40,941**
IFRS 16 impact (see Note 1)	-	-	-	(7)	-	-	-	-	(7)	(4)	(11)
EQUITY AT JANUARY 1, 2019 with IFRS 16	**2,435,285,011**	**2,435**	**32,565**	**(597)**	**3,750**	**(1,019)**	**(1,130)**	**(460)**	**35,544**	**5,386**	**40,930**
Net income/(loss)				984					984	664	1,649
Other comprehensive income/(loss)				(735)		(942)	32		(1,645)	(109)	(1,754)
TOTAL COMPREHENSIVE INCOME/(LOSS)				**250**	**-**	**(942)**	**32**	**-**	**(660)**	**555**	**(105)**
Employee share issues and share-based payment		-	-	50					50	-	50
Dividends paid in cash [(2)]			(1,096)	(738)					(1,833)	(453)	(2,286)
Purchase/disposal of treasury stock				(157)				157	-	-	-
Deeply-subordinated perpetual notes [(2)]				(172)	163				(9)	-	(9)
Transactions between owners				36					36	4	40
Transactions with impact on non-controlling interests [(3)]				-					-	(515)	(515)
Application of IFRIC 23 rule by Suez				(35)					(35)	-	(35)
Share capital increases and decreases subscribed by non-controlling interests									-	(28)	(28)
Other changes				(6)	-	-			(6)	1	(5)
EQUITY AT DECEMBER 31, 2019	**2,435,285,011**	**2,435**	**31,470**	**(1,369)**	**3,913**	**(1,961)**	**(1,098)**	**(303)**	**33,087**	**4,950**	**38,037**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements*”).*

(2) Transactions of the period are listed in Note 18 “Equity”.

(3) Mainly relates to the deconsolidation of Glow following its disposal (see Note 4.1 “Disposals carried out in 2019”).

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

STATEMENT OF CASH FLOWS

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 (1)
NET INCOME/(LOSS)		**1,649**	**1,629**
- Net income/(loss) relating to discontinued operations		-	1,069
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS		**1,649**	**560**
- Share in net income of equity method entities	**3**	(500)	(361)
+ Dividends received from equity method entities		773	572
- Net depreciation, amortization, impairment and provisions		7,083	5,085
- Impact of changes in scope of consolidation and other non-recurring items		(1,579)	195
- Mark-to-market on commodity contracts other than trading instruments		426	223
- Other items with no cash impact		(18)	105
- Income tax expense	11	640	704
- Net financial income/(loss)	10	1,387	1,381
Cash generated from operations before income tax and working capital requirements		**9,863**	**8,464**
+ Tax paid		(575)	(757)
Change in working capital requirements	**24.1**	**(1,110)**	**149**
CASH FLOW FROM OPERATING ACTIVITIES RELATING TO CONTINUED OPERATIONS		**8,178**	**7,857**
CASH FLOW FROM OPERATING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**-**	**17**
CASH FLOW FROM OPERATING ACTIVITIES		**8,178**	**7,873**
Acquisitions of property, plant and equipment and intangible assets	5.6	(6,524)	(6,202)
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	5.6	(864)	(983)
Acquisitions of investments in equity method entities and joint operations	5.6	(1,746)	(338)
Acquisitions of equity and debt instruments	5.6	(595)	(283)
Disposals of property, plant and equipment, and intangible assets		134	114
Loss of controlling interests in entities, net of cash and cash equivalents sold		2,676	2,865
Disposals of investments in equity method entities and joint operations		14	2
Disposals of equity and debt instruments		148	186
Interest received on financial assets		28	26
Dividends received on equity instruments		67	52
Change in loans and receivables originated by the Group and other	5.6	(532)	(251)
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES RELATING TO CONTINUED OPERATIONS		**(7,193)**	**(4,813)**
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**-**	**(1,282)**
CASH FLOW FROM (USED IN) INVESTING ACTIVITIES		**(7,193)**	**(6,095)**
Dividends paid (2)		(2,522)	(2,659)
Repayment of borrowings and debt		(3,035)	(5,328)
Change in financial assets held for investment and financing purposes		(135)	(289)
Interest paid		(780)	(727)
Interest received on cash and cash equivalents		82	79
Cash flow on derivatives qualifying as net investment hedges and compensation payments on derivatives and on early buyback of borrowings		(114)	(152)
Increase in borrowings		6,622	4,724
Increase/decrease in capital		(1,372)	70
Issue of deeply-subordinated perpetual notes		1,478	989
Purchase and/or sale of treasury stock		-	104
Changes in ownership interests in controlled entities	5.6	(12)	(18)
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES RELATING TO CONTINUED OPERATIONS		**212**	**(3,207)**
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES RELATING TO DISCONTINUED OPERATIONS		**-**	**1,279**
CASH FLOW FROM (USED IN) FINANCING ACTIVITIES		**212**	**(1,928)**
Effects of changes in exchange rates and other relating to continued operations (3)		623	(78)
Effects of changes in exchange rates and other relating to discontinued operations		-	(1)
TOTAL CASH FLOW FOR THE PERIOD		**1,819**	**(229)**
Reclassification of cash and cash equivalents relating to discontinued operations		-	-
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD		**8,700**	**8,929**
CASH AND CASH EQUIVALENTS AT END OF PERIOD		**10,519**	**8,700**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

(2) The line “Dividends paid” includes the coupons paid to owners of the deeply subordinated perpetual notes for an amount of €150 million at December 31, 2019 (€123 million at December 31, 2018).

(3) Of which €619 million of other financial assets deducted from net financial debt reclassified from “Other financial assets” to “Cash and cash equivalents” (see Note 16.1 “Financial assets”), with no impact on net financial debt

NB: The amounts shown in the tables are expressed in millions of euros. In certain cases, rounding may cause non-material discrepancies in the totals.

03 NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

ENGIE SA, the parent company of the Group, is a French s*ociété anonyme* with a Board of Directors that is subject to the provisions of Book II of the French Commercial Code (*Code de Commerce*), as well as to all other provisions of French law applicable to French commercial companies. It was incorporated on November 20, 2004 for a period of 99 years.

It is governed by current and future laws and by regulations applicable to *sociétés anonymes* and its bylaws.

The Group is headquartered at 1 place Samuel de Champlain, 92400 Courbevoie (France).

ENGIE shares are listed on the Paris, Brussels and Luxembourg stock exchanges.

On February 26, 2020, the Group's Board of Directors approved and authorized for issue the consolidated financial statements of the Group for the year ended December 31, 2019.

NOTE 1 ACCOUNTING FRAMEWORK AND BASIS FOR PREPARING THE CONSOLIDATED FINANCIAL STATEMENTS

1.1 Accounting standards

Pursuant to European Regulation (EU) 2019/980 dated March 14, 2019, financial information concerning the assets, liabilities, financial position, and profit and loss of ENGIE has been provided for the last two reporting periods (ended December 31, 2018 and 2019). This information was prepared in accordance with European Regulation (EC) 1606/2002 "on the application of international accounting standards" dated July 19, 2002. The Group's consolidated financial statements for the year ended December 31, 2019 have been prepared in accordance with IFRS Standards as published by the International Accounting Standards Board and endorsed by the European Union [1].

The accounting standards applied in the consolidated financial statements for the year ended December 31, 2019 are consistent with the policies used to prepare the consolidated financial statements for the year ended December 31, 2018, except for those described in § 1.1.1 below.

1.1.1 IFRS Standards, amendments or IFRIC Interpretations applicable in 2019

1.1.1.1 IFRS 16 – *Leases* and IFRIC 23 – *Uncertainty over Income Tax Treatments*

- **IFRS 16 – *Leases***

  In January 2016, the IASB issued a new standard on leases. IFRS 16 – *Lease*s replaces IAS 17 – *Leases* along with its interpretations (IFRIC 4 – *Determining whether an Arrangement contains a Lease*, SIC 15 – *Operating Leases-Incentives* and SIC 27 – *Evaluating the Substance of Transactions Involving the Legal Form of a Lease*).

  Under the new standard, on the lessee side, all lease commitments, for which no exemption applies due to the contract's short term and/or the low value of the assets leased, will be recognized on the balance sheet, without distinguishing operating leases from finance leases. Previously, only the latter were recognized in the balance sheet of the lessee. As a result, an amount representing the right-of-use asset during the lease period is recognized as an asset and a debt corresponding to the present value of fixed lease payments as a liability, in the balance sheet. In the income statement, rental expenses previously recognized for operating leases are partially replaced by depreciation of the right-of-use asset and by financial expenses related to the interest on the lease liability. The

(1) *Available on the European Commission's website: http://ec.europa.eu/internal_market/accounting/ias/index_en.htm.*

presentation of the cash flow statement is also impacted with an improvement in cash flows from operating activities against an increase in cash flows from financing activities.

On the lessor's side, the accounting principles are substantially unchanged compared to IAS 17. Lessors will continue to classify leases either as operating or finance leases using similar principles as under IAS 17. IFRS 16 does not as such have an impact for leases where the Group is the lessor.

The Group adopted IFRS 16 – *Leases* from January 1, 2019, using the modified retrospective approach. Under this method, comparative information is not restated and the cumulative effect of initial application is recognized in equity as an adjustment to opening balance of retained earnings for the current period.

On applying IFRS 16 for the first time, on January 1, 2019, the Group chose to use the following practical expedients permitted by the standard:

- not to reassess whether a contract previously assessed under IAS 17 and IFRIC 4 contains a lease ("the grand-fathering clause");
- adjust the right-of-use assets by the amount of the provisions for onerous leases recognized in the statement of financial position as at December 31, 2018 (rather than performing an impairment test);
- exclude initial direct costs from the measurement of the right-of-use assets;
- use a single discount rate for a portfolio of leases with reasonably similar characteristics; and
- use hindsight, for example when determining the lease term, if the contract contains options to extend or terminate the lease.

On the other hand, the Group decided not to exclude leases for which the residual lease term ends within 12 months of the transition date.

Assessment of the lease term, including whether a renewal option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised, was made on a case-by-case basis.

The Group uses the recognition exemptions allowed by the standard, and therefore does not recognize any right-of-use assets and liabilities for leases with a lease term of 12 months or less ("short-term leases"), or for leases for which the underlying asset is of a low value ("low-value asset").

The Group does not apply the practical expedient allowed by the standard, which permits the application of a portfolio approach for leases with similar characteristics, nor the one which makes it possible not to separate lease and services components.

Lease liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate at January 1, 2019. The weighted average incremental borrowing rate applied to the lease liabilities on January 1, 2019 was 1.43% (*see Note 15 "Property, plant and equipment" for more information on the methodology used to determine the weighted average incremental borrowing rate*).

The impacts on transition of newly recognized assets and liabilities on the consolidated statement of financial position, for leases where the Group acts as lessee, are summarized below:

In millions of euros	**Jan. 1, 2019**
Right-of-use assets presented in Property, plant and equipment	3,045
Finance leases reclassified under Right-of-use assets	(905)
Other current and non-current assets	(31)
TOTAL ASSETS	**2,110**
TOTAL EQUITY	**(11)**
Lease liabilities presented in Short and long term borrowings	2,167
Other current and non-current liabilities	(46)
TOTAL EQUITY AND LIABILITIES	**2,110**

Newly recognized right-of-use assets mainly concern the following types of assets:

In millions of euros	Jan. 1, 2019
Real estate	1,782
Vehicles	206
Others	153
TOTAL	**2,141**

For leases previously classified as finance leases, and as required by the standard, the Group did not change the carrying amounts of existing assets and liabilities at the date of initial application (i.e., the right-of-use assets and lease liabilities equal the lease assets and liabilities recognized under IAS 17). These commitments were reclassified as right-of-use assets for a net amount of €905 million, mainly relating to power plants in Latin America.

In the consolidated income statement, the reversal of the rental expenses under leases previously considered as operating leases results in an increase in EBITDA, in depreciation and in financial expenses.

The difference between (i) the commitments relating to operating leases under IAS 17 for which ENGIE acts as lessee, disclosed in the Group's consolidated financial statements at December 31, 2018 (*see Note 23.1* "*Operating leases – for which ENGIE acts as lessee*") with an amount of €2,087 million and (ii) the liability accounted for as a lease liability in accordance with IFRS 16 at January 1, 2019 which amounts to €2,546 million corresponds to (i) leases previously classified as finance leases for €380 million and (ii) the discounting effect for €79 million.

- **IFRIC 23 – *Uncertainty over Income Tax Treatments***

IFRIC 23 clarifies the requirements of IAS 12 – *Income Taxes*. What is clarified is how income taxes are recognized and measured where there is an uncertainty regarding the treatment of an item, regarding the determination of taxable profit or loss, the tax bases of assets and liabilities, unused tax losses, unused tax credits and tax rates.

The Group has applied IFRIC 23 – *Uncertainty over Income Tax Treatments* since January 1, 2019, without restating comparative information. This interpretation has no material impact on the Group's consolidated financial statements.

- **Impact of the application of IFRS 16 and IFRIC 23 on the consolidated statement of financial position at January 1, 2019**

Impacts relating to the first-time application of IFRS 16 and IFRIC 23 on the statement of financial position at January 1, 2019 are presented hereunder:

In millions of euros	Dec. 31, 2018 published	IFRS 16 & IFRIC 23	Jan. 1, 2019 with IFRS 16 & IFRIC 23
Non-current assets			
Goodwill	17,809	-	17,809
Intangible assets, net	6,718	(7)	6,711
Property, plant and equipment, net	48,917	2,148	51,065
Other financial assets	6,193	-	6,193
Derivative instruments	2,693	-	2,693
Investments in equity method entities	7,846	-	7,846
Other non-current assets	474	(39)	435
Deferred tax assets	1,066	-	1,066
TOTAL NON-CURRENT ASSETS	**91,716**	**2,102**	**93,818**
Current assets			
Other financial assets	2,290	-	2,290
Derivative instruments	10,679	-	10,679
Trade and other receivables, net	15,613	-	15,613
Assets from contracts with customers	7,411	-	7,411
Inventories	4,158	-	4,158
Other current assets	9,337	(3)	9,334
Cash and cash equivalents	8,700	-	8,700
Assets classified as held for sale	3,798	11	3,809
TOTAL CURRENT ASSETS	**61,986**	**8**	**61,994**
TOTAL ASSETS	**153,702**	**2,110**	**155,812**
Shareholders' equity	35,551	(7)	35,544
Non-controlling interests	5,391	(4)	5,386
TOTAL EQUITY	**40,941**	**(11)**	**40,930**
Non-current liabilities			
Provisions	19,194	-	19,194
Long-term borrowings	26,434	1,777	28,211
Derivative instruments	2,785	-	2,785
Other financial liabilities	46	-	46
Liabilities from contracts with customers	36	-	36
Other non-current liabilities	960	-	960
Deferred tax liabilities	5,415	(4)	5,410
TOTAL NON-CURRENT LIABILITIES	**54,869**	**1,773**	**56,642**
Current liabilities			
Provisions	2,620	(301)	2,318
Short-term borrowings	5,745	389	6,134
Derivative instruments	11,510	-	11,510
Trade and other payables	19,759	-	19,759
Liabilities from contracts with customers	3,598	-	3,598
Other current liabilities	12,529	249	12,778
Liabilities directly associated with assets classified as held for sale	2,130	11	2,141
TOTAL CURRENT LIABILITIES	**57,891**	**348**	**58,239**
TOTAL EQUITY AND LIABILITIES	**153,702**	**2,110**	**155,812**

1.1.1.2 Other IFRS Standards, amendments or IFRIC Interpretations

The other amendments and interpretations applicable as from 2019 have no significant impact on the Group's consolidated financial statements.

- Amendments to IFRS 9 – *Financial Instruments: Prepayment Features with Negative Compensation*.
- Amendments to IAS 28 – *Investments in Associates and Joint Ventures: Long-term Interests in Associates and Joint Ventures*.
- Amendments to IAS 19 – *Employee Benefits: Plan Amendment, Curtailment or Settlement*.

- Annual improvements to IFRSs - 2015-2017 cycle.

1.1.1.3 Other pronouncements

In its agenda decision of March 2019, the IFRS Interpretations Committee (IFRIC) concluded that, due to the characteristics of particular contracts entered into to buy or sell non-financial items, accounted for as derivatives under IFRS 9, and settled by either delivering or taking delivery of the non-financial items, said contracts have to be accounted for on a single line of the consolidated income statement, including their changes in fair value as well as the effects of their physical settlement.

This agenda decision applies to the Group's derivative financial instruments relating to commodities, including gas and electricity, used in economic hedging relationships but which are not qualified as such under IFRS.

The Group's practice was up to now, to present the changes in the fair value (mark-to-market or MtM) of commodity derivatives, not qualified as either trading or hedging instruments under IFRS, below "Current operating income after share in net income of equity method entities". At physical settlement, gains and losses were reclassified in operating income together with the economically hedged item, so that the operating performance of the transactions concerned is recognized at the hedged rate.

Following the IFRIC decision, the Group changed its accounting policy as from the year ended December 31, 2019, with no impact on net income, equity or the current operating income indicator used in the management dialogue and financial communication. The Group therefore now presents unrealized income/(loss) relating to the concerned derivatives, whether it represents a seller or buyer position, on the same line as realized income/(loss) arising from their physical settlement, i.e. under "Purchases and operating derivatives" within the indicator now named "Current operating income including operating MtM and share in net income of equity method entities". Thus:

- MtM on commodity contracts other than trading instruments, previously presented under "Income/(loss) from operating activities", is now included in "Purchases and operating derivatives";
- commodity sale transactions giving rise to physical delivery and used for economic hedging purposes which fall within the scope of IFRS 9, previously presented under "Revenues from other contracts" are now presented as a deduction from the "Purchases" line.

The performance management indicator (COI), which is defined as excluding operating MtM, is now calculated and reconciled to "Current operating income including operation MtM and share in net income of equity method entities" in Note 5 "Financial indicators used in financial communication".

The Group has also decided to improve the presentation by nature of the other items of "Current operating income including operating MtM and share in net income of equity method entities", without impacting the total for this indicator.

The reconciliation between the old and new presentation of the income statement at December 31, 2018 is summarized below:

In millions of euros	Dec. 31, 2018 old presentation	Operating MtM (1)	Commodity sales transactions (2)	Taxes (3)	Other expenses (4)	Dec. 31, 2018 new presentation	
Revenues from contracts with customers	56,388	-	(221)	-	-	56,167	Revenues from contracts with customers
Revenues from other contracts	4,208	-	(3,408)	-	-	801	Revenues from other
REVENUES	**60,596**	**-**	**(3,629)**	**-**	**-**	**56,967**	**REVENUES**
Purchases	(32,190)	(223)	3,629	314	(10,190)	(38,660)	Purchases and operating derivatives
Personnel costs	(10,624)	-	-	-	-	(10,624)	Personnel costs
Depreciation, amortization and provisions	(3,586)	-	-	-	-	(3,586)	Depreciation, amortization and provisions
Taxes	-	-	-	(1,069)	-	(1,069)	Taxes
Other operating expenses	(10,981)	-	-	755	10,226	-	Other operating expenses
Other operating income	1,550	-	-	-	(36)	1,514	Other operating income
CURRENT OPERATING INCOME	**4,765**	**(223)**	**-**	**-**	**-**	**4,542**	**Current operating income including operating MtM**
Share in net income of entities accounted for using the equity method	361	-	-	-	-	361	Share in net income of equity method entities
CURRENT OPERATING INCOME AFTER SHARE IN NET INCOME OF ENTITIES ACCOUNTED FOR USING THE EQUITY METHOD	**5,126**	**(223)**	**-**	**-**	**-**	**4,903**	**Current operating income including operating MtM and share in net income of equity method entities**
Mark-to-market on commodity contracts other than trading instruments	(223)	223	-	-	-	-	
Impairment losses	(1,798)	-	-	-	-	(1,798)	Impairment losses
Restructuring costs	(162)	-	-	-	-	(162)	Restructuring costs
Changes in scope of consolidation	(150)	-	-	-	-	(150)	Changes in scope of consolidation
Other non-recurring items	(147)	-	-	-	-	(147)	Other non-recurring items
INCOME/(LOSS) FROM OPERATING ACTIVITIES	**2,645**	**-**	**-**	**-**	**-**	**2,645**	**INCOME/(LOSS) FROM OPERATING ACTIVITIES**

(1) Reclassification under "Purchases" of the unrealized income/(loss) (MtM) on derivatives not qualified as trading.
(2) Reclassification under "Purchases" of the realized income/(loss) on physical commodity contracts not qualified as IFRS 15 contracts.
(3) Accounted for under a single dedicated line for operating tax effects and taxes (excluding social security contributions presented within personnel costs and excluding income tax presented on a dedicated mine).
(4) Reclassification of other operating expenses according to their nature.

Revenues without a change in accounting policy consequent to the IFRIC decision would have stood at €64,137 million at December 31, 2019.

1.1.2 IFRS Standards, amendments or IFRIC Interpretations effective in 2020 and that the Group has elected to early adopt

- Amendments to IFRS 9 – *Financial Instruments* ; IAS 39 – *Financial Instruments: recognition and measurement* ; IFRS 7 – *Financial Instruments: Disclosures – Interest rate benchmark reform* (See Note 17.1.5.2) [1].

(1) These standards, amendments and interpretations have not yet been adopted by the European Union.

1.1.3 IFRS Standards, amendments or IFRIC Interpretations effective in 2020 and that the Group has elected not to early adopt

- Amendments to IFRS 3 – *Business Combinations: Definition of a Business* [1].
- Amendments to IAS 1 – *Presentation of Financial Statements* and IAS 8 – *Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Material.*
- IFRS 17 – *Insurance Contracts* [1].

The impact of these standards and amendments is currently being assessed.

1.2 Measurement and presentation basis

1.2.1 Historical cost convention

The Group's consolidated financial statements are presented in euros and have been prepared using the historical cost convention, except for financial instruments that are accounted for under the financial instrument categories defined by IFRS 9.

1.2.2 Chosen options

1.2.2.1 Reminder of IFRS 1 transition options

The Group used some of the options available under IFRS 1 for its transition to IFRS in 2005. The options that continue to have an impact on the consolidated financial statements are:

- translation adjustments: the Group elected to reclassify cumulative translation adjustments within consolidated equity at January 1, 2004;
- business combinations: the Group elected not to restate business combinations that took place prior to January 1, 2004 in accordance with IFRS 3.

1.2.2.2 Business combinations

Business combinations carried out prior to January 1, 2010 were accounted for in accordance with IFRS 3 prior to the revision. In accordance with IFRS 3 revised, these business combinations have not been restated.

Since January 1, 2010, the Group applies the purchase method as defined in IFRS 3 revised, which consists in recognizing the identifiable assets acquired and liabilities assumed at their fair values at the acquisition date, as well as any non-controlling interests in the acquiree. Non-controlling interests are measured either at fair value or at the entity's proportionate interest in the net identifiable assets of the acquiree. The Group determines on a case-by-case basis which measurement option to be used to recognize non-controlling interests.

1.2.2.3 Consolidated statement of cash flows

The consolidated statement of cash flows is prepared using the indirect method starting from net income.

"Interest received on non-current financial assets" is classified within investing activities because it represents a return on investments. "Interest received on cash and cash equivalents" is shown as a component of financing activities because

(1) These standards, amendments and interpretations have not yet been adopted by the European Union.

the interest can be used to reduce borrowing costs. This classification is consistent with the Group's internal organization, where debt and cash are managed centrally by the Group treasury department.

As impairment losses on current assets are considered to be definitive losses, changes in current assets are presented net of impairment.

Cash flows relating to the payment of income tax are presented on a separate line.

1.2.3 Foreign currency transactions

1.2.3.1 Translation of foreign currency transactions

Foreign currency transactions are recorded in the functional currency at the exchange rate prevailing on the date of the transaction.

Functional currency is the currency of the primary economic environment in which an entity operates, which in most cases corresponds to local currency. However, certain entities may have a functional currency different from the local currency when that other currency is used for an entity's main transactions and better reflects its economic environment.

At each reporting date:

- monetary assets and liabilities denominated in foreign currencies are translated at year-end exchange rates. The resulting translation gains and losses are recorded in the consolidated income statement for the year to which they relate;
- non-monetary assets and liabilities denominated in foreign currencies are recognized at the historical cost applicable at the date of the transaction.

1.2.3.2 Translation of the financial statements of subsidiaries with a functional currency other than the euro (the presentation currency)

The statements of financial position of these subsidiaries are translated into euros at the official year-end exchange rates. Income statement and cash flow statement items are translated using the average exchange rate for the year. Any differences arising from the translation of the financial statements of these subsidiaries are recorded under "Translation adjustments" as other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of foreign entities are classified as assets and liabilities of those foreign entities and are therefore denominated in the functional currencies of the entities and translated at the year-end exchange rate.

1.2.4 Use of estimates and judgments

1.2.4.1 Estimates

The preparation of consolidated financial statements requires the use of estimates and assumptions to determine the value of assets and liabilities and contingent assets and liabilities at the reporting date, as well as income and expenses reported during the period.

Developments in the economic and financial environment prompted the Group to step up its risk oversight procedures and include an assessment of these risks in measuring financial instruments and performing impairment tests. The Group's estimates used in business plans and determination of discount rates used in impairment tests and for calculating provisions, take into account the environment and the important market volatility.

Accounting estimates are made in a context that remains sensitive to energy market developments, therefore making it difficult to apprehend medium-term economic prospects.

Due to uncertainties inherent in the estimation process, the Group regularly revises its estimates in light of currently available information. Final outcomes could differ from those estimates.

The key estimates used in preparing the Group's consolidated financial statements relate mainly to:

- measurement of the fair value of assets acquired and liabilities assumed in a business combination *(see Note 4)*;
- measurement of revenue not yet metered, so called un-metered revenue *(see Note 7)*;
- measurement of recognized tax loss carry-forwards *(see Note 11)*;
- measurement of the recoverable amount of goodwill *(see Note 13)*, other intangible assets (see *Note 14)* and property, plant and equipment *(see Note 15)*;
- financial instruments *(see Notes 16 and 17)*;
- measurement of provisions, particularly for back-end of nuclear fuel cycle, dismantling obligations, disputes, pensions and other employee benefits *(see Notes 19 and 20)*.

1.2.4.2 Judgment

As well as relying on estimates, Group management also makes judgments to define the appropriate accounting policies to apply to certain activities and transactions, particularly when the effective IFRS Standards and IFRIC Interpretations do not specifically deal with the related accounting issues.

In particular, the Group exercised its judgment in assessing:

- the type of control (*see Note 2*);
- the performance obligations of sales contracts (see *Note 7*);
- how revenue is recognized for distribution or transmission services invoiced to clients (see *Note 7*);
- the identification of "own use contracts" as defined by IFRS 9 within non-financial purchase and sales contracts (electricity, gas, etc.) (see *Note 16*);
- the determination of whether arrangements are / or contain a lease (*see Notes 15 and 16*);
- the regrouping of operating segments for the presentation of reportable segments; and in the context of defining the various Business Lines (see *Note 6*).

Entities for which judgment on the nature of control has been exercised are listed in Note 2 "Main subsidiaries at December 31, 2019" and Note 3 "Investments in equity method entities".

Accounting standards

Accounting standards are presented in the Notes to which they relate in the form of an insert.

NOTE 2 MAIN SUBSIDIARIES AT DECEMBER 31, 2019

Accounting standards

Controlled entities (subsidiaries) are fully consolidated in accordance with IFRS 10 – *Consolidated Financial Statements*. An investor (the Group) controls an entity and therefore must consolidate it if all of the following three criteria are met:

- it has the ability to direct the relevant activities of the entity;
- it has the rights and is exposed to variable returns from its involvement with the entity;
- it has the ability to use its power over the entity to affect the investor's return.

2.1 List of main subsidiaries at December 31, 2019

The following lists are made available by the Group to third parties, pursuant to Regulation No. 2016-09 of the French accounting standards authority (ANC) issued on December 2, 2016:

- list of companies included in consolidation;
- list of companies excluded from consolidation because their individual and cumulative incidence on the Group's consolidated accounts is not material. They correspond to entities deemed not significant as regards the Group's main key figures (revenues, total equity, etc), shell companies or entities that have ceased all activities and are undergoing liquidation/closure proceedings;
- list of main non-consolidated interests.

This information is available on the Group's website (www.engie.com, Investors/Regulated information section). Non-consolidated companies are classified under non-current financial assets (*see Note 16.1.1.1)* under "Equity instruments at fair value".

The list of the main subsidiaries consolidated under the full consolidation method presented below was determined, as regards operating entities, based on their contribution to Group revenues, EBITDA, net income and net debt. The main equity-accounted investments (associates and joint ventures) are presented in Note 3 "Investments in equity method entities".

Some entities such as ENGIE SA, ENGIE Energie Services SA or Electrabel SA comprise both operating activities and headquarters functions which report to management teams of different reportable segments. In the following tables, these operating activities and headquarters functions are shown within their respective reportable segments under their initial company name followed by a (*) sign.

France excluding Infrastructures

Company name	Activity	Country	% interest Dec. 31, 2019	% interest Dec. 31, 2018
ENGIE SA *	Energy sales	France	100.0	100.0
ENGIE Energie Services SA *	Energy services/Networks	France	100.0	100.0
Axima Concept	Systems, facilities and maintenance	France	100.0	100.0
Endel Group	Systems, facilities and maintenance	France	100.0	100.0
INEO Group	Systems, facilities and maintenance	France	100.0	100.0
Compagnie Nationale du Rhône	Electricity distribution and generation	France	49.9	49.9
ENGIE Green	Electricity distribution and generation	France	100.0	100.0
CPCU	Urban heating networks	France	66.5	66.5

France Infrastructures

Company name	Activity	Country	% interest Dec. 31, 2019	% interest Dec. 31, 2018
GRDF	Natural gas distribution	France	100.0	100.0
GRTgaz Group (excluding Elengy)	Natural gas transportation	France, Germany	74.6	74.6
Elengy	LNG terminals	France	74.6	74.6
Fosmax LNG	LNG terminals	France	54.1	54.1
Storengy France	Underground natural gas storage	France	100.0	100.0
Storengy Deutschland GmbH	Underground natural gas storage	Germany	100.0	100.0

Rest of Europe

Company name	Activity	Country	% interest Dec. 31, 2019	% interest Dec. 31, 2018
ENGIE Thermique France	Electricity generation	France	100.0	100.0
Electrabel SA *	Electricity generation, Energy sales	Belgium	100.0	100.0
Synatom	Managing provisions relating to power plants and nuclear fuel	Belgium	100.0	100.0
Cofely Fabricom SA	Systems, facilities and maintenance	Belgium	100.0	100.0
ENGIE Energie Nederland N.V. *	Electricity generation, Energy sales	Netherlands	100.0	100.0
ENGIE Services Nederland N.V.	Energy services	Netherlands	100.0	100.0
ENGIE Energielösungen GmbH	Energy services	Germany	-	100.0
ENGIE Deutschland GmbH	Energy services	Germany	100.0	100.0
ENGIE Deutschland AG *	Electricity generation	Germany	100.0	100.0
ENGIE Kraftwerk Wilhelmshaven GmbH & Co.	Electricity generation	Germany	-	57.0
ENGIE Supply Holding UK Limited	Energy sales	United Kingdom	100.0	100.0
ENGIE Retail Investment UK Limited	Holding	United Kingdom	100.0	100.0
First Hydro Holdings Company	Electricity generation	United Kingdom	75.0	75.0
Keepmoat Regeneration	Energy services	United Kingdom	100.0	100.0
ENGIE Services Holding UK Ltd	Energy services	United Kingdom	100.0	100.0
ENGIE Services Limited	Energy services	United Kingdom	100.0	100.0
ENGIE Cartagena	Electricity generation	Spain	100.0	100.0
ENGIE Italia S.p.A *	Energy sales	Italy	100.0	100.0
Engie Servizi S.p.A	Energy services	Italy	100.0	100.0
ENGIE Romania	Natural gas distribution, Energy sales	Romania	51.0	51.0

Latin America

Company name	Activity	Country	% interest Dec. 31, 2019	Dec. 31, 2018
ENGIE Energía Chile Group	Electricity distribution and generation	Chile	52.8	52.8
ENGIE Energía Perú	Electricity distribution and generation	Peru	61.8	61.8
ENGIE Brasil Energia Group	Electricity distribution and generation	Brazil	68.7	68.7

USA & Canada

Company name	Activity	Country	% interest Dec. 31, 2019	Dec. 31, 2018
ENGIE North America	Electricity distribution and generation, Natural gas, LNG, Energy services	United States	100.0	100.0
ENGIE Holding Inc.	Holding - parent company	United States	100.0	100.0
ENGIE Infinity Renewables	Electricity distribution and generation	United States	100.0	100.0
SoCore Energy LLC	Development and installation of photovoltaic panels	United States	100.0	100.0
ENGIE Resources Inc.	Energy sales	United States	100.0	100.0
Engie Insight Service	Energy services	United States	100.0	100.0

Middle East, Asia & Africa

Company name	Activity	Country	% interest Dec. 31, 2019	Dec. 31, 2018
Glow Group (1)	Electricity distribution and generation	Thailand	-	69.1
UCH Power Limited	Electricity generation	Pakistan	100.0	100.0
Simply Energy	Energy sales	Australia	72.0	72.0
Baymina Enerji A.S.	Electricity generation	Turkey	95.0	95.0

(1) The disposal of Glow Group was finalized on March 14, 2019 (see Note 4 "Main changes in Group structure").

Others

Company name	Activity	Country	% interest Dec. 31, 2019	Dec. 31, 2018
ENGIE SA *	Holding - parent company, Energy management trading, Energy sales, LNG	France	100.0	100.0
ENGIE Energie Services SA *	Holding	France	100.0	100.0
ENGIE FINANCE SA	Financial subsidiaries	France	100.0	100.0
ENGIE Solar	Solar EPC	France	100.0	100.0
Gaztransport & Technigaz (GTT)	Engineering	France	40.4	40.4
Electrabel SA *	Holding, Electricity generation, Energy management trading	France/Belgium	100.0	100.0
ENGIE Global Markets	Energy management trading	France, Belgium, Singapore	100.0	100.0
ENGIE Energy Management *	Energy management trading	France, Belgium, Italy, United Kingdom	100.0	100.0
ENGIE CC	Financial subsidiaries, Central functions	Belgium	100.0	100.0
Tractebel Engineering	Engineering	Belgium	100.0	100.0
International Power Limited	Holding	United Kingdom	100.0	100.0
ENGIE Energy Management Holding Switzerland AG	Holding	Switzerland	100.0	100.0

2.2 Significant judgments exercised when assessing control

The Group primarily considers the following information and criteria when determining whether it has control over an entity:

- governance arrangements: voting rights and whether the Group is represented in the governing bodies, majority rules and veto rights;
- the nature of substantive or protective rights granted to shareholders, relating to the entity's relevant activities;
- deadlock resolution mechanisms;
- whether the Group is exposed, or has rights, to variable returns from its involvement with the entity.

The Group exercised its judgment regarding the entities and sub-groups described below.

Entities in which the Group has the majority of the voting rights

GRTgaz (France Intrastructures): 74.6%

In addition to the analysis of the shareholder agreement with Société d'Infrastructures Gazières, a subsidiary of *Caisse des Dépôts et Consignations* (CDC), which owns 24.8% of the share capital of GRTgaz, the Group also assessed the rights granted to the French Energy Regulatory Commission (*Commission de régulation de l'énergie* – CRE). As a regulated activity, GRTgaz has a dominant position on the gas transportation market in France. Accordingly, since the transposition of the Third European Directive of July 13, 2009 into French law (Code de l'énergie -Energy Code) of May 9, 2011, GRTgaz has been subject to independence rules as concerns its directors and senior management team. The French Energy Code confers certain powers on the CRE in the context of its duties to control the proper functioning of the gas markets in France, including verifying the independence of the members of the Board of Directors and senior management and assessing the choice of investments. The Group considers that it exercises control over GRTgaz and its subsidiaries (including Elengy) in view of its current ability to appoint the majority of the members of the Board of Directors and take decisions about the relevant activities, especially in terms of the level of investment and planned financing.

Entities in which the Group does not have the majority of the voting rights

In the entities in which the Group does not have a majority of the voting rights, judgment is exercised with regard to the following items, in order to assess whether there is a situation of *de facto* control:

- dispersion of the shareholding structure: number of voting rights held by the Group relative to the number of rights held respectively by the other vote holders and their dispersion;
- voting patterns at shareholders' meetings: the percentages of voting rights exercised by the Group at shareholders' meetings in recent years;
- governance arrangements: representation in the governing body with strategic and operational decision-making power over the relevant activities;
- rules for appointing key management personnel;
- contractual relationships and material transactions.

The main fully consolidated entities in which the Group does not have the majority of the voting rights are Compagnie Nationale du Rhône (49.98%) and Gaztransport & Technigaz (40.4%).

Compagnie Nationale du Rhône ("CNR" – France excluding Infrastructures): 49.98%

The Group holds 49.98% of the share capital of CNR, with CDC holding 33.2%, and the balance (16.82%) being dispersed among around 200 local authorities. In view of the current provisions of the French "Murcef" law, under which a majority of CNR's share capital must remain under public ownership, the Group is unable to hold more than 50% of the share capital. However, the Group considers that it exercises *de facto* control as it holds the majority of the voting rights exercised at shareholders' meetings due to the widely dispersed shareholding structure and the absence of evidence of the minority shareholders acting in concert.

Gaztransport & Technigaz ("GTT" – Others): 40.4%

Since GTT's initial public offering in February 2014, ENGIE has been the largest shareholder in the company with a 40.4% stake, the free float representing around 49% of the share capital. The Group holds the majority of the voting rights exercised at shareholders' meetings in view of the widely dispersed shareholding structure and the absence of evidence of minority shareholders acting in concert. ENGIE also holds the majority of the seats on the Board of Directors. The Group considers that it exercises *de facto* control over GTT, based on an IFRS 10 criteria.

2.3 Subsidiaries with material non-controlling interests

The following table shows the non-controlling interests in Group entities that are deemed to be material, the respective contributions to equity and net income at December 31, 2019 and December 31, 2018, as well as the dividends paid to non-controlling interests of these significant subsidiaries:

Corporate name	Activity	Percentage interest of non-controlling interests		Net income/(loss) of non-controlling interests		Equity of non-controlling interests		Dividends paid to non-controlling interests	
In millions of euros		Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018 [1]	Dec. 31, 2019	Dec. 31, 2018
GRTgaz Group (France Infrastructures, France)	Regulated gas transportation activities and management of LNG terminals	25.4	25.4	89	99	1,076	1,133	120	158
ENGIE Energía Chile Group (Latin America, Chile) [2]	Electricity distribution and generation - thermal power plants	47.2	47.2	54	49	926	913	52	25
Glow Group (Middle East, Asia & Africa, Thailand) [3]	Electricity distribution and generation - hydroelectric, wind and thermal power plants	-	30.9	32	96	-	512	-	75
ENGIE Romania Group (Rest of Europe, Romania)	Distribution of natural gas, Energy sales	49.0	49.0	47	43	533	512	14	18
ENGIE Brasil Energia Group (Latin America, Brazil) [2]	Electricity distribution and generation	31.3	31.3	177	170	520	473	94	206
ENGIE Energía Perú (Latin America, Peru) [2]	Electricity distribution and generation – thermal and hydroelectric power plants	38.2	38.2	36	34	393	376	22	11
Gaztransport & Technigaz (Other, France) [2]	Naval engineering, cryogenic membrane containment systems for LNG transportation	59.6	59.6	75	63	343	339	73	59
Other subsidiaries with non-controlling interests				154	41	1,159	1,131	78	331
TOTAL				**664**	**595**	**4,950**	**5,391**	**453**	**882**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Engie Energia Chile, Engie Brasil Energia, Gaztransport & Technigaz and Engie Energia Perú are listed in their respective countries.

(3) The disposal of Glow Group was finalized on March 14, 2019 (see Note 4 "Main changes in Group structure").

2.3.1 Condensed financial information on subsidiaries with material non-controlling interests

The condensed financial information concerning these subsidiaries presented in the table below is based on a 100% interest and is shown before intragroup eliminations.

	GRTgaz Group		ENGIE Energía Chile Group		Glow Group (1)		ENGIE Romania Group	
In millions of euros	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
Income statement								
Revenues	2,275	2,298	1,180	1,028	255	1,354	1,436	1,231
Net income/(loss)	325	389	103	94	93	262	95	87
Net income/(loss) Group share	236	283	49	45	61	165	49	44
Other comprehensive income/(loss) – Owners of the parent	(77)	(13)	9	49	(162)	41	(13)	(3)
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**159**	**270**	**59**	**94**	**(101)**	**206**	**36**	**41**
Statement of financial position								
Current assets	689	918	546	364	-	3,278	613	626
Non-current assets	10,403	10,404	2,707	2,700	-	(257)	809	787
Current liabilities	(1,016)	(921)	(322)	(271)	-	(950)	(277)	(312)
Non-current liabilities	(6,097)	(6,198)	(1,025)	(910)	-	(835)	(65)	(64)
TOTAL EQUITY	**3,979**	**4,204**	**1,907**	**1,882**	**-**	**1,237**	**1,080**	**1,037**
TOTAL NON-CONTROLLING INTERESTS	**1,076**	**1,133**	**926**	**913**	**-**	**512**	**533**	**512**
Statement of cash flows								
Cash flow from operating activities	967	1,213	467	249	93	421	71	109
Cash flow from (used in) investing activities	(495)	(493)	(144)	(248)	(93)	(132)	(77)	(58)
Cash flow from (used in) financing activities	(480)	(740)	(171)	(15)	(14)	(534)	(34)	(54)
TOTAL CASH FLOW FOR THE PERIOD (2)	**(8)**	**(20)**	**152**	**(14)**	**(14)**	**(245)**	**(40)**	**(3)**

(1) The disposal of Glow Group was finalized on March 14, 2019 (see Note 4 "Main changes in Group structure").
(2) Excluding effects of changes in exchange rates and other.

	ENGIE Brasil Energia Group		ENGIE Energía Perú		Gaztransport & Technigaz	
In millions of euros	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
Income statement						
Revenues	2,207	2,017	479	427	289	246
Net income/(loss)	623	544	94	88	126	106
Net income/(loss) Group share	446	374	58	55	51	43
Other comprehensive income/(loss) – Owners of the parent	(93)	(119)	12	27	(1)	-
TOTAL COMPREHENSIVE INCOME/(LOSS) – OWNERS OF THE PARENT	**353**	**255**	**70**	**81**	**51**	**43**
Statement of financial position						
Current assets	1,533	1,045	295	255	343	319
Non-current assets	5,792	4,232	1,714	1,728	452	491
Current liabilities	(1,345)	(907)	(177)	(174)	(174)	(166)
Non-current liabilities	(3,757)	(2,983)	(802)	(824)	(46)	(74)
TOTAL EQUITY	**2,224**	**1,388**	**1,029**	**985**	**575**	**570**
TOTAL NON-CONTROLLING INTERESTS	**520**	**473**	**393**	**376**	**343**	**339**
Statement of cash flows						
Cash flow from operating activities	1,045	875	237	195	139	168
Cash flow from (used in) investing activities	(1,136)	(851)	(22)	(19)	(10)	(9)
Cash flow from (used in) financing activities	436	89	(199)	(144)	(122)	(94)
TOTAL CASH FLOW FOR THE PERIOD (2)	**345**	**113**	**16**	**33**	**7**	**66**

(1) Excluding effects of changes in exchange rates and other.

NOTE 3 INVESTMENTS IN EQUITY METHOD ENTITIES

Accounting standards

The Group accounts for its investments in associates (entities over which the Group has significant influence) and joint ventures using the equity method. Under IFRS 11 – *Joint Arrangements*, a joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

The respective contributions of associates and joint ventures in the statement of financial position, the income statement and the statement of comprehensive income at December 31, 2019 and December 31, 2018 are as follows:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Statement of financial position		
Investments in associates	4,646	4,590
Investments in joint ventures	4,570	3,256
INVESTMENTS IN EQUITY METHOD ENTITIES	**9,216**	**7,846**
Income statement		
Share in net income/(loss) of associates	255	88
Share in net income/(loss) of joint ventures	245	273
SHARE IN NET INCOME/(LOSS) OF EQUITY METHOD ENTITIES	**500**	**361**
Statement of comprehensive income		
Share of associates in "Other comprehensive income/(loss)"	(123)	132
Share of joint ventures in "Other comprehensive income/(loss)"	(158)	26
SHARE OF EQUITY METHOD ENTITIES IN "OTHER COMPREHENSIVE INCOME/(LOSS)"	**(281)**	**158**

Significant judgments

The Group primarily considers the following information and criteria in determining whether it has joint control or significant influence over an entity:

- governance arrangements: whether the Group is represented in the governing bodies, majority rules and veto rights;
- the nature of substantive or protective rights granted to shareholders, relating to the entity's relevant activities. This can be difficult to determine in the case of "project management" or "one-asset" entities, as certain decisions concerning the relevant activities are made upon the creation of the joint arrangement and remain valid throughout the project. Accordingly, the rights' analysis relates to the relevant residual activities of the entity (those that significantly affect the variable returns of the entity);
- deadlock resolution mechanisms;
- whether the Group is exposed, or has rights, to variable returns from its involvement with the entity. This can also involve analyzing the Group's contractual relations with the entity, in particular the conditions in which these contracts are entered into, their duration as well as the management of conflicts of interest that may arise when the entity's governing body casts votes.

The Group exercised its judgment regarding the following entities and sub-groups:

Project management entities in the Middle East

The significant judgments made in determining the consolidation method to be applied to these project management entities related to the risks and rewards relating to contracts between ENGIE and the entity concerned, as well as an analysis of the residual relevant activities over which the entity retains control after its creation. The Group considers that it has significant influence or joint control over these entities, since the decisions taken throughout the term of the project about the relevant activities such as refinancing, or the renewal or amendment of significant contracts (sales, purchases, operating and maintenance services) require, depending on the case, the unanimous consent of two or more parties sharing control.

SUEZ Group (32.06%)

Since the SUEZ shareholders' agreement expired on July 22, 2013, ENGIE no longer controls SUEZ but exercises significant influence over the SUEZ group. In particular, this is because: (i) the Group does not have a majority of members on SUEZ's Board of Directors, (ii) at Shareholders' Meetings, although SUEZ's shareholder base is fragmented and ENGIE holds a large interest, past voting shows that ENGIE alone did not have the majority at Ordinary and Extraordinary Shareholders' Meetings between 2010 and 2019.

Transportadora Associada de Gás S.A. ("TAG" - Latin America): 58.5% holding interest (directly and indirectly) representing a net interest in of 49.3%

The Group exercises joint control over TAG (*see Note 4.3.1*).

Joint ventures in which the Group holds an interest of more than 50%

Tihama (60%)

ENGIE holds a 60% stake in the Tihama cogeneration plant in Saudi Arabia and its partner Saudi Oger holds 40%. The Group considers that it has joint control over Tihama since the decisions about its relevant activities, including for example the preparation of the budget and amendments to major contracts, etc., require the unanimous consent of the parties sharing control.

Joint control – difference between joint ventures and joint operations

Classifying a joint arrangement requires the Group to use its judgment to determine whether the entity in question is a joint venture or a joint operation. IFRS 11 requires an analysis of "other facts and circumstances" when determining the classification of jointly controlled entities.

The IFRS Interpretations Committee (IFRS IC) (November 2014) decided that for an entity to be classified as a joint operation, other facts and circumstances must give rise to direct enforceable rights to the assets, and obligations for the liabilities, of the joint arrangement.

In view of this position and its application to our analyses, the Group has no material joint operations at December 31, 2019.

3.1 Investments in associates

3.1.1 Contribution of material associates and of associates that are not material to the Group taken individually

The table hereafter shows the contribution of each material associate along with the aggregate contribution of associates deemed not material taken individually, in the consolidated statement of financial position, income statement, statement of comprehensive income, and the "Dividends received from equity method entities" line of the statement of cash flows.

The Group used qualitative and quantitative criteria to determine material associates. These criteria include the contribution to the consolidated line items "Share in net income/(loss) of associates" and "Investments in associates", the total assets of associates in Group share, and associates carrying major projects in the study or construction phase for which the related investment commitments are material.

Corporate name	Activity	Capacity	Percentage interest of investments in associates		Carrying amount of investments in associates		Share in net income/(loss) of associates		Other comprehensive income/(loss) of associates		Dividends received from associates	
In millions of euros			Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
SUEZ Group (Other)	Water and waste processing		32.06	32.06	1,953	1,968	113	55	(37)	21	129	130
Project management entities in the Middle East (Middle-East, Asia & Africa, Saudi Arabia, Bahrain, Qatar, United Arab Emirates, Oman, Kuwait) (1)	Gas-fired power plants and seawater desalination facilities				950	1,004	79	97	(96)	96	77	97
Energia Sustentável Do Brasil (Latin America, Brazil)	Hydro power plant	3 750 MW	40.00	40.00	659	646	(49)	(57)	-	-	-	-
GASAG (Rest of Europe, Germany)	Gas and heat networks		31.57	31.57	233	261	16	18	(17)	1	9	4
Other investments in associates that are not material taken individually					852	710	96	(25)	27	14	61	104
INVESTMENTS IN ASSOCIATES					**4,646**	**4,590**	**255**	**88**	**(123)**	**132**	**277**	**334**

(1) Investments in associates operating gas-fired power plants and seawater desalination facilities in the Arabian Peninsula have been grouped together under "Project management entities in the Middle East". This includes around 40 associates operating thermal power plants with a total installed capacity of 27,632 MW (at 100%) and a further 1,507 MW (at 100%) in capacity under construction. These associates have fairly similar business models and joint arrangements: the project management entities selected as a result of a competitive bidding process develop, build and operate power generation plants and seawater desalination facilities. The entire output of these facilities is sold to government-owned companies under power and water purchase agreements, over periods generally spanning 20 to 30 years.
In accordance with their contractual arrangements, the corresponding plants are recognized as property, plant and equipment or as financial receivables whenever substantially all of the risks and rewards associated with the assets are transferred to the buyer of the output. This treatment complies with IFRIC 4 and IFRS 16. The shareholding structure of these entities systematically includes a government-owned company based in the same country as the project management entity. The Group's percentage interest and percentage voting rights in each of these entities varies between 20% and 50%.

The share in net income/(loss) of associates includes a net non-recurring loss for a total amount of €79 million in 2019 (compared to a net non-recurring loss of €155 million in 2018), mainly including changes in the fair value of derivative instruments and disposal gains and losses, net of tax *(see Note 5.3 "Net recurring income Group share")*.

3.1.2 Financial information regarding material associates

The tables below provide condensed financial information for the Group's main associates. The amounts shown have been determined in accordance with IFRS, before the elimination of intragroup items and after (i) adjustments made in line with Group accounting policies and (ii) fair value measurements of the assets and liabilities of the associate performed at the date of acquisition at the level of ENGIE, as required by IAS 28. All amounts are presented based on a 100% interest with the exception of "Total equity attributable to ENGIE".

In millions of euros	Revenues	Net income/(loss)	Other compre-hensive income/(loss)	Total compre-hensive income/(loss)	Current assets	Non-current assets	Current liabilities	Non-current liabilities	Total equity	% interest of Group	Total equity attributable to ENGIE
AT DECEMBER 31, 2019											
SUEZ Group [1]	18,015	352	(58)	294	11,481	24,153	12,098	14,248	9,288	32.06	1,953
Project management entities in the Middle East	3,778	390	(409)	(19)	2,851	21,053	3,543	16,644	3,717	-	950
Energia Sustentável Do Brasil	578	(123)	-	(123)	204	4,137	304	2,388	1,648	40.00	659
GASAG	1,251	51	(54)	(2)	850	1,847	1,757	203	736	31.57	233
AT DECEMBER 31, 2018											
SUEZ Group [1]	17,331	335	(103)	232	10,872	22,681	11,664	12,896	8,993	32.06	1,968
Project management entities in the Middle East	4,254	467	406	873	2,572	21,401	3,775	16,263	3,934	-	1,004
Energia Sustentável Do Brasil	564	(142)	-	(142)	199	4,388	544	2,428	1,615	40.00	646
GASAG	1,196	56	3	59	798	1,733	1,508	196	827	31.57	261

(1) The data indicated in the table for SUEZ correspond to financial information published by SUEZ. Total SUEZ equity attributable to the Group amounts to €6,463 million based on the published financial statements of SUEZ and €6,092 million based on the financial statements of ENGIE. The difference in these amounts mainly reflects the non-inclusion of the share in deeply-subordinated perpetual notes issued by SUEZ in total equity attributable to ENGIE, partly offset by the fair value measurement of the assets and liabilities of SUEZ at the date the Group changed its consolidation method (July 22, 2013).

SUEZ is the only material listed associate. Based on the closing share price at December 31, 2019, the market value of this interest was €2,686 million.

3.1.3 Transactions between the Group and its associates

The data below set out the impact of transactions with associates on the Group's 2019 consolidated financial statements.

In millions of euros	Purchases of goods and services	Sales of goods and services	Net financial income (excluding dividends)	Trade and other receivables	Loans and receivables at amortized cost	Trade and other payables	Borrowings and debt
Project management entities in the Middle East	-	254	-	36	130	2	-
Contassur [1]	-	-	-	160	2	-	-
Energia Sustentável Do Brasil	140	-	-	-	29	10	-
Other	65	35	28	14	264	10	760
AT DECEMBER 31, 2018	**205**	**289**	**28**	**211**	**426**	**21**	**760**

(1) Contassur is a life insurance company accounted for using the equity method. Contassur offers insurance contracts, chiefly with pension funds that cover post-employment benefit obligations for Group employees and also employees of other companies mainly engaged in regulated activities in the electricity and gas sector in Belgium. Insurance contracts entered into by Contassur represent reimbursement rights recorded within "Other assets" in the statement of financial position. These reimbursement rights totaled €161 million at December 31, 2019 (€168 million at December 31, 2018).

3.2 Investments in joint ventures

3.2.1 Contribution of material joint ventures and of joint ventures that are not material to the Group taken individually

The table below shows the contribution of each material joint venture along with the aggregate contribution of joint ventures deemed not material taken individually to the consolidated statement of financial position, income statement, statement of comprehensive income, and the "Dividends received from entities accounted for using the equity method" line of the statement of cash flows.

The Group used qualitative and quantitative criteria to determine material joint ventures. These criteria include the contribution to the line items "Share in net income/(loss) of joint ventures" and "Investments in joint ventures", the Group's share in total assets of joint ventures, and joint ventures conducting major projects in the study or construction phase for which the related investment commitments are material.

Corporate name	Activity	Capacity	Percentage interest of investments in joint ventures		Carrying amount of investments in joint ventures		Share in net income/(loss) of joint ventures		Other comprehensive income/(loss) of joint ventures		Dividends received from joint ventures	
In millions of euros			Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018
Transportadora Associada de Gás S.A. (TAG) (Latin America, Brazil)	Gas transmission network		58.50	-	1,364	-	44	-	(71)	-	159	-
National Central Cooling Company "Tabreed" (Middle-East, Asia & Africa, Abu Dhabi)	District cooling networks		40.00	40.00	740	710	42	40	-	-	24	39
EcoÈlectrica (USA & Canada, Puerto Rico)	Combined-cycle gas-fired power plant and LNG terminal	507 MW	50.00	50.00	395	416	25	34	-	-	59	104
Portfolio of power generation assets in Portugal (Rest of Europe, Portugal)	Electricity generation	2 909 MW	50.00	50.00	312	325	39	44	(2)	1	50	49
WSW Energie und Wasser AG (Rest of Europe, Germany)	Electricity distribution and generation	142 MW	33.10	33.10	207	204	(4)	11	-	-	4	3
Tihama Power Generation Co (Middle-East, Asia & Africa, Saudi Arabia)	Electricity generation	1 599 MW	60.00	60.00	108	163	32	34	(5)	1	86	-
Ohio State Energy Partners (USA & Canada, Unites States)	Services		50.00	50.00	114	129	2	5	(10)	5	9	4
Megal GmbH (France Infrastuctures, Germany)	Gas transmission network		49.00	49.00	79	91	2	6	-	-	14	13
Transmisora Eléctrica del Norte (Latin America, Chile)	Electricity transmission line		50.00	50.00	80	85	7	7	(10)	8	-	-
Other investments in joint ventures that are not material taken individually					1,171	1,134	55	92	(61)	11	35	31
INVESTMENTS IN JOINT VENTURES					**4,570**	**3,256**	**245**	**273**	**(158)**	**26**	**439**	**244**

The share in net income/(loss) of joint ventures includes non-recurring loss of €14 million in 2019 (non-recurring income of €6 million in 2018), resulting chiefly from changes in the fair value of derivatives, impairment losses and disposal gains and losses, net of tax *(see Note 5.3 "Net recurring income Group share")*.

3.2.2 Financial information regarding material joint ventures

The amounts shown have been determined in accordance with IFRS before the elimination of intragroup items and after (i) adjustments made in line with Group accounting policies and (ii) fair value measurements of the assets and liabilities of the joint venture performed at the date of acquisition at the level of ENGIE, as required by IAS 28. All amounts are presented based on a 100% interest with the exception of "Total equity attributable to ENGIE" in the statement of financial position.

Information on the income statement and statement of comprehensive income

In millions of euros	Revenues	Depreciation and amortization on intangible assets and property, plant and equipment	Net financial income/(loss)	Income tax expense	Net income/(loss)	Other comprehensive income/(loss)	Total comprehensive income/(loss)
AT DECEMBER 31, 2019							
Transportadora Associada de Gás S.A.	655	(191)	(191)	(52)	88	(121)	(34)
National Central Cooling Company "Tabreed"	370	(41)	(44)	-	105	-	105
EcoÉlectrica	308	(69)	-	(2)	50	-	50
Portfolio of power generation assets in Portugal	426	(67)	(29)	(36)	93	(7)	86
WSW Energie und Wasser AG	729	(12)	(2)	6	(11)	-	(11)
Tihama Power Generation Co	42	(5)	(23)	(8)	54	(8)	46
Ohio State Energy Partners	121	-	(44)	-	4	(20)	(15)
Megal GmbH	123	(69)	(4)	3	4	-	4
Transmisora Eléctrica del Norte	76	-	(30)	(5)	15	(21)	(6)
AT DECEMBER 31, 2018							
Transportadora Associada de Gás S.A.	-	-	-	-	-	-	-
National Central Cooling Company "Tabreed"	335	(34)	(37)	-	100	-	100
EcoÉlectrica	280	(63)	2	(3)	68	-	68
Portfolio of power generation assets in Portugal	749	(65)	(31)	(37)	106	3	109
WSW Energie und Wasser AG	856	(11)	(3)	(19)	35	-	35
Tihama Power Generation Co	111	(5)	(24)	(8)	56	1	57
Ohio State Energy Partners	52	-	(33)	-	10	11	21
Megal GmbH	124	(63)	(4)	2	12	-	12
Transmisora Eléctrica del Norte	75	-	(33)	(5)	14	16	30

Information on the statement of financial position

In millions of euros	Cash and cash equivalents	Other current assets	Non-current assets	Short-term borrowings	Other current liabilities	Long-term borrowings	Other non-current liabilities	Total equity	% interest of Group	Total equity attributable to ENGIE
AT DECEMBER 31, 2019										
Transportadora Associada de Gás S.A.	88	329	7,844	595	88	4,618	629	2,331	58.50	1,364
National Central Cooling Company "Tabreed"	-	143	2,671	13	184	765	-	1,851	40.00	740
EcoÉlectrica	34	97	701	(7)	29	-	21	789	50.00	395
Portfolio of power generation assets in Portugal	232	635	1,039	178	139	770	92	728	50.00	312
WSW Energie und Wasser AG	19	59	805	37	54	94	92	606	33.10	207
Tihama Power Generation Co	56	124	432	69	26	325	13	179	60.00	108
Ohio State Energy Partners	19	1,055	89	343	25	522	43	229	50.00	114
Megal GmbH	6	2	729	210	41	262	62	162	49.00	79
Transmisora Eléctrica del Norte	43	34	774	42	4	645	-	160	50.00	80
AT DECEMBER 31, 2018										
National Central Cooling Company "Tabreed"	65	124	2,574	-	173	816	-	1,775	40.00	710
EcoÉlectrica	24	107	755	3	27	-	23	833	50.00	416
Portfolio of power generation assets in Portugal	231	568	1,305	287	178	763	115	761	50.00	325
WSW Energie und Wasser AG	12	148	778	55	84	101	103	596	33.10	204
WSW Energie und Wasser AG	129	140	488	61	40	370	15	271	60.00	163
Tihama Power Generation Co	16	8	1,039	(6)	7	804	-	257	50.00	129
Megal GmbH	-	13	752	10	56	446	70	185	49.00	91
Transmisora Eléctrica del Norte	66	30	773	75	3	621	-	170	50.00	85

3.2.3 Transactions between the Group and its joint ventures

The data below set out the impact of transactions with joint ventures on the Group's 2019 consolidated financial statements.

In millions of euros	Purchases of goods and services	Sales of goods and services	Net financial income (excluding dividends)	Trade and other receivables	Loans and receivables at amortized cost	Trade and other payables	Borrowings and debt
EcoÉlectrica	-	147	-	18	-	-	-
Portfolio of power generation assets in Portugal	-	-	-	1	128	-	-
WSW Energie und Wasser AG	-	23	-	1	-	1	-
Megal GmbH	65	-	-	-	51	-	-
Futures Energies Investissements Holding	3	19	3	2	207	-	-
Other	(40)	89	8	27	200	6	5
AT DECEMBER 31, 2019	**28**	**278**	**11**	**49**	**585**	**7**	**5**

3.3 Other information on investments accounted for using the equity method

3.3.1 Unrecognized share of losses of associates and joint ventures

Cumulative unrecognized losses of associates (corresponding to the cumulative amount of losses exceeding the carrying amount of investments in the associates concerned) including other comprehensive income/(loss), amounted to €113 million in 2019 (€171 million in 2018). This decrease resulted from (i) unrecognized income relating to fiscal year 2019 amounting to €89 million and (ii) changes in other comprehensive income.

These unrecognized losses correspond to the negative fair value of derivative instruments designated as interest rate and commodity hedges (“Other comprehensive income/(loss)”) contracted by associates in the Middle-East, Africa & Asia reportable segment in connection with the financing of construction projects for power generation plants.

3.3.2 Commitments and guarantees given by the Group in respect of equity method entities

At December 31, 2019, the main commitments and guarantees given by the Group in respect of equity method entities concern:

- Energia Sustentável do Brasil (“Jirau”), for an aggregate amount of BRL 4,210 million (€930 million).
  At December 31, 2019, the amount of loans granted by Banco Nacional de Desenvolvimento Econômico e Social, the Brazilian Development Bank, to Energia Sustentável do Brasil amounted to BRL 10,525 million (€2,325 million). Each partner stands as guarantor for this debt to the extent of its ownership interest in the consortium;

- TAG for performance bonds and other guarantees for an amount of €176 million;

- The project management entities in the Middle East and Africa, for an aggregate amount of €917 million.

  Commitments and guarantees given by the Group in respect of these project management entities chiefly correspond to:
  - an equity contribution commitment (capital/subordinated debt) for €101 million. These commitments only concern entities acting as holding companies for projects in the construction phase,
  - letters of credit to guarantee debt service reserve accounts for an aggregate amount of €200 million. The project financing set up in certain entities can require those entities to maintain a certain level of cash within the company (usually enough to service its debt for six months). This is particularly the case when the financing is without recourse. This level of cash may be replaced by letters of credit,
  - collateral given to lenders in the form of pledged shares in the project management entities, for an aggregate amount of €266 million,
  - performance bonds and other guarantees for an amount of €350 million.

NOTE 4 MAIN CHANGES IN GROUP STRUCTURE

Accounting standards

In accordance with IFRS 5 - *Non-Current Assets Held for Sale and Discontinued Operations*, assets or groups of assets held for sale are presented separately on the face of the statement of financial position and are measured and accounted for at the lower of their carrying amount and fair value less costs to sell.

An asset is classified as "held for sale" when its sale is highly probable within twelve months from the date of classification, when it is available for immediate sale under its present condition and when the management is committed to a plan to sell the asset and an active program to locate a buyer and complete the plan has been initiated. To assess whether a sale is highly probable, the Group takes into consideration among other things indications of interest and offers received from potential buyers as well as specific execution risks attached to certain transactions.

Furthermore, assets or group of assets are presented as discontinued operations in the Group's consolidated financial statements when they are classified as "held for sale" and represent a separate major line of business under IFRS 5.

4.1 Disposals carried out in 2019

The Group unveiled its 2019-2021 strategy on February 28, 2019 and on the same occasion announced a €6 billion asset disposal program as part of its continued transformation.

The table below shows the impact of the main disposals and sale agreements of 2019 on the Group's net debt, excluding partial disposals with respect to DBSO [(1)] activities:

In millions of euros	**Disposal price**	**Reduction in net debt**
Disposal of ENGIE's interest in Glow - Thailand	2,591	2,466
Disposal of German and Dutch coal-fired power plants	213	106
Other disposals that are not material taken individually	606	522
TOTAL	**3,410**	**3,094**

Additional disposals in the process of completion at December 31, 2019 are described in Note 4.2 "Assets held for sale".

4.1.1 Disposal of ENGIE's interest in Glow (Thailand)

On March 14, 2019, the Group completed the sale of its 69.1% interest in Glow to Global Power Synergy Public Company Ltd. (GPSC), having received official approval from Thailand's Energy Regulatory Commission on March 8, 2019. This transaction followed an initial agreement entered into by ENGIE and GPSC in June 2018.

The combined effects of the transaction and of the cash generated by these activities since January 1, 2019 have reduced the Group's net debt by €2,466 million. The disposal gain before tax amounted to €1,580 million in 2019, of which €143 million corresponds to the recycling to the income statement of items from the statement of comprehensive income (translation adjustments for €351 million and hedges for a negative €208 million).

(1) Develop, Build, Share and Operate, a model used in renewable energies based on the continuous rotation of capital employed, for which the impacts of disposals are recorded as deduction from CAPEX within current operating income.

4.1.2 Disposal of ENGIE's interest in coal-fired power plants in Germany and the Netherlands

On November 29, 2019, the Group finalized the disposal to Riverstone Holdings LLC, an international investment fund specializing in energy, of the coal-fired power plants of Farge, Zolling and Wilhelmshaven in Germany and Rotterdam in the Netherlands, with a total installed capacity of 2,345 MW.

This transaction resulted in a €106 million reduction in ENGIE's net debt at December 31, 2019 (and €84 million to be received in 2020). The disposal loss before tax amounted to €26 million at December 31, 2019, following a negative value adjustment of €121 million, mainly corresponding to goodwill.

4.2 Assets held for sale

Total "Assets classified as held for sale" and total "Liabilities directly associated with assets classified as held for sale" amounted to €468 million and €92 million, respectively, at December 31, 2019.

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
Property, plant and equipment, net and intangible assets	378	2,661
Other assets	90	1,137
TOTAL ASSETS CLASSIFIED AS HELD FOR SALE	**468**	**3,798**
Borrowings and debt	26	1,019
Other liabilities	65	1,111
TOTAL LIABILITIES DIRECTLY ASSOCIATED WITH ASSETS CLASSIFIED AS HELD FOR SALE	**92**	**2,130**

(1) Data published at December 31, 2018 was not restated due to the transition approach used when applying IFRS 16 and IFRIC 23 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

The assets related to Glow (Thailand), solar parks in operation by Langa in France, and renewable energy assets in Mexico, recorded in "Assets classified as held for sale" at December 31, 2018, were sold in 2019 (see Note 4.1 "*Disposals carried out in 2019*").

Assets classified as held for sale at December 31, 2019 include renewable energy assets in Mexico and green gas production assets in operation in France. These transactions are expected to be completed in first-half 2020. Given the expected capital gains from the disposal, no value adjustment has been recorded.

4.3 Acquisitions carried out in 2019

4.3.1 Acquisition of a 58.5% interest in Transportadora Associada de Gás S.A. (TAG) in Brazil

In early April 2019, a consortium comprising ENGIE (32.5%), ENGIE Brasil Energia (32.5%) and Caisse de Dépôt et Placement du Québec (CDPQ) (35%), won the bidding process initiated by Petrobras for the acquisition of a 90% interest in Transportadora Associada de Gás S.A. (TAG).

ENGIE therefore holds a 58.5% interest in TAG directly and indirectly, representing a net interest of 49.3% for the Group. The other TAG shareholders are CDPQ with 31.5% and Petrobras, which has retained a 10% stake.

The acquisition price was USD 8.6 billion, of which USD 5.3 billion was financed by debt external to the consortium and USD 2.4 billion by the shareholders. The impact of the acquisition on the Group's net debt was €1.6 billion (including acquisition costs).

The transaction was completed on June 13, 2019.

TAG owns the largest natural gas transportation network in Brazil, a key country in ENGIE's recently unveiled strategy, and will provide the Group with a steady contractual income stream. TAG's assets include 4,500 kilometers of gas pipelines, representing 47% of the country's gas infrastructure.

The Group has joint control over TAG since the decisions about its relevant activities, including for example preparation of the budget and medium-term plan, investments, operations and maintenance, are taken by majority vote requiring the consent of both ENGIE and CDPQ. Consequently, this interest is accounted for using the equity method.

4.3.2 Other transactions in 2019

Various other acquisitions were made in 2019, including OTTO Luft-und Klimatechnik GmbH & Co, a German ventilation installation and services company; SUEZ's nuclear maintenance business (formerly SRA SAVAC); Vol V Biomasse, which operates across the entire biomethane value chain; TIKO, a developer of smart energy management systems for the residential market; a controlling interest in Cofely Besix Facility Management (CBFM); and Conti, an energy services company in North America.

These various acquisitions increased net debt by €1.6 billion.

In addition, on December 19, 2019, the Group and its consortium partners Crédit Agricole Assurances and Mirova (a subsidiary of Natixis Investment Managers) announced that they had won a competitive process conducted by EDP for the acquisition of Portugal’s second largest hydroelectric portfolio. ENGIE owns 40% of the consortium, while Crédit Agricole Assurances and Mirova, through managed funds, own 35% and 25%, respectively. A net debt impact of approximately €650 million is anticipated for ENGIE. This investment will be accounted for using the equity method. Closing of the transaction is expected during the second half of 2020.

Finally, ENGIE has also announced the acquisition of Renvico in Italy, a company that operates in the field of renewable energy, specializing in wind farm management. The closing of the transaction is expected to occur in 2020.

NOTE 5 FINANCIAL INDICATORS USED IN FINANCIAL COMMUNICATION

The purpose of this note is to present the main non-GAAP financial indicators used by the Group as well as their reconciliation with the indicators of the IFRS consolidated financial statements. Published data at December 31, 2018, presented below, were not restated due to the transition method used for the application of IFRS 16 (*see Note 1 "Accounting framework and basis for preparing the consolidated financial statements"* [1]).

5.1 EBITDA

The reconciliation between EBITDA and current operating income including operating MtM and share in net income of equity method entities is as follows:

In millions of euros	Dec. 31, 2019	Dec 31, 2018 [1]
Current operating income including operating MtM and share in net income of equity method entities	**5,300**	**4,903**
Mark-to-market on commodity contracts other than trading instruments	426	223
Net depreciation and amortization/Other	4,497	3,882
Share-based payments (IFRS 2)	51	79
Non-recurring share in net income of equity method entities	93	149
EBITDA	**10,366**	**9,236**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

5.2 Current operating income (COI)

The reconciliation between current operating income (COI) and current operating income including operating MtM and share in net income of equity method entities is as follows:

In millions of euros	Dec. 31, 2019	Dec 31, 2018 [1]
Current operating income including operating MtM and share in net income of equity method entities	**5,300**	**4,903**
(-) Mark-to-market on commodity contracts other than trading instruments	426	223
CURRENT OPERATING INCOME (COI)	**5,726**	**5,126**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

From 2020, the composition of COI will be homogenized with that of EBITDA to exclude, in line with ENGIE's accounting policies, the non-recurring share in net income of equity method entities (negative €93 million in 2019 and negative €149 million in 2018), resulting in an adjusted COI of €5,819 million and €5,275 million at December 31, 2019 and December 31, 2018 respectively.

5.3 Net recurring income Group share

Net recurring income Group share is a financial indicator used by the Group in its financial reporting to present net income Group share adjusted for unusual or non-recurring items.

This financial indicator therefore excludes:

- all items presented between the lines "Current operating income including operating MtM and share in net income of equity method entities" and "Income/(loss) from operating activities", i.e. "Impairment losses", "Restructuring

(1) Comparative data including the impact relating to the application of IFRS 16 are presented in Section 1 of this 2019 Annual Financial Report.

costs", "Changes in scope of consolidation" and "Other non-recurring items". These items are defined in Note 9 "Other items of income/(loss) from operating activities";

- mark-to-market on commodity contracts other than trading instruments;
- the following components of net financial income/(loss): the impact of debt restructuring, compensation payments on the early unwinding of derivative instruments net of the reversal of the fair value of these derivatives that were settled early, changes in the fair value of derivative instruments that do not qualify as hedges under IFRS 9 – *Financial Instruments,* as well as the ineffective portion of derivative instruments that qualify as hedges;
- the income tax impact of the items described above, determined using the statutory income tax rate applicable to the relevant tax entity;
- net non-recurring items included in "Share in net income of equity method entities". The excluded items correspond to the non-recurring items as defined above.

The reconciliation of net income/(loss) with net recurring income Group share is as follows:

In millions of euros	Notes	Dec. 31, 2019	Dec 31, 2018 (1)
NET INCOME/(LOSS) GROUP SHARE		**984**	**1,033**
NET INCOME/(LOSS) RELATING TO DISCONTINUED OPERATIONS, GROUP SHARE		**-**	**1,045**
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS, GROUP SHARE		**984**	**(12)**
Non-controlling interests relating to continued operations		664	572
NET INCOME/(LOSS) RELATING TO CONTINUED OPERATIONS		**1,649**	**560**
Reconciliation items between CURRENT OPERATING INCOME AFTER SHARE IN NET INCOME OF EQUITY METHOD ENTITIES and INCOME/(LOSS) FROM OPERATING ACTIVITIES		**1,623**	**2,258**
Impairment losses	*9.1*	*1,770*	*1,798*
Restructuring costs	*9.2*	*218*	*162*
Changes in scope of consolidation	*9.3*	*(1,604)*	*150*
Other non-recurring items	*9.4*	*1,240*	*147*
Other adjusted items		**154**	**430**
Mark-to-market on commodity contracts other than trading instruments	*8.1*	*426*	*223*
Ineffective portion of derivatives qualified as fair value hedges	*10*	*3*	*3*
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	*10*	*(6)*	*(7)*
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	*10*	*223*	*183*
Non-recurring income/(loss) from debt instruments and equity instruments	*10*	*(115)*	*26*
Other adjusted tax impacts		*(470)*	*(147)*
Non-recurring income/(loss) included in share in net income of equity method entities		*93*	*149*
NET RECURRING INCOME RELATING TO CONTINUED OPERATIONS		**3,426**	**3,248**
Net recurring income relating to continued operations attributable to non-controlling interests		743	790
NET RECURRING INCOME RELATING TO CONTINUED OPERATIONS, GROUP SHARE		**2,683**	**2,458**
Net recurring income/(loss) relating to discontinued operations, Group share		-	(33)
NET RECURRING INCOME GROUP SHARE		**2,683**	**2,425**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

5.4 Industrial capital employed

The reconciliation of industrial capital employed with items in the statement of financial position is as follows:

In millions of euros			Dec. 31, 2019	Dec. 31, 2018 (1)
(+)		Property, plant and equipment and intangible assets, net	58,996	55,635
(+)		Goodwill	18,665	17,809
	(-)	*Goodwill Gaz de France - SUEZ and International Power (2)*	*(7,650)*	*(7,610)*
(+)		IFRIC 4, IFRS 16 and IFRIC 12 receivables	1,737	1,550
(+)		Investments in equity method entities	9,216	7,846
	(-)	*Goodwill arising on the International Power combination (2)*	*(154)*	*(151)*
(+)		Trade and other receivables, net	15,180	15,613
	(-)	*Margin calls (2) (3)*	*(2,023)*	*(1,669)*
(+)		Inventories	3,617	4,158
(+)		Assets from contracts with customers	7,831	7,411
(+)		Other current and non-current assets	10,601	9,811
(+)		Deferred tax	(3,771)	(4,349)
	(+)	*Cancellation of deferred tax on other recyclable items (2)*	*(571)*	*(247)*
(-)		Provisions	(25,115)	(21,813)
	(+)	*Actuarial gains and losses in shareholders' equity (net of deferred tax) (2)*	*3,507*	*2,637*
(-)		Trade and other payables	(19,109)	(19,759)
	(+)	*Margin calls (2) (3)*	*1,996*	*1,681*
(-)		Liabilities from contracts with customers	(4,330)	(3,634)
(-)		Other current and non-current liabilities	(14,298)	(13,507)
INDUSTRIAL CAPITAL EMPLOYED			**54,325**	**51,412**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) For the purpose of calculating industrial capital employed, the amounts recorded in respect of these items have been adjusted from those appearing in the statement of financial position.

(3) Margin calls included in "Trade and other receivables, net" and "Trade and other payables" correspond to advances received or paid as part of collateralization agreements set up by the Group to manage counterparty risk on commodity transactions.

5.5 Cash flow from operations (CFFO)

The reconciliation of cash flow from operations (CFFO) with items in the statement of cash flows is as follows:

In millions of euros	Dec. 31, 2019	Dec 31, 2018 (1)
Cash generated from operations before income tax and working capital requirements	9,863	8,464
Tax paid	(575)	(757)
Change in working capital requirements	(1,110)	149
Interest received on non-current financial assets	28	26
Dividends received on non-current financial assets	67	52
Interest paid	(780)	(727)
Interest received on cash and cash equivalents	82	79
Change in financial assets at fair value through income	(135)	(289)
(+) Change in financial assets at fair value through income recorded in the statement of financial position	*135*	*303*
CASH FLOW FROM OPERATIONS (CFFO)	**7,574**	**7,300**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

5.6 Capital expenditure (CAPEX)

The reconciliation of capital expenditure (CAPEX) with items in the statement of cash flows is as follows:

In millions of euros	Dec. 31, 2019	Dec 31, 2018 (1)
Acquisitions of property, plant and equipment and intangible assets	6,524	6,202
Acquisitions of controlling interests in entities, net of cash and cash equivalents acquired	864	983
(+) Cash and cash equivalents acquired	*229*	*83*
Acquisitions of investments in equity method entities and joint operations	1,746	338
Acquisitions of equity and debt instruments	595	283
Change in loans and receivables originated by the Group and other	532	251
(+) Other	*8*	*11*
Change in ownership interests in controlled entities	12	18
(+) Payments received in respect of the disposal of non-controlling interests	-	-
(-) Disposal impacts relating to DBSO (2) activities	(468)	(526)
TOTAL CAPITAL EXPENDITURE (CAPEX)	**10,042**	**7,643**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements"), but now includes the impact of disposals carried out in the context of the Group's DBSO activities.

(2) Develop, Build, Share & Operate.

5.7 Net financial debt

The reconciliation of net financial debt with items in the statement of financial position is as follows:

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 (1)
(+) Long-term borrowings	16.2 & 16.3	30,002	26,434
(+) Short-term borrowings	16.2 & 16.3	8,543	5,745
(+) Derivative instruments - carried in liabilities	16.4	15,575	14,295
(-) Derivative instruments hedging commodities and other items		*(15,350)*	*(13,970)*
(-) Other financial assets	16.1	(9,568)	(8,483)
(+) Loans and receivables at amortized cost not included in net financial debt		*4,870*	*3,844*
(+) Equity instruments at fair value		*1,297*	*1,107*
(+) Debt instruments at fair value not included in net financial debt		*1,899*	*1,551*
(-) Cash and cash equivalents	16.1	(10,519)	(8,700)
(-) Derivative instruments - carried in assets	16.4	(14,272)	(13,372)
(+) Derivative instruments hedging commodities and other items		*13,443*	*12,652*
NET FINANCIAL DEBT		**25,919**	**21,102**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

5.8 Economic net debt

Economic net debt is as follows:

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 (1)
NET DEBT	16	**25,919**	**21,102**
Future minimum operating lease payments (2)			2,087
Provisions for back-end of the nuclear fuel cycle	19	7,611	6,170
Provisions for dismantling of plant and equipment	19	7,329	6,081
Provisions for site rehabilitation	19	237	222
Post-employment benefit - Pension	20	2,427	1,970
(-) Infrastructures regulated companies		*(93)*	*60*
Post-employment benefit - Reimbursement rights	20	(160)	(167)
Post-employment benefit - Other benefits	20	5,001	4,293
(-) Infrastructures regulated companies		(3,080)	(2,572)
Deferred tax assets for pension and related obligations	11	(1,635)	(1,374)
(-) Infrastructures regulated companies		759	601
Plan assets relating to nuclear provisions, inventories of uranium and a receivable of Electrabel towards EDF Belgium	16 & 24	(3,236)	(2,884)
ECONOMIC NET DEBT		**41,078**	**35,590**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

(2) As from January 1, 2019, commitments related to lease liabilities are included in net debt due to the application of IFRS 16.

NOTE 6 SEGMENT INFORMATION

6.1 Strengthening of ENGIE's organizational structure

In the first half of 2019, ENGIE unveiled its ambition to become the world leader in the zero carbon transition for its customers and announced measures to strengthen its organizational structure in order to accelerate the implementation of its strategy.

The Group has kept its current decentralized organizational structure based on 24 Business Units (BUs), which are essentially geographical, in order to remain close to its customers and foster initiative, and has strengthened this structure by creating four new Global Business Lines (GBLs): Client Solutions, Networks, Renewables and Thermal.

The role of these GBLs is to support the local teams and encourage cross-cutting performance by proposing an inter-BU strategy for their business, contributing to decisions on the allocation of resources between BUs, identifying and managing the key cross-cutting digital and excellence programs, identifying and implementing worldwide partnerships, and supporting, measuring and presenting the global performance of their business activities. These GBLs plus the Supply and Nuclear business activities form the Group's six core Business Lines (BLs).

The Group now operates on a matrix structure with the BUs forming the primary axis and the BLs the secondary axis.

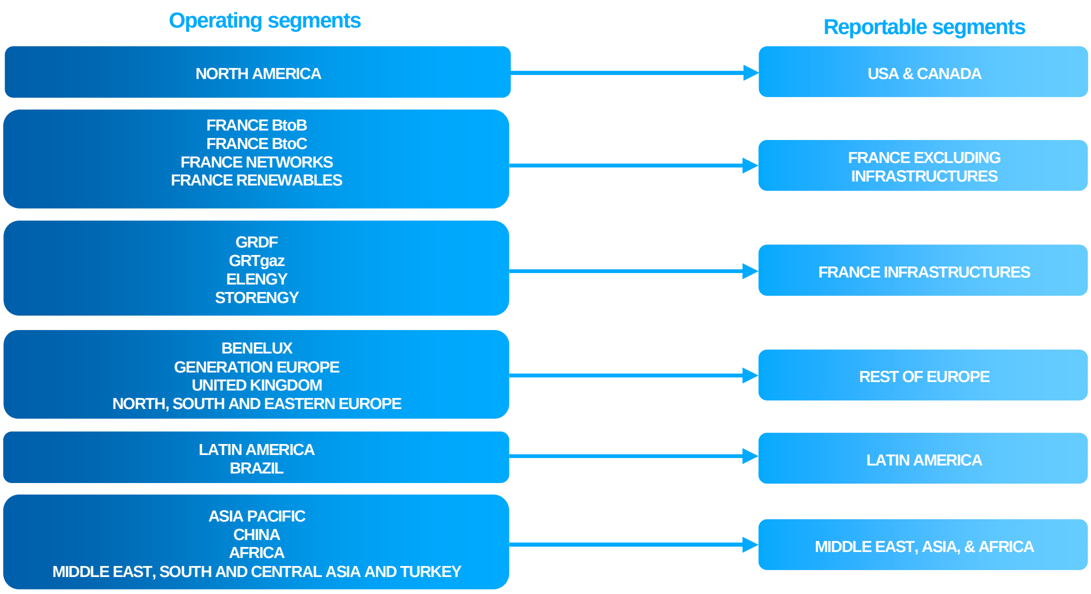
6.2 Operating segments and reportable segments

6.2.1 Definition of reportable segments

In accordance with IFRS 8, the Group has redefined its reportable and operating segments following these organizational developments and the deep changes to the BU business portfolios upon completion of the 2016-2018 transformation plan.

Each BU corresponds to an "operating segment" whose operational and financial performance is regularly reviewed by the Group's Executive Committee, which remains the Group's "chief operating decision maker" within the meaning of IFRS 8. The 24 BUs have now been regrouped into seven reportable segments reflecting the geographic areas where the Group operates:

- one reportable segment corresponding to the USA & Canada operating segment;
- five reportable segments corresponding to groups of operating segments;



- furthermore “Others” comprises operating segments that cannot be grouped together (Global Energy Management, Tractebel, GTT, Hydrogen) as well as the activities of *Entreprises & Collectivités (E&C)* due to the specificity of their businesses and markets or due to their particular risk profile, as well as the Group’s holding and corporate activities.

In order to determine how to group together the operating segments, as set out above, the Group exercised its judgment to decide whether two or more operating segments could be grouped together in the same reportable segment. The following key factors were examined to assess the similarity of the operating segments’ economic characteristics:

- nature of business and services;
- regulatory environment;
- economic environment in which the relevant activities operate (market maturity, growth prospects, political risks, etc.);
- risk profiles of the activities;
- how the activities fit into the Group’s strategy and new business model.

The Group decided to organize the operating segments within the reportable segments for the following reasons:

- the France BtoB, France BtoC, France Networks and France Renewables operating segments have been grouped together within the **France excluding Infrastructures** reportable segment, which encompasses all the French downstream energy businesses (energy services and gas and electricity sales and distribution to BtoB, BtoT and BtoC customers), and the increasingly decentralized renewable energy generation activities. These are complementary unregulated businesses that are supported by a well-developed local network and primarily aim to develop a combined offering for local customers: energy services, decentralized production resources and combined gas and electricity supply contracts. These BUs also operate within an environment driven by the “energy transition for green growth” law (LTECV);
- the GRDF, GRTgaz, Storengy and Elengy operating segments, which comprise the gas infrastructure businesses in Europe (distribution, transport, storage and LNG terminals), have been grouped together within the **France Infrastructures** reportable segment, as they are all regulated businesses with similar risk profiles and margins;
- the Benelux, Generation Europe, United Kingdom and North, South and Eastern Europe operating segments have been grouped together within the **Rest of Europe** reportable segment as these BUs, which comprise all of the Group’s European energy activities excluding France, have a similar business mix (energy production, supply, sale and services), operate in mature energy markets, and are undergoing transformation as part of the energy transition, with rapid development in renewable energy and client solutions;
- the Latin America and Brazil operating segments have been grouped together within the **Latin America** reportable segment, as these segments share similar growth prospects with a substantial proportion of their revenue generated by electricity sales under long-term agreements;
- the Asia-Pacific, China, Africa and Middle East, Southern and Central Asia and Turkey operating segments have been grouped together within the **Middle East, Asia & Africa** reportable segment, as all these regions have high power generation requirements and consequently represent significant growth prospects for the Group in the energy and energy services businesses. They operate in markets driven by the energy transition, with rapid development in renewable energy and client solutions.

6.2.2 Description of reportable segments

- **France excluding Infrastructures**: encompasses the activities of the following BUs: (i) France BtoB: energy sales and services for buildings and industry, cities and regions and major infrastructures, (ii) France BtoC: sales of energy and related services to individual and professional customers, (iii) France Renewables: development, construction, financing, operation and maintenance of all renewable power generation assets in France and (iv) France Networks, which designs, finances, builds and operates decentralized energy production and distribution facilities (heating and cooling networks).
- **France Infrastructures**: encompasses the GRDF, GRTgaz, Elengy and Storengy BUs, which operate natural gas transportation, storage and distribution networks and facilities, and LNG terminals, mainly in France. They also sell access rights to these terminals.

- **Rest of Europe**: encompasses the activities of the following BUs: (i) Benelux (Group's business in Belgium, Netherlands and Luxembourg: nuclear and renewable electricity generation, sales of natural gas and electricity and energy services activities), (ii) Generation Europe, which comprises the Group's thermal electricity generation activities in Europe, (iii) United Kingdom (management of renewable energy generation assets and the portfolio of distribution assets, supply of energy services and solutions, etc.) and (iv) North, South and Eastern Europe (sales of natural gas and electricity and related energy services and solutions, operation of renewable energy generation assets, management of distribution networks).
- **Latin America**: encompasses the activities of (i) the Brazil BU and (ii) the Latin America BU (Argentina, Chile, Mexico and Peru). The subsidiaries concerned are involved in centralized power generation, including renewable energy, gas chain activities (including infrastructure), and energy services.
- **USA & Canada**: encompasses power generation, energy services and natural gas and electricity sales activities in the United States, Canada and Puerto Rico.
- **Middle East, Asia & Africa**: encompasses the activities of the following BUs: (i) Asia-Pacific (Australia, New Zealand, Thailand, Singapore and Indonesia), (ii) China, (iii) Africa (mainly Morocco and South Africa) and (iv) the Middle East, South and Central Asia and Turkey (including India and Pakistan). In all of these regions, the Group is active in electricity generation and sales, gas distribution and sales, energy services and seawater desalination in the Arabian Peninsula.
- **Others**: encompasses the activities of (i) GEM, whose role is to manage and optimize, on behalf of the BUs that hold power generation assets, the Group's physical and contractual asset portfolios (excluding gas infrastructure), particularly in the European market, to sell energy to major pan-European and national industrial companies, and to provide solutions related to its expertise in the financial energy markets to third parties, (ii) Tractebel (engineering companies specialized in energy, hydraulics and infrastructure), (iii) GTT (specialized in the design of cryogenic membrane confinement systems for sea transportation and storage of LNG, both onshore and offshore), (iv) Hydrogen (design of renewable hydrogen-based zero carbon energy solutions), as well as (v) the Group's holding and corporate activities which include the entities centralizing the Group's financing requirements, *Entreprises & Collectivités* (E&C) and the contribution of the associate SUEZ.

The main commercial relationships between the reportable segments are as follows:

- relationships between the "France Infrastructures" reportable segment and the users of those infrastructures, i.e. the "France excluding Infrastructures" and "Others" (GEM and E&C) reportable segments: services relating to the use of the Group's gas infrastructures in France are billed based on regulated rates (or revenues) applicable to all users. Revenue and margins related to GRDF business continue to fall within the scope of "France Infrastructures";
- relationships between the "Others" (GEM) reportable segment and the "France excluding Infrastructures" and "Rest of Europe" reportable segments: GEM manages the Group's natural gas supply contracts and sells gas at market prices to commercial companies within the "France excluding Infrastructures" and "Rest of Europe" reportable segments. As regards electricity, GEM manages and optimizes the power stations and sales portfolios on behalf of entities that hold power generation assets and deducts a percentage of the energy margin in return for providing these services. The revenue and margins related to power generation activities (minus the percentage deducted by GEM) are reported by the segments that hold power generation assets ("France excluding Infrastructures" and "Rest of Europe");
- relationships between the "Generation Europe" operating segment, which is part of the "Rest of Europe" reportable segment, and the commercial entities in the "France excluding Infrastructures" reportable segment: a portion of the power generated by thermal assets within the "Generation Europe" BU is sold to commercial entities from these segments at market prices.

Due to the variety of its businesses and their geographical location, the Group serves a very diverse range of situations and customer types (industry, local authorities and individual customers). Accordingly, no external customer represents individually 10% or more of the Group's consolidated revenues.

6.2.3 Key indicators by reportable segment [1]

In accordance with IFRS 8, comparative segment information at December 31, 2018 has been restated in order to present this information in accordance with the new segment structure introduced by the Group on January 1, 2019.

However, it has not been restated due to the transition method used for the application of IFRS 16 (*see Note 1 "Accounting framework and basis for preparing the consolidated financial statements"*), in accordance with the transition options of the standard, applicable as from January 1, 2019.

REVENUES

	Dec. 31, 2019 (1)			Dec. 31, 2018 (1)		
In millions of euros	External revenues	Intra-Group Revenues	Total	External revenues	Intra-Group Revenues	Total
France excluding Infrastructures	15,854	334	16,188	14,998	188	15,186
France Infrastructures	5,569	979	6,548	5,450	1,125	6,575
Total France	*21,423*	*1,313*	*22,736*	*20,448*	*1,312*	*21,760*
Rest of Europe	17,270	1,488	18,758	16,946	1,770	18,716
Latin America	5,341	1	5,342	4,639	-	4,639
USA & Canada	4,545	1	4,547	3,355	62	3,417
Middle East, Asia & Africa	2,914	-	2,914	4,014	4	4,018
Others	8,565	5,995	14,560	7,565	6,332	13,897
Elimination of internal transactions	-	(8,798)	(8,798)	-	(9,481)	(9,481)
TOTAL REVENUES	**60,058**	**-**	**60,058**	**56,967**	**-**	**56,967**

(1) Data presented at December 31, 2019 have been prepared in accordance with the new income statement presentation adopted by the Group. Comparative data at December 31, 2018 have been reclassified in accordance with this new presentation (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

EBITDA

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
France excluding Infrastructures	1,672	1,670
France Infrastructures	3,539	3,499
Total France	5,211	5,168
Rest of Europe	1,750	973
Latin America	2,221	1,775
USA & Canada	291	224
Middle East, Asia & Africa	727	1,122
Others	166	(27)
TOTAL EBITDA (2)	**10,366**	**9,236**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) EBITDA at December 31, 2019 includes the impact of IFRS 16 (cancellation of leases) in an amount of around €0.4 billion.

(1) Comparable data including the impact related to the first-time application of IFRS 16 are presented in Section 1 of this 2019 Annual Financial Report.

DEPRECIATION AND AMORTIZATION

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
France excluding Infrastructures	(761)	(628)
France Infrastructures	(1,581)	(1,479)
Total France	(2,343)	(2,106)
Rest of Europe	(1,041)	(928)
Latin America	(523)	(416)
USA & Canada	(127)	(72)
Middle East, Asia & Africa	(102)	(134)
Others	(360)	(225)
TOTAL DEPRECIATION AND AMORTIZATION	**(4,497)**	**(3,882)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

SHARE IN NET INCOME OF EQUITY METHOD ENTITIES

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
France excluding Infrastructures	17	1
France Infrastructures	3	12
Total France	20	13
Rest of Europe	55	89
Latin America	8	(25)
USA & Canada	60	75
Middle East, Asia & Africa	246	166
Others	111	42
Of which share in net income of SUEZ	*113*	*55*
TOTAL SHARE IN NET INCOME OF EQUITY METHOD ENTITIES	**500**	**361**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

Associates and joint ventures account for €255 million and €245 million respectively of share in net income of equity method entities at December 31, 2019, compared to €88 million and €273 million in 2018.

CURRENT OPERATING INCOME (COI)

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
France excluding Infrastructures	903	1,035
France Infrastructures	1,957	2,016
Total France	2,861	3,051
Rest of Europe	684	37
Latin America	1,694	1,355
USA & Canada	159	151
Middle East, Asia & Africa	559	893
Others	(231)	(362)
TOTAL CURRENT OPERATING INCOME (COI)	**5,726**	**5,126**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

INDUSTRIAL CAPITAL EMPLOYED

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
France excluding Infrastructures	7,143	6,306
France Infrastructures	20,172	19,802
Total France	27,315	26,107
Rest of Europe	1,797	3,563
Latin America	11,462	9,897
USA & Canada	3,717	2,494
Middle East, Asia & Africa	3,633	3,553
Others	6,401	5,796
Of which SUEZ equity value	*2,027*	*2,018*
TOTAL INDUSTRIAL CAPITAL EMPLOYED	**54,325**	**51,412**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

CAPITAL EXPENDITURE (CAPEX)

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
France excluding Infrastructures	1,019	853
France Infrastructures	1,745	1,619
Total France	2,764	2,472
Rest of Europe	1,439	1,430
Latin America	2,499	1,758
USA & Canada	1,380	918
Middle East, Asia & Africa	453	616
Others	1,506	449
TOTAL CAPITAL EXPENDITURE (CAPEX)	**10,042**	**7,643**

6.3 Key indicators by Business Line

6.3.1 Definition of Business Lines

- **Client Solutions** (excluding BtoC clients): encompasses services and service packages such as design, engineering, works, operation, installation, maintenance and facility management, as well as asset management activities such as heating and cooling networks, dedicated energy generation assets (decentralized energy delivered directly to the client). It also includes the Group's interest in the SUEZ group.
- **Networks**: comprises the Group's electricity and gas infrastructure activities and projects. These activities include the management and development of (i) gas and electricity transportation networks in Europe and Latin America and natural gas distribution networks in Europe, Asia and the American continent, (ii) natural gas underground storage in Europe, and (iii) regasification infrastructure in France and Chile. Apart from the historical infrastructure management activities, its asset portfolio also contributes to the challenges of energy decarbonization and network greening (gradual integration of green gas, hydrogen based projects, geothermal projects, energy as a service, etc.).
- **Renewables**: comprises all centralized renewable energy generation activities, including financing, construction and operation of renewable energy facilities, using various energy sources such as hydroelectric, onshore wind, photovoltaic solar, biomass, offshore wind, geothermal and biogas. The energy produced is fed into the grid and sold either on the open or regulated market or through electricity sale agreements.
- **Thermal**: encompasses all the Group's centralized energy generation activities using thermal assets, whether contracted or not. It includes the operation of power plants fueled mainly by gas and coal, as well as pump-operated storage plants. The energy produced is fed into the grid and sold either on the open or regulated market or through electricity sale agreements. It includes the financing, construction and operation of desalination plants, whether or not connected to power plants.
- **Nuclear**: encompasses all of the Group's nuclear power generation activities, with seven reactors in Belgium (four in Doel and three in Tihange) and drawing rights in France.
- **Supply**: encompasses all the Group's activities relating to the sale of gas and electricity to end customers, whether professional or individual. It also includes all the Group's activities in services for residential clients.

Others encompasses (i) energy management and optimization activities, (ii) the GTT BU, and (iii) corporate and holding activities.

6.3.2 Key indicators by Business Line

EBITDA

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
Client Solutions	1,835	1,511
Networks	4,024	3,975
Renewables	1,725	1,575
Thermal	1,765	2,025
Nuclear	192	(555)
Supply	639	764
Others	186	(58)
TOTAL EBITDA	**10,366**	**9,236**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

CURRENT OPERATING INCOME (COI)

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
Client Solutions	1,090	982
Networks	2,327	2,399
Renewables	1,190	1,105
Thermal	1,260	1,455
Nuclear	(314)	(1,051)
Supply	345	537
Others	(172)	(302)
TOTAL CURRENT OPERATING INCOME (COI)	**5,726**	**5,126**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

CAPITAL EXPENDITURE (CAPEX)

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Client Solutions	1,621	1,537
Networks	3,446	1,814
Renewables	2,488	1,986
Thermal	517	813
Nuclear	636	750
Supply	457	454
Others	876	289
TOTAL CAPITAL EXPENDITURE (CAPEX)	**10,042**	**7,643**

6.4 Key indicators by geographic area

The amounts set out below are analyzed by:

- destination of products and services sold for revenues;
- geographic location of consolidated companies for industrial capital employed.

	Revenues (1)		Industrial capital employed	
In millions of euros	Dec. 31, 2019	Dec. 31, 2018	Dec. 31, 2019	Dec. 31, 2018 (2)
France	24,223	23,661	31,831	30,543
Belgium	5,894	5,098	(6,026)	(3,254)
Other EU countries	14,631	14,196	8,363	7,188
Other European countries	989	815	490	386
North America	5,273	3,838	4,419	2,881
Asia, Middle East & Oceania	3,867	4,776	3,355	3,337
South America	4,759	4,197	10,920	9,515
Africa	422	385	971	816
TOTAL	**60,058**	**56,967**	**54,325**	**51,412**

(1) Data presented at December 31, 2019 have been prepared in accordance with the new income statement presentation adopted by the Group. Comparative data at December 31, 2018 have been reclassified in accordance with this new presentation (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NOTE 7 REVENUES

7.1 Revenues

Accounting standards

Revenues from contracts with customers concern revenues from contracts that fall within the scope of IFRS 15. Revenues are recognized when the customer obtains control of goods or services promised in the contract, for the amount of consideration to which an entity expects to be entitled in exchange for said promised goods or services.

A contractual analysis of the Group's sale contracts has led to the application of the following revenue recognition principles.

- **Gas, electricity and other energies**
  Revenues from sales of gas, electricity and other energies are recognized upon delivery of the power to the retail, business or industrial customer.
  Power deliveries are monitored in real time or on a deferred basis for those customers whose energy consumption is metered during the accounting period, in which case the portion of not yet metered revenues "in the meter" is estimated on the closing date.

- **Gas, electrical and other energy infrastructures**
  Revenues derived by gas and electricity infrastructure operators upon providing transportation or distribution or storage capacities, are recognized on a straight-line basis over the contract term.
  In the countries where the Group acts as an energy provider (supplier) without being in charge of its distribution or transportation, mainly in France and Belgium, an analysis of the energy sales contracts and of the related regulatory framework is carried out to determine whether the distribution or transportation services invoiced to the customers have to be excluded from the revenues recognized under IFRS 15.
  Judgment may be exercised by the Group for this analysis in order to determine whether the energy provider acts as an agent or a principal for the gas or electricity distribution or transportation services re-invoiced to the customers. The main criteria used by the Group to exercise its judgment and conclude, in certain countries, that the energy provider acts as an agent of the infrastructure operator are as follows: who is primarily responsible for fulfillment of the distribution or transportation services? Does the energy provider have the ability to commit to capacity reservation contracts towards the infrastructure operator? To what extent does the energy provider have discretion in establishing the price for the distribution or transportation services?

- **Constructions, installations, Operations and Maintenance (O&M), facility management (FM) and other services**
  Constructions and installations contracts mainly concern assets built on the premises of customers such as cogeneration units, heaters or other energy-efficiency assets. The related revenues are usually recognized according to the percentage of completion on the basis of the costs incurred.
  O&M contracts generally require the Group to perform services ensuring the availability of assets generating energy. These services are performed over time and the related revenues are recognized according to the percentage of completion on the basis of the costs incurred.
  FM generally involves managing and integrating a great number of different services, outsourced by customers. The consideration due to FM suppliers can either be fixed or variable depending on the number of hours or on another indicator, irrespective of the nature of the services provided. Hence, the related revenues are recognized according to the percentage of completion on the basis of the costs incurred or of the number of hours performed.

If it is not possible to conclude from the contractual analysis that the contract falls within the scope of IFRS 15, the revenues are then accounted for as non-IFRS 15 revenues.

Revenues from other contracts, corresponding to revenues from operations that do not fall within the scope of IFRS 15, presented in the "Others" column include lease or concession income, as well as any financial component of operating services.

The table below shows a breakdown of revenues by type of accounting principles:

In millions of euros	Sales of gas	Sales of electricity and other energies	Sales of services linked to infrastructures	Constructions, installations, O&M, FM and other services	Others	Dec. 31, 2019 (1)
France excluding Infrastructures	3,207	4,160	144	8,338	5	**15,854**
France Infrastructures	64	1	5,265	218	22	**5,569**
Total France	*3,271*	*4,160*	*5,409*	*8,556*	*27*	***21,423***
Rest of Europe	3,147	6,403	331	7,323	66	**17,270**
Latin America	559	3,840	351	457	134	**5,341**
USA & Canada	465	2,734	2	1,342	3	**4,545**
Middle East, Asia & Africa	446	1,293	21	1,053	101	**2,914**
Others	3,464	3,303	130	1,050	619	**8,565**
TOTAL REVENUES	**11,351**	**21,732**	**6,244**	**19,781**	**949**	**60,058**

In millions of euros	Sales of gas	Sales of electricity and other energies	Sales of services linked to infrastructures	Constructions, installations, O&M, FM and other services	Others	Dec. 31, 2018 (1)
France excluding Infrastructures	3,164	4,040	105	7,684	5	**14,998**
France Infrastructures	155	-	5,092	200	3	**5,450**
Total France	*3,318*	*4,040*	*5,197*	*7,885*	*9*	***20,448***
Rest of Europe	3,237	6,398	410	6,845	55	**16,946**
Latin America	461	3,522	322	197	138	**4,639**
USA & Canada	592	1,858	-	900	5	**3,355**
Middle East, Asia & Africa	452	2,605	31	806	121	**4,014**
Others	3,835	2,231	117	908	473	**7,565**
TOTAL REVENUES	**11,895**	**20,654**	**6,077**	**17,540**	**801**	**56,967**

(1) Data presented at December 31, 2019 have been prepared in accordance with the new income statement presentation adopted by the Group. Comparative data at December 31, 2018 have been reclassified in accordance with this new presentation (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

7.2 Trade and other receivables, assets and liabilities from contracts with customers

Accounting standards

On initial recognition, trade and other receivables are recorded at their transaction price as defined in IFRS 15.

A contract asset is an entity's right to consideration in exchange for goods or services that have been transferred to a customer but for which payment is not yet due or is contingent on the satisfaction of a specific condition stipulated in the contract. When an amount becomes due, it is transferred to receivables.

A receivable is recorded when the entity has an unconditional right to consideration. A right to consideration is unconditional if only the passage of time is required before payment of that consideration.

A contract liability is an entity's obligation to transfer goods or services to a customer for which the entity has already received consideration from the customer. The liability is derecognized upon recognition of the corresponding revenue.

Trade and other receivables and assets from contracts with customers are tested for impairment in accordance with the provisions of IFRS 9 on expected credit losses.

The impairment model for financial assets is based on the expected credit loss model. To calculate expected losses, the Group uses a matrix approach for trade receivables and assets from contracts with customers, for which the change in credit risk is monitored on a portfolio basis. An individual approach is used for large customers and other large counterparties, for which the change in credit risk is monitored on an individual basis.

See Note 17 “Risks arising from financial instruments” for the Group’s assessment of counterparty risk.

7.2.1 Trade and other receivables and assets from contracts with customers

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Trade and other receivables, net	15,180	15,613
Of which IFRS 15	*7,385*	*7,552*
Of which non-IFRS15	*7,795*	*8,060*
Assets from contracts with customers	7,831	7,411
Accrued income and unbilled revenues	*6,783*	*6,377*
Energy in the meter (1) (2)	*1,048*	*1,034*

(1) i.e. 1.7% of annual revenues.
(2) Net of advance payments.

In 2019, the segments reporting the greatest amounts of assets from contracts were France excluding Infrastructures (€2,884 million, mainly in France BtoB and BtoC), Rest of Europe (€2,708 million, mainly in Benelux, Germany and the United Kingdom) and Others (€1,017 million mainly BU GEM).

	Dec. 31, 2019			Dec. 31, 2018		
In millions of euros	Gross	Allowances and expected credit losses	Net	Gross	Allowances and expected credit losses	Net
Trade and other receivables, net	16,277	(1,097)	15,180	16,689	(1,076)	15,613
Assets from contracts with customers	7,848	(17)	7,831	7,419	(8)	7,411
TOTAL	**24,125**	**(1,114)**	**23,011**	**24,108**	**(1,085)**	**23,023**

Gas and electricity in the meter

For customers whose energy consumption is metered during the accounting period, the gas supplied but not yet metered at the reporting date is estimated based on historical data, consumption statistics and estimated selling prices.

For sales on networks used by a large number of grid operators, the Group is allocated a certain volume of energy transiting through the networks by the grid managers. As the final allocations are sometimes only known several months down the line, revenue figures cannot be determined with absolute certainty. However, the Group has developed measuring and modeling tools allowing it to estimate revenues with a reasonable degree of accuracy and subsequently ensure that risks of error associated with estimating quantities sold and the related revenues can be considered as immaterial.

In France and Belgium, un-metered revenues (“gas in the meter”) are calculated using a direct method taking into account customers’ estimated consumption based on the last invoice or metering not yet billed. These estimates are in line with the volume of energy allocated by the grid managers over the same period. The average price is used to measure “gas in the meter” and takes account of the category of customer and the age of the delivered unbilled “gas in the meter”. The portion of unbilled revenues at the reporting date varies according to the assumptions about volume and average price.

“Electricity in the meter” is also determined using a direct allocation method similar to that used for gas, but taking into account specific factors related to electricity consumption. It is also measured on a customer-by-customer basis or by customer type.

Realized but not yet metered revenues ("un-metered revenues") mainly related to France and Belgium for an amount of €3,275 million at December 31, 2019 (€3,108 at December 31, 2018).

7.2.2 Liabilities from contracts with customers

	Dec. 31, 2019			Dec. 31, 2018		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total
Liabilities from contracts with customers	45	4,286	4,330	36	3,598	3,634
Advances and downpayments received	*11*	*2,190*	*2,201*	-	*1,713*	*1,713*
Deferred revenues	*34*	*2,096*	*2,129*	*36*	*1,885*	*1,921*

In 2019, the segments reporting the greatest amounts of revenues recognized over time are France excluding Infrastructures (€2,382 million, mainly in France BtoB and BtoC) and Rest of Europe (€1,295 million, mainly in Benelux, Germany and the United Kingdom).

7.3 Revenues relating to performance obligations not yet satisfied

Revenues relating to performance obligations only partially satisfied at December 31, 2019 amounted to €16,792 million. They mainly concern the United Kingdom (€7,441 million) and France BtoB (€5,052 million) BUs. These BUs handle a large number of construction, installation, maintenance and facility management contracts under which revenues are recognized over time. The Benelux, Tractebel Engineering and North, South and Eastern Europe BUs will also be recognizing revenues over the next three years for performance obligations satisfied over time.

NOTE 8 OPERATING EXPENSES

Accounting standards

Operating expenses include:

- purchases and commodity hedges including:
  - the purchase of commodities and associated costs (infrastructure, transport, storage, etc.),
  - the realized impact, as well as the change in fair value (MtM), of commodity transactions, with or without physical delivery, that fall within the scope of IFRS 9 - *Financial Instruments* and that do not qualify as trading or hedging. These contracts are set up as part of economic hedges of operating transactions in the energy sector;
- purchases of services and other items such as subcontracting and interim expenses, lease expenses (short-term lease contracts or leases with low underlying asset value), concession expenses, etc.;
- personnel costs;
- depreciation, amortization, and provisions; and
- taxes.

8.1 Purchases and operating derivatives

In millions of euros	Dec. 31, 2019 (1)	Dec. 31, 2018 (1)(2)
Purchases and other income and expenses on operating derivatives other than trading (3)	(29,340)	(28,431)
Service and other purchases (4)	(10,609)	(10,229)
PURCHASES AND OPERATING DERIVATIVES	**(39,950)**	**(38,660)**

(1) Data presented at December 31, 2019 have been prepared in accordance with the new income statement presentation adopted by the Group. Comparative data at December 31, 2018 have been restated in accordance with this new definition (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

(2) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

(3) Of which a net expense of €426 million at December 31, 2019 relating to MtM on commodity contracts other than trading (compared to a net expense of €223 million at December 31, 2018).

(4) Of which €258 million in lease expenses, relating to short term lease contracts and leases with a low underlying asset value, accounted for in accordance with IFRS 16 at December 31, 2019 (compared to €828 million lease expenses accounted for in accordance with IAS 17 at December 31, 2018).

8.2 Personnel costs

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018
Short-term benefits		(10,933)	(9,998)
Share-based payments	21	(56)	(86)
Costs related to defined benefit plans	20.3.4	(368)	(407)
Costs related to defined contribution plans	20.4	(121)	(133)
PERSONNEL COSTS		**(11,478)**	**(10,624)**

8.3 Depreciation, amortization and provisions

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018 [1]
Depreciation and amortization	14 & 15	(4,497)	(3,882)
Net change in write-downs of inventories, trade receivables and other assets		(104)	-
Net change in provisions	19	208	296
DEPRECIATION, AMORTIZATION AND PROVISIONS		**(4,393)**	**(3,586)**

At December 31, 2019, depreciation and amortization mainly break down as €943 million for intangible assets and €3,554 million for property, plant and equipment.

NOTE 9 OTHER ITEMS OF INCOME/(LOSS) FROM OPERATING ACTIVITIES

Accounting standards

Other items of Income/(loss) from operating activities include:

- "Impairment losses" include impairment losses on goodwill, other intangible assets, property, plant and equipment and investments in entities consolidated using the equity method of accounting;
- "Restructuring costs" concern costs corresponding to a restructuring program planned and controlled by management that materially changes either the scope of a business undertaken by the entity, or the manner in which that business is conducted, based on the criteria set out in IAS 37;
- "Changes in the scope of consolidation". This line includes:
  - direct costs related to acquisitions of controlling interests,
  - in a business combination achieved in stages, remeasurement at fair value at the acquisition date of the previously held interest,
  - subsequent changes in the fair value of contingent consideration,
  - gains or losses from disposals of investments which result in a change of consolidation method, as well as any impact from the remeasurement of retained interests with the exception of gains and losses arising from transactions realized in the framework of "Develop, Build, Share & Operate" (DBSO) or "Develop, Share, Build & Operate" (DSBO) business models. These transactions on renewable activities are recognized in current operating income as they are part of the recurring rotation of the Group's capital employed;
- "Other non-recurring items" notably include gains and losses on disposals of non-current assets.

9.1 Impairment losses

In millions of euros	Notes	Dec. 31, 2019	Dec. 31, 2018
Impairment losses:			
Goodwill	13.1	(116)	(14)
Property, plant and equipment and other intangible assets	14 & 15	(1,735)	(1,609)
Investments in equity method entities and related provisions		-	(209)
TOTAL IMPAIRMENT LOSSES		**(1,851)**	**(1,831)**
Reversal of impairment losses:			
Property, plant and equipment and other intangible assets		61	33
Investments in equity method entities and related provisions		20	-
TOTAL REVERSALS OF IMPAIRMENT LOSSES		**81**	**33**
TOTAL		**(1,770)**	**(1,798)**

Net impairment losses amounted to €1,770 million in 2019, relating to property, plant and equipment and goodwill. After taking into account the deferred tax effects and the share of impairment losses attributable to non-controlling interests, the impact of these impairment losses on net income Group share for 2019 amounted to €1,579 million.

Impairment tests are performed in accordance with the conditions described in Note 13.3.

9.1.1 Impairment losses recognized in 2019

Net impairment losses amounted to €1,770 million in 2019 and mainly concerned:

- **Belgian nuclear power assets**

  As a result of continued investment in extending the operating life of the nuclear power plants to 50 years and the increase in dismantling assets related to the revision of dismantling provisions (*see Note 19.2 "Nuclear dismantling liabilities"*), the carrying amount of the nuclear power plants increased significantly in 2019 in a context of falling prices. Given the impairment losses recognized in the past (*see Note 10.2.1 to the consolidated financial statements for the year ended December 31, 2018*), nuclear assets were tested for impairment distinguishing between nuclear power plants where there is no longer any possibility of extending their operating life and those whose operating life may still be extended beyond 2025.

  In these conditions, the Group has updated its forecasts in line with the maintenance schedule for nuclear power plants reviewed for the next three years and in line with the adaptation of their management method as they approach the end of their lifetime. The Group recognized impairment losses of €1,023 million in 2019 against plants whose operating life may no longer be extended, including €639 million in respect of dismantling assets corresponding to the increase in nuclear dismantling provisions.

- **Other impairment losses**

  Other impairment losses recognized by the Group mainly concerned:

  - thermal power generation assets in Latin America for €165 million, following the anticipated shutdown of these plants;
  - the decision to mothball a thermal power generation asset in the Middle East for €135 million, in an unfavorable economic environment;
  - the intangible asset of €111 million corresponding to the France BtoC client portfolio value. This value was affected by the 2019 law, which enacts the end of regulated gas tariffs from 2023;
  - value adjustments of several coal-fired power plants in Germany and the Netherlands in connection with their disposal (*see Note 4.1 "Disposals carried out in 2019"*) for €148 million mainly recorded against all of the goodwill allocated to the assets sold for €108 million.

9.1.2 Impairment losses recognized in 2018

Net impairment losses amounted to €1,798 million in 2018, and mainly concerned:

- thermal power generation assets in Europe (€646 million), mainly due to the expected impact of a stricter regulatory environment for coal-fired power plants;
- Belgian nuclear power assets (€615 million), in respect of the nuclear plants whose operating life will not be extended;
- other impairment losses related to an investment in the Africa/Asia reportable segment (€209 million), gas infrastructure facilities in Europe (€87 million) and thermal power generation assets in Latin America (€71 million).

After taking into account the deferred tax effects and the share of impairment losses attributable to non-controlling interests, the impact of these impairment losses on net income Group share for 2018 amounted to €1,540 million.

9.2 Restructuring costs

In 2019, restructuring costs totaled €218 million (versus €162 million in 2018). Restructuring costs in both years mainly included costs related to staff reduction plans and measures to adapt to economic situations, as well as the shutdown of production, the closure or restructuring of certain facilities and other miscellaneous restructuring costs.

9.3 Changes in scope of consolidation

The impact of changes in the scope of consolidation in 2019 was a positive €1,604 million and mainly comprised (i) the positive impact of the sale of Glow for €1,580 million, including €143 million in respect of items of other comprehensive income recycled to the income statement (translation adjustments for €351 million and hedges for a negative €208 million).

The impact of changes in the scope of consolidation in 2018 was a negative €150 million and mainly comprised (i) the €87 million negative impact of the sale of the Loy Yang B thermal power plant in Australia, primarily in respect of items of other comprehensive income recycled to the income statement, and (ii) the €27 million negative impact of the sale of LNG operations in the United States.

9.4 Other non-recurring items

Other non-recurring items totaling a negative €1,240 million in 2019, mainly included the non-recurring impact of the nuclear provision review (back-end of the cycle) and other miscellaneous expenses for a negative €1,166 million.

In 2018, other non-recurring items totaling a negative €147 million mainly included asset scrapping, costs related to site closures and other miscellaneous expenses.

NOTE 10 NET FINANCIAL INCOME/(LOSS)

In millions of euros	Expense	Income	Dec. 31, 2019	Expense	Income	Dec. 31, 2018 [(1)]
Interest expense on gross debt and hedges	*(894)*	-	*(894)*	*(828)*	-	*(828)*
Foreign exchange gains/losses on borrowings and hedges	-	*30*	*30*	-	*4*	*4*
Ineffective portion of derivatives qualified as fair value hedges	*(3)*	-	*(3)*	*(3)*	-	*(3)*
Gains and losses on cash and cash equivalents and liquid debt instruments held for cash investment purposes	-	*84*	*84*	-	*81*	*81*
Capitalized borrowing costs	*106*	-	*106*	*134*	-	*134*
Cost of net debt	**(790)**	**114**	**(676)**	**(697)**	**85**	**(611)**
Cost of lease liabilities [(2)]	**(48)**	**-**	**(48)**	**(16)**	**-**	**(16)**
Cash payments made on the unwinding of swaps	*(62)*	-	*(62)*	*(108)*	-	*(108)*
Reversal of the negative fair value of these early unwound derivative financial instruments	-	*62*	*62*	-	*102*	*102*
Expenses on debt restructuring transactions	-	*6*	*6*	-	*13*	*13*
Gains/(losses) on debt restructuring and early unwinding of derivative financial instruments	**(62)**	**68**	**6**	**(108)**	**115**	**7**
Net interest expense on post-employment benefits and other long-term benefits	*(121)*	-	*(121)*	*(112)*	-	*(112)*
Unwinding of discounting adjustments to other long-term provisions	*(566)*	-	*(566)*	*(538)*	-	*(538)*
Change in fair value of derivatives not qualified as hedges and ineffective portion of derivatives qualified as cash flow hedges	*(223)*	-	*(223)*	*(185)*	-	*(185)*
Income/(loss) from debt instruments and equity instruments	*(34)*	*212*	*179*	*(84)*	*73*	*(11)*
Interest income on loans and receivables at amortized cost	-	*169*	*169*	-	*111*	*111*
Other	*(457)*	*350*	*(107)*	*(241)*	*216*	*(25)*
Other financial income and expenses	**(1,400)**	**731**	**(669)**	**(1,161)**	**400**	**(761)**
NET FINANCIAL INCOME/(LOSS)	**(2,300)**	**913**	**(1,387)**	**(1,981)**	**600**	**(1,381)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) At December 31, 2018, the cost of lease liabilities corresponds to interest on finance leases previously classified in "Cost of net debt".

The increase in the cost of net debt was mainly due to the increasing weight of debt in Brazil in relation with the acquisition of TAG (*see. Note "4.3.1 Acquisition of a 58.5% interest in Transportadora Associada de Gás S.A. (TAG) in Brazil"*) since December 31, 2018, partly offset by the positive impacts of debt financing transactions carried out by the Group and to active interest-rate management *(see Note 16.3.3 "Financial instruments – Main events of the period").*

At December 31, 2019, the average cost of debt after hedging came out at 2.70% compared with 2.68% at December 31, 2018.

NOTE 11 INCOME TAX EXPENSE

Accounting standards

The Group calculates taxes in accordance with prevailing tax legislation in the countries where income is taxable.

In accordance with IAS 12, deferred taxes are recognized according to the liability method on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and their tax bases, using tax rates that have been enacted or substantively enacted by the reporting date. However, under the provisions of IAS 12, no deferred tax is recognized for temporary differences arising from goodwill for which impairment losses are not deductible for tax purposes, or from the initial recognition of an asset or liability in a transaction which (i) is not a business combination and (ii) at the time of the transaction, affects neither accounting income nor taxable income. In addition, deferred tax assets are only recognized to the extent that it is probable that taxable income will be available against which the deductible temporary differences can be utilized.

A deferred tax liability is recognized for all taxable temporary differences associated with investments in subsidiaries, associates, joint ventures and branches, except if the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future.

Net balances of deferred taxes are calculated based on the tax position of each company or on the total income of companies included within the relevant consolidated tax group, and are presented in assets or liabilities for their net amount per tax entity.

Deferred taxes are reviewed at each reporting date to take into account factors including the impact of changes in tax laws and the prospects of recovering deferred tax assets arising from deductible temporary differences.

Deferred tax assets and liabilities are not discounted.

Tax effects relating to coupon payments on deeply-subordinated perpetual notes are recognized in profit or loss.

11.1 Actual income tax expense recognized in the income statement

11.1.1 Breakdown of actual income tax expense recognized in the income statement

The tax expense recognized in the income statement for 2019 amounts to €640 million (€704 million income tax expense in 2018). It breaks down as follows:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
Current income taxes	(761)	(712)
Deferred taxes	121	9
TOTAL INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**(640)**	**(704)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

11.1.2 Reconciliation of theoretical income tax expense with actual income tax expense

A reconciliation of theoretical income tax expense with the Group's actual income tax expense is presented below:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018 [1]
Net income/(loss)	**1,649**	**1,629**
Share in net income of equity method entities	500	361
Net income from discontinued operations	-	1,069
Income tax expense	(640)	(704)
Income/(loss) before income tax expense and share in net income of associates (A)	**1,790**	**903**
Of which French companies	*285*	*1,434*
Of which companies outside France	*1,505*	*(531)*
Statutory income tax rate of the parent company (B)	34.4%	34.4%
THEORETICAL INCOME TAX EXPENSE (C) = (A) X (B)	**(616)**	**(311)**
Reconciling items between theoretical and actual income tax expense		
Difference between statutory tax rate applicable to the parent and statutory tax rate in force in jurisdictions in France and abroad	215	42
Permanent differences [2]	(23)	(72)
Income taxed at a reduced rate or tax-exempt [3]	533	123
Additional tax expense [4]	(123)	(74)
Effect of unrecognized deferred tax assets on tax loss carry-forwards and other tax-deductible temporary differences [5]	(867)	(968)
Recognition or utilization of tax income on previously unrecognized tax loss carry-forwards and other tax-deductible temporary differences [6]	212	370
Impact of changes in tax rates [7]	(55)	54
Tax credits and other tax reductions [8]	101	185
Other [9]	(16)	(53)
INCOME TAX BENEFIT/(EXPENSE) RECOGNIZED IN INCOME	**(640)**	**(704)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Includes mainly disallowable impairment losses on goodwill, disallowable operating expenses, the deduction of interest expenses arising from hybrid debts and effects relating to the cap on allowable interest on borrowings in France in 2018.

(3) Reflects notably capital gains on disposals of securities exempt from tax or taxed at a reduced rate in some tax jurisdictions, the impact of the specific tax regimes used by some entities, disallowable impairment losses and capital losses on securities, and the impact of untaxed income from remeasuring previously-held (or retained) equity interests in connection with acquisitions and changes in consolidation methods.

(4) Includes mainly tax on dividends resulting from the parent company tax regime, withholding tax on dividends and interest levied in several tax jurisdictions, allocations to provisions for income tax, and regional and flat-rate corporate taxes.

(5) Includes (i) the cancellation of the net deferred tax asset position for some tax entities in the absence of sufficient profit being forecast and (ii) the impact of disallowable impairment losses on fixed assets.

(6) Includes the impact of the recognition of net deferred tax asset positions for some tax entities.

(7) Includes mainly the impact of tax rate changes on deferred tax balances in France.

(8) Includes notably reversals of provisions for tax litigation, tax credits in France and other tax reductions.

(9) Includes mainly the correction of previous tax charges.

11.1.3 Analysis of the deferred tax income/(expense) recognized in the income statement, by type of temporary difference

In millions of euros	Impact in the income statement	
	Dec. 31, 2019	Dec. 31, 2018 (1)
Deferred tax assets:		
Tax loss carry-forwards and tax credits	572	302
Pension and related obligations	28	2
Non-deductible provisions	(137)	(77)
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(93)	(141)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	(1,360)	845
Other	(36)	38
TOTAL	**(1,028)**	**969**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(239)	(249)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	1,661	(751)
Other	(273)	116
TOTAL	**1,149**	**(884)**
DEFERRED TAX INCOME/(EXPENSE)	**121**	**85**
Of which continued activities	*121*	*9*

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

11.2 Deferred tax income/(expense) recognized in "Other comprehensive income"

Net deferred tax income/(expense) recognized in "Other comprehensive income" is broken down by component as follows:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Equity and debt instruments	(2)	(1)
Actuarial gains and losses	256	68
Net investment hedges	12	(14)
Cash flow hedges on other items	218	71
Cash flow hedges on net debt	10	(10)
TOTAL EXCLUDING SHARE OF EQUITY METHOD ENTITIES	**494**	**114**
Share of equity method entities	81	(20)
Discontinued operations	-	(81)
TOTAL	**575**	**13**

11.3 Deferred taxes presented in the statement of financial position

11.3.1 Change in deferred taxes

Changes in deferred taxes recognized in the statement of financial position, after netting deferred tax assets and liabilities by tax entity, break down as follows:

In millions of euros	Assets	Liabilities	Net position
AT DECEMBER 31, 2018 (1)	**1,066**	**(5,415)**	**(4,349)**
IFRS 16 (see Note 1)	**-**	**4**	**4**
AT JANUARY 1, 2019 including IFRS 16	**1,066**	**(5,410)**	**(4,345)**
Impact on net income/(loss) for the year	(1,028)	1,149	121
Impact on other comprehensive income items	482	38	520
Impact of changes in scope of consolidation	(86)	29	(57)
Impact of translation adjustments	10	(27)	(17)
Other	(115)	121	7
Impact of netting by tax entity	531	(531)	-
AT DECEMBER 31, 2019	**860**	**(4,631)**	**(3,771)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

11.3.2 Analysis of the net deferred tax position recognized in the statement of financial position (before netting deferred tax assets and liabilities by tax entity), by type of temporary difference

Accounting standards

Measurement of recognized tax loss carry-forwards

Deferred tax assets are recognized on tax loss carry-forwards when it is probable that taxable profit will be available against which the tax loss carry-forwards can be utilized. The probability that taxable profit will be available against which the unused tax losses can be utilized, is based on taxable temporary differences relating to the same taxation authority and the same taxable entity and estimates of future taxable profits. These estimates and utilizations of tax loss carry-forwards were prepared on the basis of profit and loss forecasts over a six-year tax projection period as included in the medium-term business plan validated by Management, subject to exceptions justified by a particular context and, if necessary, on the basis of additional forecasts.

	Statement of financial position at	
In millions of euros	Dec. 31, 2019	Dec. 31, 2018 (1)
Deferred tax assets:		
Tax loss carry-forwards and tax credits	2,118	1,765
Pension obligations	1,635	1,374
Non-deductible provisions	268	371
Difference between the carrying amount of PP&E and intangible assets and their tax bases	763	787
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	2,199	3,398
Other	518	545
TOTAL	**7,502**	**8,239**
Deferred tax liabilities:		
Difference between the carrying amount of PP&E and intangible assets and their tax bases	(8,953)	(8,773)
Measurement of financial instruments at fair value (IAS 32 / IFRS 9)	(1,700)	(3,343)
Other	(620)	(472)
TOTAL	**(11,273)**	**(12,588)**
NET DEFERRED TAX ASSETS/(LIABILITIES)	**(3,772)**	**(4,349)**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

11.4 Unrecognized deferred taxes

At December 31, 2019, the tax effect of tax losses and tax credits eligible for carry-forward but not utilized and not recognized in the statement of financial position amounted to €3,836 million (€3,216 million at December 31, 2018). Most of these unrecognized tax losses relate to companies based in countries which allow losses to be carried forward indefinitely (mainly Belgium and Luxembourg) or for up to nine or six years in the Netherlands depending on the year these losses were realized. These tax loss carry-forwards did not give fully or partially rise to the recognition of deferred tax due to the absence of sufficient profit forecasts in the medium term.

The tax effect of other tax-deductible temporary differences not recorded in the statement of financial position was €929 million at end-December 2019 versus €1,364 million at end-December 2018.

NOTE 12 EARNINGS PER SHARE

Accounting standards

Basic earnings per share is calculated by dividing net income Group share for the year by the weighted average number of ordinary shares outstanding during the year. The average number of ordinary shares outstanding during the year is the number of ordinary shares outstanding at the beginning of the year, adjusted by the number of ordinary shares bought back or issued during the year.

For the diluted earnings per share calculation, the weighted average number of shares and basic earnings per share are adjusted to take into account the impact of the conversion or exercise of any dilutive potential ordinary shares (options, warrants and convertible bonds, etc.).

In compliance with IAS 33 – *Earnings per Share,* earnings per share and diluted earnings per share are based on net income/(loss) Group share after deduction of payments to bearers of deeply-subordinated perpetual notes *(see Note 18.2.1 "Issuance of deeply-subordinated perpetual notes").*

The Group's dilutive instruments included in the calculation of diluted earnings per share include bonus shares and performance shares granted in the form of ENGIE securities.

	Dec. 31, 2019	Dec. 31, 2018 (1)
Numerator (in millions of euros)		
Net income/(loss) Group share	**984**	**1,033**
Of which Net income(loss) relating to continued operations, Group share	*984*	*(12)*
Interest from deeply-subordinated perpetual notes	(165)	(145)
Net income used to calculate earnings per share	**820**	**889**
Of which Net income(loss) relating to continued operations, Group share, used to calculate earnings per share	*820*	*(156)*
Impact of dilutive instruments	-	-
Diluted net income/(loss) Group share	**820**	**889**
Denominator (in millions of shares)		
Average number of outstanding shares	**2,413**	**2,396**
Impact of dilutive instruments:		
Bonus share plans reserved for employees	12	11
Diluted average number of outstanding shares	**2,425**	**2,407**
Earnings per share (in euros)		
Basic earnings/(loss) per share	**0.34**	**0.37**
Of which Basic earnings/(loss) Group share relating to continued operations per share	*0.34*	*(0.07)*
Diluted earnings/(loss) per share	**0.34**	**0.37**
Of which Diluted earnings/(loss) Group share relating to continued operations per share	*0.34*	*(0.06)*

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

NOTE 13 GOODWILL

Accounting standards

Goodwill is measured as the difference between:

- on the one hand the sum of:
  - the consideration transferred,
  - the amount of non-controlling interests in the acquire, and
  - in a business combination achieved in stages, the acquisition-date fair value of the previously held equity interest in the acquiree;
- on the other hand the net fair value of the identifiable assets acquired and liabilities assumed. The key assumptions and estimates used to determine the fair value of assets acquired and liabilities assumed include the market outlook for the measurement of future cash flows as well as applicable discount rates. These assumptions reflect management's best estimates at acquisition date.

The amount of goodwill recognized at the acquisition date cannot be adjusted after the end of the 12 month measurement period.

Goodwill relating to interests in associates is recorded under "Investments in equity method entities".

Risk of impairment

Goodwill is not amortized but tested for impairment each year in accordance with IAS 36, or more frequently where an indication of impairment is identified. Impairment tests are carried out at the level of cash-generating units (CGUs) or groups of CGUs, which constitute groups of assets which generate cash flows that are largely independent from cash flows generated by other CGUs.

Goodwill is impaired if the net carrying amount of the CGU to which the goodwill is allocated is greater than the recoverable amount of that CGU. The methods used to carry out these impairment tests are described in paragraph 13.3.

Impairment losses in relation to goodwill cannot be reversed and are shown as "Impairment losses" in the income statement.

Indicators of goodwill impairment

The main indicators of impairment used by the Group are:

- using external sources of information
  - a decline in an asset's value over the period that is significantly more than would be expected from the passage of time or normal use,
  - significant adverse changes that have taken place over the period, or will take place in the near future, in the technological market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated,
  - an increase over the period in market interest rates or other market rates of return on investments if such increase is likely to affect the discount rate used in calculating an asset's value in use and decrease its recoverable amount materially,
  - the carrying amount of the net assets of the entity exceeds its market capitalization;
- using internal sources of information
  - evidence of obsolescence or physical damage to an asset,

- significant changes in the extent to which, or manner in which, an asset is used or is expected to be used, that have taken place in the period or soon hereafter and that will have an adverse effect on it. These changes include the asset becoming idle, plans to dispose of an asset sooner than expected, reassessing its useful life as finite rather than indefinite or plans to restructure the operations for which the asset belong,
- internal reports that indicate that the economic performance of an asset is, or will be, worse than expected.

13.1 Movements in the carrying amount of goodwill

In millions of euros	Net amount
AT DECEMBER 31, 2018	**17,809**
Impairment losses	(116)
Changes in scope of consolidation and Other	876
Translation adjustments	96
AT DECEMBER 31, 2019	**18,665**

Changes in the period were mainly attributable to (i) the impact of changes in the scope of consolidation primarily relating to the recognition of goodwill arising on the acquisition of Powerlines Group GmbH (€160 million), OTTO Luft-und Klimatechnik GmbH & Co (€137 million), Compañía Americana de Multiservicios (€78 million), CN'Air's Houat group (€77 million) and Pierre Guerin (€69 million), and to (ii) the recognition of an impairment loss amounting to €108 million relating to the disposal of coal-fired power plants in Germany and the Netherlands.

13.2 Goodwill CGUs

The table below shows "material" goodwill CGUs at December 31, 2019:

In millions of euros	Operating segment	Dec. 31, 2019
MATERIAL CGUs		
Benelux	Rest of Europe	4,260
GRDF	France Infrastructures	4,009
France Renewable Energy	France excl. Infrastructures	1,194
United Kingdom	Rest of Europe	1,115
OTHER SIGNIFICANT CGUs		
France BtoB	France excl. Infrastructures	1,052
France BtoC	France excl. Infrastructures	1,046
North America	USA & Canada	986
Northern, Southern and Central Europe	Rest of Europe	818
GRTgaz	France Infrastructures	614
Generation Europe	Rest of Europe	521
OTHER CGUs		3,051
TOTAL		**18,665**

13.3 Impairment testing of goodwill CGUs

All goodwill CGUs are tested for impairment based on data as of end-June, plus a review of events arisen in the second half of the year. In most cases, the recoverable amount of CGUs is determined by reference to a value in use that is calculated using cash flow projections drawn up on the basis of the 2020 budget and the 2021-2022 medium-term business plan, as approved by the Executive Committee and the Board of Directors, and on extrapolated cash flows beyond that time frame.

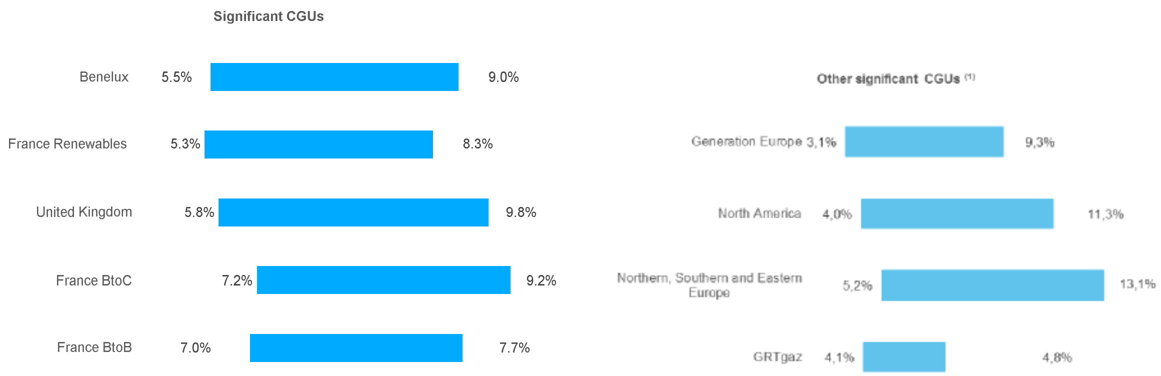
Cash flow projections are determined on the basis of macroeconomic assumptions (inflation, exchange rates and growth rates) and price forecasts resulting from the Group's reference scenario for 2023-2040. The forecasts that feature in the reference scenario were approved by the Executive Committee in December 2019. The forecasts and projections included in the reference scenario were determined on the basis of the following inputs:

- forward market prices over the liquidity period for fuel (coal, oil and gas), CO_2 and electricity on each market;

- beyond this period, medium- and long-term energy prices were determined by the Group based on macroeconomic assumptions and fundamental supply and demand equilibrium models, the results of which are regularly compared against forecasts prepared by external energy sector specialists. Long-term projections for CO_2 are in line with the 2050 targets of climate neutrality set by the European commission as part of the "green deal" published in December 2019. More specifically, medium- and long-term electricity prices were determined by the Group using electricity demand forecasting models, medium- and long-term forecasts of fuel and CO_2 prices, and expected trends in installed capacity and in the technology mix of the production assets within each power generation system.

Discount rate

The discount rates used correspond to the weighted average cost of capital, which is adjusted in order to reflect the business, market, country and currency risk relating to each goodwill CGU reviewed. The discount rates used are consistent with available external information sources. The post-tax rates used in 2019 to measure the value in use of the goodwill CGUs for discounting future cash flows ranged between 3.1% and 13.1%, compared with a range of between 3.7% and 11.3% in 2018. The discount rates used for the main goodwill CGUs are shown below:



(1) The valuation methods used are the discounted cash flows (DCF) method and the discounted dividend model (DDM) method.

13.3.1 Material CGUs

This section presents the method for determining value in use, the key assumptions underlying the valuation, and the sensitivity analyses for the impairment tests on the Group's main goodwill CGUs at December 31, 2019.

13.3.1.1 Benelux CGU

The goodwill allocated to the Benelux CGU amounted to €4,260 million at December 31, 2019. The Benelux CGU includes the Group's activities in Belgium, the Netherlands and Luxembourg: (i) power generation activities using its nuclear power plants and wind farms, (ii) natural gas and electricity sales activities, and (iii) energy services activities, as well as drawing rights on the Chooz B and Tricastin power plants in France.

Key assumptions used for the impairment test

The cash flow projections for the Benelux CGU are based on a large number of key assumptions, such as the long-term prices for fuel and CO_2, expected trends in gas and electricity demand and in electricity prices, the market outlook, and changes in the regulatory environment (especially concerning nuclear capacities in Belgium and the extension of drawing rights agreements for French nuclear plants). The key assumptions also include the discount rate used to calculate the value in use of this goodwill CGU.

Cash flow projections for the period beyond the medium-term business plan were determined as described below:

Activities	Assumptions applied beyond the term of the business plan (1)
Nuclear power generation in Belgium	For Doel 1, Doel 2 and Tihange 1, cash flow projection over the residual useful life of 50 years. For the second generation reactors Doel 3 and Tihange 2, cash flow projection over the residual useful life of 40 years. For the second generation reactors Doel 4 and Tihange 3, extension of the operating life for a period of 20 years.
Drawing rights on Chooz B et Tricastin power plants	Cash flow projection over the remaining term of existing contract plus assumption that drawing rights will be extended for a further 10 years.
Energy retail and service activities	Cash flow projection over the duration of the business plan at mid-term, plus application of a terminal value based on a normative cash flow using a long-term growth rate of 1.9%

(1) Assumptions unchanged from December 31, 2018.

The most important assumptions concerning the Belgian regulatory environment relate to the operating life of existing nuclear reactors and the level of royalties and nuclear contributions paid to the Belgian State.

The impairment test took into account the 10-year extension (through 2025) of the operating life of Tihange 1, Doel 1 and Doel 2, annual royalties totaling €20 million in respect of said extension and the new conditions for determining the nuclear contribution that will apply to second-generation reactors (Doel 3 and 4, Tihange 2 and 3) through their 40th year of operation, as defined in the December 29, 2016 law.

As regards second-generation reactors, the principle of a gradual phase-out of nuclear power and the schedule for this phase-out, with the shutdown of the reactors Doel 3 in 2022, Tihange 2 in 2023 and Tihange 3 and Doel 4 in 2025, after 40 years of operation, were reaffirmed in the law of June 18, 2015 and by the energy pact approved by the government on March 30, 2018. The pact is supplemented by a federal energy strategy based on four objectives: the safeguarding of supplies, the impact on climate, the impact on energy prices, and the safety of power plants. A monitoring committee has been set up to evaluate the achievement of these objectives and, where applicable, make recommendations to policymakers so that corrective action may be taken.

However, in view of (i) the extension of the operating life of Tihange 1, Doel 1 and Doel 2 beyond 40 years, (ii) the importance of nuclear power generation in the Belgian energy mix, (iii) the lack of a sufficiently detailed and attractive industrial plan enticing energy utilities to invest in replacement thermal capacity, and (iv) CO_2 emissions reduction targets, the Group considers that nuclear power will still be needed to guarantee the energy equilibrium in Belgium after 2025. Accordingly, in calculating value in use, the Group assumes a 20-year extension of the operating life of half of its second-generation reactors, while taking into account a mechanism of nuclear contributions to be paid to the Belgian government. Should the circumstances described above change in the future, the Group may adapt its industrial scenarios accordingly.

In France, the Nuclear Safety Authority authorized a fourth 10-yearly inspection for the Tricastin nuclear power plants, allowing a 10-year extension of the operating life of these reactors. The Group therefore included an assumption that its drawing rights on the Tricastin and Chooz B nuclear plants expiring in 2021 and 2037, respectively, would be extended by 10 years. This extension assumption had also been taken into account in 2018 as the Group considered that extending the reactors' operating life was the most credible and likely scenario at this point in time. This was also consistent with the expected French energy mix featured in the Group's reference scenario.

Results of the impairment test

At December 31, 2019, the recoverable amount of the goodwill CGU was higher than its carrying amount. Furthermore, the Group recognized impairment losses of €1,022 million against nuclear reactors (*see Note 9.1 "Impairment losses"*), including €638 million on dismantling assets for nuclear facilities whose operating life may no longer be extended, the recognition of which follows the triennial review of nuclear provisions (*see Note 19.2 "Nuclear power generation activities"*).

Sensitivity analyses

A decrease of €10/MWh in electricity prices for nuclear power generation would lead to an additional impairment loss of around €0.5 billion. Conversely, an increase of €10/MWh in electricity prices would have a positive impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU.

An increase of 50 basis points in the discount rates used would have a negative 54% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 57% impact on the calculation.

Various transformational scenarios were considered concerning nuclear power generation in Belgium:

- the disappearance of the entire nuclear component from the portfolio in 2025 after 50 years of operation in the case of Tihange 1, Doel 1 and Doel 2, and 40 years of operation for the second-generation reactors would have a strongly adverse impact on the results of the test, with the recoverable amount falling significantly below the carrying amount. In this scenario, the impairment risk would represent around €1.5 billion;
- if the life of half of the second-generation reactors were to be extended by ten years and the entire nuclear component subsequently disappear, the recoverable amount would fall below the carrying amount and the impairment risk would represent €0.6 billion.

13.3.1.2 GRDF CGU

The total amount of goodwill allocated to the GRDF CGU was €4,009 million at December 31, 2019. The GRDF CGU groups together the Group's regulated natural gas distribution activities in France.

The terminal value used to calculate the value in use corresponds to the expected Regulated Asset Base (RAB) with no premium at the end of 2025. The RAB is the value assigned by the French Energy Regulation Commission (CRE) to the assets operated by the distributor. It is the sum of the future pre-tax cash flows, discounted at a rate that equals the pre-tax rate of return guaranteed by the regulator.

The cash flow projections are drawn up based on the tariff for public natural gas distribution networks, known as the "ATRD 6 tariff", which will enter into effect for a period of four years on July 1, 2020, and on the overall level of investments agreed by the CRE as part of its decision on the "ATRD 5 tariff".

Given the regulated nature of the businesses grouped within the GRDF CGU, a reasonable change in any of the valuation inputs would not result in impairment losses.

13.3.1.3 France Renewable Energy CGU

The goodwill allocated to the France Renewable Energy CGU amounted to €1,194 million at December 31, 2019. The France Renewable Energy CGU groups together the development, construction, financing, operation and maintenance of all of the renewable power generation assets in France (hydraulic, wind and photovoltaic).

For the hydraulics business, the terminal value was determined to calculate the value in use by extrapolating the cash flows beyond that period based on the reference scenario adopted by the Group.

The main assumptions and key estimates relate primarily to discount rates, assumptions on the renewal of the hydropower concession agreements and changes in the sales prices of electricity beyond the liquidity period.

Value in use of the Compagnie Nationale du Rhône and SHEM was calculated based on assumptions including the extension or renewal of a tender process for the concession agreements, as well as on the conditions of a potential extension.

The cash flows for the periods covered by the renewal of the concession agreements are based on a number of assumptions relating to the economic and regulatory conditions for operating these assets (royalty rates, required level of investment, etc.) during this period.

A decrease of €10/MWh in electricity prices for hydropower generation would have a negative 73% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of €10/MWh in electricity prices would have a positive 71% impact on the calculation.

An increase of 50 basis points in the discount rates used would have a negative 48% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 65% impact on the calculation.

If the Compagnie Nationale du Rhône hydropower concession agreements are not renewed beyond 2023, this would have a strong adverse impact on the results of the test, with the recoverable amount falling significantly below the carrying amount. In this scenario, the impairment risk would represent around €1.3 billion.

13.3.1.4 United Kingdom CGU

The goodwill allocated to the United Kingdom CGU amounted to €1,115 million at December 31, 2019. The United Kingdom CGU includes activities in (i) renewable power generation (hydraulic, wind and solar), (ii) gas and electricity sales, and (iii) services to individual and professional customers in the United Kingdom.

The terminal value used to calculate the value in use of the services and energy sales businesses was determined by extrapolating the cash flows beyond that period using a long-term growth rate of 2% per year.

The main assumptions and key estimates relate primarily to discount rates and changes in price beyond the liquidity period.

An increase of 50 basis points in the discount rates used would have a negative 52% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 40% impact on the calculation.

A decrease of 10% in the margin captured by power generation assets would have a negative 21% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. An increase of 10% in the margin captured would have a positive 21% impact on this calculation.

13.3.2 Other significant CGUs

13.3.2.1 North America CGU

The goodwill allocated to the North America CGU amounted to €986 million at December 31, 2019. The North America CGU mainly comprises:

- Canada, which includes activities in (i) renewable power generation (wind and biomass), (ii) services to individual and professional customers;
- the United States, which includes activities in (i) gas and electricity sales, (ii) services to individual and professional customers and (iii) thermal power generation;
- Puerto Rico, which includes an investment in EcoElectrica, a key energy industry player in Puerto Rico's economy (*see Note 3.2 "Investments in joint ventures"*). Despite the difficult financial environment in Puerto Rico, ENGIE does not have any information at December 31, 2019 on the basis of which the Group would modify its valuation assumptions regarding its share in these assets.

The wind and solar energy production activities acquired in the United States in 2018 make up an independent goodwill CGU.

The value in use of these activities was calculated using the cash flow projections drawn up on the basis of the 2020 budget and the 2021-2022 medium-term business plan. A terminal value was calculated for the services and energy sales businesses using EBITDA multiples as a basis.

The main assumptions and key estimates relate primarily to discount rates and changes in captured margins beyond the liquidity period.

An increase of 50 basis points in the discount rates used would have a negative impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive impact on the calculation.

A decrease of 10% in the margin on gas and electricity sales activities would have a negative 18% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on gas and electricity sales activities would have a positive 18% impact on the calculation.

A decrease of 10% in service activities would have a negative 8% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. Conversely, an increase of 10% in the margin on gas and electricity sales activities would have a positive 8% impact on the calculation.

13.3.2.2 Generation Europe CGU

The goodwill allocated to the Generation Europe CGU amounted to €521 million at December 31, 2019. The Generation Europe CGU groups together the thermal power generation activities in Europe.

The value in use of these activities was calculated using the cash flow projections drawn up on the basis of the 2020 budget and the 2021-2022 medium-term business plan. Beyond this three-year period, cash flows were projected over the useful lives of the assets based on the reference scenario adopted by the Group.

The main assumptions and key estimates relate primarily to discount rates, estimated demand for electricity and changes in the price of CO_2, fuel and electricity beyond the liquidity period.

Results of the impairment test

At December 31, 2019, the recoverable amount of the Generation Europe goodwill CGU was higher than its carrying amount.

Sensitivity analyses

An increase of 50 basis points in the discount rates used would have a negative 15% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. A reduction of 50 basis points in the discount rates used would have a positive 18% impact on the calculation.

A decrease of 10% in the margin captured by thermal power plants would have a negative 24% impact on the excess of the recoverable amount over the carrying amount of the goodwill CGU. However, the recoverable amount would remain above the carrying amount. An increase of 10% in the margin captured would have a positive 24% impact on this calculation.

13.3.2.3 Other significant goodwill CGUs

For the other significant goodwill CGUs, there is a considerable difference between their recoverable amount and their carrying amount at December 31, 2019.

13.4 Goodwill segment information

The carrying amount of goodwill can be analyzed as follows by reportable segment:

In millions of euros	Dec. 31, 2019
France excluding Infrastructures	3,705
France Infrastructures	5,006
Rest of Europe	6,713
Latin America	820
USA & Canada	1,103
Middle East, Asia & Africa	741
Others	576
TOTAL	**18,665**

NOTE 14 INTANGIBLE ASSETS

Accounting standards

Initial measurement

Intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses.

Amortization

Intangible assets are amortized on the basis of the expected pattern of consumption of the estimated future economic benefits embodied in the asset. Amortization is calculated mainly on a straight-line basis over the following useful lives:

	Useful life	
Main depreciation periods (years)	**Minimum**	**Maximum**
Concession rights	10	30
Customer portfolio	10	40
Other intangible assets	1	50

Intangible assets with an indefinite useful life are not amortized but are tested for impairment annually.

Risk of impairment

In accordance with IAS 36, impairment tests are carried out on items of property, plant and equipment and intangible assets where there is an indication that the assets may be impaired. Such indications may be based on events or changes in the market environment, or on internal sources of information. Intangible assets that are not amortized are tested for impairment annually.

Impairment indicators

Property, plant and equipment and intangible assets with finite useful lives are only tested for impairment when there is an indication that they may be impaired. This is generally the result of significant changes in the environment in which the assets are operated or when economic performance is lower than expected.

Main impairment indicators used by the Group are described in Note 13 “Goodwill”.

Impairment

Items of property, plant and equipment and intangible assets are tested for impairment at the level of the individual asset or cash-generating unit (CGU), as appropriate and, determined in accordance with IAS 36. If the recoverable amount of an asset is lower than its carrying amount, the carrying amount is written down to the recoverable amount by recording an impairment loss. Upon recognition of an impairment loss, the depreciable amount and possibly the useful life of the asset concerned is revised.

Impairment losses recorded in relation to property, plant and equipment or intangible assets may be subsequently reversed if the recoverable amount of the asset increases to exceed the carrying amount. The increased carrying amount of an item of property, plant or equipment following the reversal of an impairment loss may not exceed the carrying amount that would have been determined (net of depreciation/amortization) had no impairment loss been recognized in prior periods.

Measurement of recoverable amount

In order to review the recoverable amount of property, plant and equipment and intangible assets, the assets are grouped, where appropriate, into CGUs and the carrying amount of each CGU is compared with its recoverable amount.

For operating entities which the Group intends to hold on a long-term and going concern basis, the recoverable amount of a CGU corresponds to the higher of its fair value less costs to sell and its value in use. Value in use is primarily determined based on the present value of future operating cash flows including a terminal value. Standard valuation techniques are used based on the following main economic assumptions:

- market perspectives and developments in the regulatory framework;
- discount rates based on the specific characteristics of the operating entities concerned;
- terminal values in line with available market data specific to the operating segments concerned and growth rates associated with these terminal values, not to exceed the inflation rate.

Discount rates are determined on a post-tax basis and applied to post-tax cash flows. The recoverable amounts calculated on the basis of these discount rates are the same as the amounts obtained by applying the pre-tax discount rates to cash flows estimated on a pre-tax basis, as required by IAS 36.

For operating entities which the Group has decided to sell, the related recoverable amount of the assets concerned is based on market value less costs of disposal. Where negotiations are ongoing, this value is determined based on the best estimate of their outcome as of the reporting date.

In the event of a decline in value, the impairment loss is recorded in the consolidated income statement under “Impairment losses”.

Intangible rights arising on concession contracts

IFRIC 12 – *Service concession arrangements* deals with the treatment to be applied by the concession operator in respect of certain concession arrangements.

For a concession arrangement to fall within the scope of IFRIC 12, usage of the infrastructure must be controlled by the concession grantor. This requirement is satisfied when the following two conditions are met:

- the grantor controls or regulates what services the operator must provide with the infrastructure, to whom it must provide them, and at what price; and
- the grantor controls any residual interest in the infrastructure at the end of the term of the arrangement, for example retains the right to take back the infrastructure at the end of the concession.

The intangible asset model according to paragraph 17 of IFRIC 12 applies if the operator receives a right (a license) to charge the users, or the grantor, depending on the use made of the public service. There is no unconditional right to receive cash as the amounts depend on the extent to which the public uses the service.

Concession infrastructures that do not meet the requirements of IFRIC 12 are presented as property, plant and equipment. This is the case of gas distribution infrastructures in France. The related assets are recognized in accordance with IAS 16, given that GRDF operates its network under long-term concession arrangements, most of which are mandatorily renewed upon expiration pursuant to French law No. 46-628 of April 8, 1946.

Research and development costs

Research costs are expensed as incurred.

Development costs are capitalized when the asset recognition criteria set out in IAS 38 are met. Capitalized development costs are amortized over the useful life of the intangible asset recognized.

14.1 Movements in intangible assets

In millions of euros	Intangible rights arising on concession contracts	Capacity entitlements	Others	Total
GROSS AMOUNT				
AT DECEMBER 31, 2018 (1)	**3,753**	**2,719**	**11,000**	**17,472**
IFRS 16 (see Note 1)	**(12)**	**-**	**-**	(12)
AT JANUARY 1, 2019 with IFRS 16	**3,741**	**2,719**	**11,000**	**17,460**
Acquisitions	152	-	1,120	1,271
Disposals	(13)	(17)	(135)	(165)
Translation adjustments	(3)	-	36	33
Changes in scope of consolidation	(26)	-	5	(21)
Transfer to "Assets classified as held for sale"	-	-	2	2
Other	(14)	160	(43)	103
AT DECEMBER 31, 2019	**3,838**	**2,862**	**11,984**	**18,684**
ACCUMULATED AMORTIZATION AND IMPAIRMENT				
AT DECEMBER 31, 2018 (1)	(1,550)	(2,087)	(7,117)	(10,754)
IFRS 16 (see Note 1)	5	-	-	5
AT JANUARY 1, 2019 with IFRS 16	**(1,545)**	**(2,087)**	**(7,117)**	**(10,749)**
Amortization	(138)	(65)	(741)	(943)
Impairment	(14)	-	(128)	(142)
Disposals	12	17	62	91
Translation adjustments	1	-	(20)	(19)
Changes in scope of consolidation	26	-	119	145
Transfer to "Assets classified as held for sale"	-	-	-	-
Other	2	-	(31)	(29)
AT DECEMBER 31, 2019	**(1,656)**	**(2,135)**	**(7,855)**	**(11,646)**
CARRYING AMOUNT				
AT DECEMBER 31, 2018 (1)	**2,204**	**632**	**3,883**	**6,718**
AT DECEMBER 31, 2019	**2,182**	**727**	**4,129**	**7,038**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

In 2019, the net increase in "Intangible assets" was mainly attribuable to investments for a total of €1,271 million, partially offset by amortization for a total of €943 million. Changes in scope of consolidation of €124 million relate mainly to the acquisition of OTTO Luft-und Klimatechnik GmbH & Co for €26 million, of the energy services companies Conti in North America for €34 million and of Certinergy for €51 million.

14.1.1 Impairment

At December 31, 2019, this caption notably relates to impairment losses recognized on Customer relationship in France following the adoption of the law enacting the end of regulated sales tariffs and rising rates of portfolio attrition for €111 million.

14.1.2 Capacity entitlements

The Group has acquired capacity entitlements from power stations operated by third parties. These power station capacity rights were acquired in connection with transactions or within the scope of the Group's involvement in financing the construction of certain power stations. In consideration, the Group received the right to purchase a share of the production over the useful life of the underlying assets. These rights are amortized over the useful life of the underlying assets, not to exceed 50 years. The Group currently holds entitlements in the Chooz B and Tricastin power plants in France and in the virtual power plant (VPP) in Italy.

14.1.3 Other

At December 31, 2019, this caption mainly relates to software and licenses for €1,218 million, as well as intangible assets in progress for €636 million and intangible assets (client portfolio) acquired as a result of business combinations and capitalized acquisition costs for customer contracts for €2,007 million.

14.2 Information regarding research and development costs

Research and development activities primarily relate to various studies regarding technological innovation, improvements in plant efficiency, safety, environmental protection, service quality, and the use of energy resources.

Research and development costs, excluding technical assistance costs, totaled €189 million in 2019, of which €23 million in expenses related to in-house projects in the development phase that meet the criteria for recognition as an intangible asset as defined in IAS 38.

NOTE 15 PROPERTY, PLANT AND EQUIPMENT

Accounting standards

Initial recognition and subsequent measurement

Items of property, plant and equipment are recognized at historical cost less any accumulated depreciation and any accumulated impairment losses.

The carrying amount of these items is not revalued as the Group has elected not to apply the allowed alternative method, which consists of regularly revaluing one or more categories of property, plant and equipment.

Investment subsidies are deducted from the gross value of the assets concerned.

In accordance with IAS 16, the initial cost of the item of property, plant and equipment includes an initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, when the entity has a present, legal or constructive obligation to dismantle the item or restore the site. A corresponding provision for this obligation is recorded for the amount of the asset component.

Borrowing costs that are directly attributable to the construction of the qualifying asset are capitalized as part of the cost of that asset.

Leases

Until December 31, 2018, only leases classified as finance leases for which the Group acts as a lessee, were recorded as an asset in the balance sheet in accordance with the principles of IAS 17 – *Leases*. A lease qualifies as a finance lease when all the risks and rewards incidental to the ownership of the related asset are substantially transferred to the lessee.

As indicated in Note 1.1.1 “IFRS Standards, amendments or IFRIC interpretations applicable in 2019” from January 1, 2019 the Group applies IFRS 16 – *Leases* to account for lease contracts where the Group acts as a lessee.

In accordance with IFRS 16, the Group recognizes a right-of-use asset and a corresponding lease liability with respect to contracts considered as a lease in which the Group acts as lessee, except for leases with a term of 12 months or less (“short-term leases”), and leases for which the underlying asset is of a low value (“low-value asset”). Payments associated with these leases are recognized on a straight-line basis as expenses in profit and loss. The lease contracts in the Group mainly concern real estate, vehicles and other equipment.

The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The lease liability is initially measured at the present value of the remaining lease payments, discounted using the lessee’s incremental borrowing rate. This rate is calculated based on the Group’s incremental borrowing rate adjusted in accordance with IFRS 16, taking into account (i) the economic environment of the subsidiaries, and in particular their credit risk, (ii) the currency in which the contract is concluded and (iii) the duration of the contract at inception (or the remaining duration for contracts existing upon the initial application of IFRS 16). The methodology applied to determine the incremental borrowing rate reflects the profile of the lease payments (duration method).

The lease term is assessed, including whether a renewal option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised, on a case-by-case basis. The lease term is reassessed if a significant event or a significant change in circumstances that is within the control of the lessee occurs and may affect the assessment made. In determining the enforceable period of a lease, the Group applies a broad interpretation of the term penalty and takes into consideration, not only contractual penalties arising from termination, but also ancillary costs that could arise in case of an early termination of the lease.

Cushion gas

"Cushion" gas injected into underground storage facilities is essential for ensuring that reservoirs can be operated effectively, and is therefore inseparable from these reservoirs. Unlike "working" gas which is included in inventories (*see Note 24.2 "Inventories"*), cushion gas is reported in other property, plant and equipment.

Depreciation

In accordance with the components approach, each significant component of an item of property, plant and equipment with a different useful life from that of the main asset to which it relates is depreciated separately over its own useful life.

Property, plant and equipment is depreciated mainly using the straight-line method over the following useful lives:

	Useful life	
Main depreciation periods (years)	**Minimum**	**Maximum**
Plant and equipment		
• Storage - Production - Transport - Distribution	5	60(*)
• Installation - Maintenance	3	10
• Hydraulic plant and equipment	20	65
Other property, plant and equipment	2	33

(*)Excluding cushion gas.

The range of useful lives is due to the diversity of the assets in each category. The minimum periods relate to smaller equipment and furniture, while the maximum periods concern network infrastructures and storage facilities. In accordance with the law of January 31, 2003 adopted by the Belgian Chamber of Representatives with respect to the gradual phase-out of nuclear energy for the industrial production of electricity, the useful lives of nuclear power stations were reviewed and adjusted prospectively to 40 years as from 2003, except for Tihange 1, Doel 1 and Doel 2 for which the operating lives have been extended by 10 years.

Fixtures and fittings relating to hydro plants operated by the Group are depreciated over the shorter of the contract term and the useful life of the assets, taking into account the renewal of the concession period if such renewal is considered to be reasonably certain.

The right-of-use asset related to leases is depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term. In that case the right-of-use asset is depreciated over the useful life of the underlying asset, which is determined on the same basis as that used for property, plant and equipment mentioned above.

Risk of impairment

See Note 14 "Intangible assets".

Impairment indicators

See Note 13 "Goodwill".

15.1 Movements in property, plant and equipment

In millions of euros	Land	Buildings	Plant and equipment	Vehicles	Dismantling costs	Assets in progress	Right of use	Other	Total
GROSS AMOUNT									
AT DECEMBER 31, 2018 (1)	**671**	**5,676**	**81,615**	**419**	**2,444**	**5,469**	**-**	**1,015**	**97,309**
IFRS 16 (see Note 1)	-	(230)	(1,161)	(2)	-	-	3,402	223	2,233
AT JANUARY 1, 2019 with IFRS 16	**670**	**5,446**	**80,455**	**417**	**2,444**	**5,469**	**3,402**	**1,239**	**99,541**
Acquisitions/Increases	6	26	596	55	1,124	4,801	539	102	7,250
Disposals	(18)	(61)	(371)	(19)	-	(18)	(78)	(47)	(611)
Translation adjustments	1	29	73	1	1	51	22	7	186
Changes in scope of consolidation	2	(308)	(3,924)	17	(56)	(41)	(43)	21	(4,332)
Transfer to "Assets classified as held for sale"	(2)	-	(100)	-	-	(276)	-	-	(378)
Other	38	357	5,129	(4)	(17)	(5,815)	40	94	(178)
AT DECEMBER 31, 2019	**698**	**5,490**	**81,857**	**467**	**3,496**	**4,172**	**3,882**	**1,417**	**101,478**
ACCUMULATED DEPRECIATION AND IMPAIRMENT									
AT DECEMBER 31, 2018 (1)	**(130)**	**(3,175)**	**(42,270)**	**(290)**	**(1,418)**	**(367)**	**-**	**(742)**	**(48,392)**
IFRS 16 (see Note 1)	-	83	222	-	-	-	(356)	(33)	(85)
AT JANUARY 1, 2019 with IFRS 16	**(130)**	**(3,092)**	**(42,049)**	**(289)**	**(1,418)**	**(367)**	**(356)**	**(775)**	**(48,476)**
Depreciation	(8)	(124)	(2,630)	(49)	(161)	-	(468)	(114)	(3,554)
Impairment	(2)	(12)	(729)	(1)	(662)	(35)	(91)	(1)	(1,532)
Disposals	3	53	273	16	-	2	65	42	455
Translation adjustments	-	(3)	(49)	(1)	(1)	-	(3)	(1)	(58)
Changes in scope of consolidation	2	302	3,077	(5)	38	1	7	(8)	3,414
Transfer to "Assets classified as held for sale"	-	-	7	-	-	-	-	-	7
Other	-	(119)	377	9	(19)	43	(22)	(44)	225
AT DECEMBER 31, 2019	**(134)**	**(2,995)**	**(41,722)**	**(320)**	**(2,223)**	**(357)**	**(868)**	**(901)**	**(49,520)**
CARRYING AMOUNT									
AT DECEMBER 31, 2018 (1)	**541**	**2,501**	**39,345**	**129**	**1,026**	**5,102**	**-**	**273**	**48,917**
AT DECEMBER 31, 2019	**564**	**2,495**	**40,135**	**147**	**1,273**	**3,815**	**3,014**	**515**	**51,958**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

In 2019, the net increase in "Property, plant and equipment" essentially takes into account :

- maintenance and development investments for a total amount of €5,587 million mainly related to the construction and the development of wind and solar farms in the United States, in Latin America and in India, as well as the extension of the transportation and distribution networks in the France Infrastructure segment;
- changes in the scope of consolidation amounting to a negative €918 million, predominantly related to DBSO [1] activities relating to wind farms in the United States (negative €234 million), in Mexico (negative €137 million) and in France (negative €195 million), the disposal of the active solar installations of the company Langa (negative €256 million), and the disposal of the coal-fired power plants in Germany and the Netherlands (a negative €280 million), partially offset by the acquisition of a biomethane project in France (positive €92 million);
- positive net translation adjustments of €128 million, mainly resulting from the US dollar (positive impact of €129 million), the pound sterling (positive impact of €87 million) and the Brazilian real (negative impact of €75 million);
- partly offset by depreciation for a total negative impact of €3,554 million;
- the classification under "Assets held for sale" of solar fields in Mexico (negative €285 million) and assets in the renewable energies in France (negative €87 million);
- impairment losses amounting to €1,532 million mainly related to:
  - Belgian nuclear power assets for a negative €1,022 million *(see Note 9.1.1 "Impairment losses recognized in 2019")*;

(1) Develop, Build, Share & Operate.

- the disposal of various coal-fired power plants in the Netherlands and in Germany for a negative €148 million, €108 million of which charged to the entire goodwill allocated to “assets held for sale” and €40 million to property, plant and equipment;
- the coal-fired power plants in Latin America for a negative €165 million due to the planned disconnection and discontinuation of operations of two coal-based energy generation units in Chile combined with the commitment to gradually decommission of coal-fired plants in Chile;
- the gas-steam turbines in the Middle-East, Asia & Africa reportable segment for which a permanent mothballing strategy is adopted due to the poor economic context for a negative €135 million.

15.2 Pledged and mortgaged assets

Items of property, plant and equipment pledged by the Group to guarantee borrowings and debt amounted to €2,261 million at December 31, 2019 compared to €1,298 million at December 31, 2018.

The increase mainly relates to thermoelectric and wind assets in Brazil for €950 million and renewable assets in France for €46 million.

15.3 Contractual commitments to purchase property, plant and equipment

In the ordinary course of their operations, some Group companies have entered into commitments to purchase, and the related third parties to deliver, property, plant and equipment. These commitments relate mainly to orders for equipment, and material related to the construction of energy production units and to service agreements.

Investment commitments made by the Group to purchase property, plant and equipment totaled €1,384 million at December 31, 2019 compared to €1,415 million at December 31, 2018.

15.4 Other information

Borrowing costs for 2019 included in the cost of property, plant and equipment amounted to €106 million at December 31, 2019 compared to €134 million at December 31, 2018.

NOTE 16 FINANCIAL INSTRUMENTS

16.1 Financial assets

Accounting standards

In accordance with the principles of IFRS 9 - *Financial Instruments*, financial assets are recognized and measured either at amortized cost, at fair value through equity or at fair value through profit or loss based on the following two criteria:

- a first criterion relating to the contractual cash flows characteristics of the financial asset. The analysis of contractual cash flow characteristics makes it possible to determines whether these cash flows are "only payments of principal and interest on the outstanding amounts" (known as "SPPI" test or Solely Payments of Principal and Interest);
- a second criterion relating to the business model used by the Group to manage its financial assets. IFRS 9 defines three different business models. A first business model whose objective is to hold assets in order to collect contractual cash flows (hold to collect), a second model whose objective is achieved by both collecting contractual cash flows and selling financial assets (hold to collect and sell) and other business models.

The identification of the business model and the analysis of the contractual cash flows characteristics require judgment to ensure that the financial assets are classified in the appropriate category.

Where the financial asset is an investment in an equity instrument and is not held for trading, the Group may irrevocably elect to present the gains and losses on that investment in other comprehensive income.

Except for trade receivables, which are measured at their transaction price in accordance with IFRS 15, financial assets are measured, on initial recognition, at fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs that are directly attributable to their acquisition.

At the end of each reporting period, financial assets measured using the amortized cost method or at fair value through other comprehensive income (with a recycling mechanism) are subject to an impairment test based on the expected credit losses method.

Financial assets also include derivatives that are measured at fair value in accordance with IFRS 9.

In accordance with IAS 1, the Group presents current and non-current assets and current and non-current liabilities separately in the statement of financial position. In view of the majority of the Group's activities, it was considered that the criterion to be used to classify assets is the expected time to realize the asset or settle the liability: the asset is classified as current if this period is less than 12 months and as non-current if it is more than 12 months after the reporting period.

The following table presents the Group's different categories of financial assets, broken down into current and non-current items:

		Dec. 31, 2019			Dec. 31, 2018		
In millions of euros	Notes	Non-current	Current	Total	Non-current	Current	Total
Other financial assets	16.1	7,022	2,546	9,567	6,193	2,290	8,483
Equity instruments at fair value through other comprehensive income		*921*	*-*	*921*	*742*	*-*	*742*
Equity instruments at fair value through income		*377*	*-*	*377*	*365*	*-*	*365*
Debt instruments at fair value through other comprehensive income (1)		*1,072*	*77*	*1,149*	*1,108*	*840*	*1,947*
Debt instruments at fair value through income		*871*	*397*	*1,268*	*600*	*233*	*832*
Loans and receivables at amortized cost		*3,782*	*2,072*	*5,854*	*3,378*	*1,218*	*4,596*
Trade and other receivables	7.2	-	15,180	15,180	-	15,613	15,613
Assets from contracts with customers	7.2	15	7,816	7,831	-	7,411	7,411
Cash and cash equivalents (1)		-	10,519	10,519	-	8,700	8,700
Derivative instruments	16.4	4,137	10,134	14,272	2,693	10,679	13,372
TOTAL		**11,174**	**46,194**	**57,369**	**8,886**	**44,692**	**53,578**

(1) In 2019, the Group modified the accounting of certain financial assets deducted from net financial debt to reflect the Group's management policy regarding investments and liquidity risk of the Group, and thus reclassified these assets as cash and cash equivalents for an amount of €619 million at December 31, 2019. This change had no impact on net financial debt.

16.1.1 Other financial assets

16.1.1.1 Equity instruments at fair value

Accounting standards

Equity instruments at fair value through other comprehensive income (OCI)

Under IFRS 9 an irrevocable election can be made to present in other comprehensive income subsequent changes in the fair value of an investment in an equity instrument that is not held for trading. This choice is made on an instrument-by-instrument basis. Amounts presented in other comprehensive income should not be transferred to profit or loss including proceeds of disposals. However, IFRS 9 authorizes the transfer of the accumulated profits and losses to another component of equity. Dividends from such investments are recognized in profit or loss unless the dividend clearly represents the recovery of a portion of the cost of the investment.

The equity instruments recognized under this line item mainly concern investments in companies that are not controlled by the Group and for which OCI measurement has been selected given their strategic and long-term nature.

Upon initial recognition, these equity instruments are recognized at fair value, which is generally their acquisition cost, plus transaction costs.

At each reporting date, for listed securities, fair value is determined based on the quoted market price at the reporting date. For unlisted securities, fair value is measured using valuation models based primarily on the latest market transactions, the discounting of dividends or cash flows and the net asset value.

Equity instruments at fair value through profit or loss

Equity instruments that are held for trading or for which the Group has not elected for measurement at fair value through other comprehensive income are measured at fair value through profit or loss.

This category mainly includes investments in companies not controlled by the Group.

Upon initial recognition, these equity instruments are recognized at fair value, which is generally their acquisition cost.

At each reporting date, for listed and unlisted securities, the same measurement method as described above should be applied.

In millions of euros	**Equity instruments at fair value through other comprehensive income**	**Equity instruments at fair value through income**	**Total**
AT DECEMBER 31, 2018	**742**	**365**	**1,107**
Increase	226	170	396
Decrease	(111)	(24)	(135)
Changes in fair value	92	(23)	69
Changes in scope of consolidation, translation adjustments and other	(28)	(112)	(140)
AT DECEMBER 31, 2019	**921**	**377**	**1,297**
Dividends	65	7	**72**

Equity instruments break down as €222 million of listed equity instruments and €1,075 million of unlisted equity instruments. This amount mainly includes shares held by the Group as a minority interest in Nord Stream AG for an amount of €478 million.

16.1.1.2 Debt instruments at fair value

Accounting standards

Debt instruments at fair value through other comprehensive income

Financial assets that are held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets and for which the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the outstanding amount (SPPI), are measured at fair value through OCI (with a recycling mechanism). This involves a measurement through profit or loss for interest (at amortized cost using the effective interest method), impairment and foreign exchange gains and losses, and through OCI (with a recycling mechanism) for other gains or losses.

This category mainly includes bonds.

Fair value gains and losses on these instruments are recognized in other comprehensive income, except for the following items which are recognized in profit or loss:

- interest income using the effective interest method;
- expected credit losses and reversals;
- foreign exchange gains and losses.

When the financial asset is derecognized, the cumulative gain or loss that was previously recognized in other comprehensive income is reclassified from equity to profit or loss.

Debt instruments at fair value through profit or loss

Financial assets whose contractual cash flows do not consist solely of payments of principal and interest on the amount outstanding (SPPI) or that are held in view of an “other” business model are measured at fair value through profit or loss.

The Group's investments in UCITS are accounted for in this caption. They are considered as debt instruments, according to IAS 32 - *Financial Instruments*: *Presentation*, given the existence of an obligation for the issuer to redeem units, at the request of the holder. They are measured at fair value through profit or loss because the contractual cash flows characteristics do not meet the SPPI test.

In millions of euros	Debt instruments at fair value through other comprehensive income	Liquid debt instruments held for cash investment purposes at fair value through other comprehensive income	Debt instruments at fair value through income	Liquid debt instruments held for cash investment purposes at fair value through income	Total
AT DECEMBER 31, 2018	**1,025**	**922**	**525**	**307**	**2,779**
Increase	647	10	430	197	1,284
Decrease	(617)	(306)	(269)	-	(1,193)
Changes in fair value	102	-	75	3	181
Changes in scope of consolidation, translation adjustments and other (1)	(20)	(614)	-	-	(634)
AT DECEMBER 31, 2019	**1,138**	**11**	**761**	**507**	**2,417**

(1) *Of which €619 million of financial instruments deducted from net financial debt and reclassified from "Other financial assets" to "Cash and cash equivalents" (see Note 16.1 "Financial assets").*

Debt instruments at fair value at December 31, 2019 include bonds and money market funds held by Synatom for €1,846 million and liquid instruments deducted from net financial debt for €518 million (respectively €1,492 million and €1,229 million at December 31, 2018).

16.1.1.3 Loans and receivables at amortized cost

Accounting standards

Loans and receivables held by the Group under a business model consisting in holding the instrument in order to collect the contractual cash flows, and whose contractual cash flows consist solely of payments of principal and interest on the principal amount outstanding (SPPI test) are measured at amortized cost. Interest is calculated using the effective interest method.

The following items are recognized in profit or loss:

- interest income using the effective interest method;
- expected credit losses and reversals;
- foreign exchange gains and losses.

The Group enters into services or take-or-pay contracts that are or contain a lease and under which the Group acts as lessor and its customers as lessees. Leases are analyzed in accordance with IFRS 16 in order to determine whether they constitute an operating lease or a finance lease. Whenever the terms of the lease transfer substantially all the risk and rewards of ownership of the related asset, the contract is classified as a finance lease and a finance receivable is recognized to reflect the financing deemed to be granted by the Group to the customer.

Leasing security deposits are presented in this caption and recognized at their nominal value.

Please refer to Note 17 "Risks arising from financial instruments" regarding the assessment of counterparty risk.

	Dec. 31, 2019			Dec. 31, 2018		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total
Loans granted to affiliated companies	2,293	172	2,465	1,498	121	1,619
Other receivables at amortized cost	302	1,697	1,998	675	940	1,614
Amounts receivable under concession contracts	588	65	653	544	68	612
Amounts receivable under finance leases	599	138	738	661	89	750
TOTAL	**3,782**	**2,072**	**5,854**	**3,378**	**1,218**	**4,596**

"Loans and receivables at amortized cost" includes notably the €311 million loan granted to Neptune Energy as part of the sale of the exploration-production business. This item also includes the financing of the Nord Stream 2 pipeline project for a nominal amount of €298 million (excluding capitalized interest and expected credit losses) for the first tranche and €433 million for the second tranche.

Impairment and expected credit losses against loans and receivables at amortized cost stood at €139 million at December 31, 2019 (€319 million at December 31, 2018). This amount includes notably the impairment on the Argentine State receivable related to the concessions granted to Aguas Provinciales de Santa Fe, attributable to SUEZ (*see Note 25.4.1 Concessions in Buenos Aires and Santa Fe*).

Net gains and losses recognized in the income statement relating to loans and receivables at amortized cost break down as follows:

		Post-acquisition measurement	
In millions of euros	**Interest income**	**Foreign currency translation**	**Expected credit loss**
At December 31, 2019	233	(38)	4
At December 31, 2018	263	(21)	(41)

No material expected credit losses were recognized against loans and receivables at amortized cost at December 31, 2019 and December 31, 2018.

Amounts receivable under finance leases

These contracts refer to lease contracts in which ENGIE acts as lessor, classified as finance leases in accordance with IFRS 16. They concern (i) energy purchase and sale contracts where the contract conveys an exclusive right to use a production asset; and (ii) certain contracts with industrial customers relating to assets held by the Group.

The Group has recognized finance lease receivables, notably for cogeneration plants for Wapda and NTDC (Uch - Pakistan) and Lanxess (Electrabel - Belgium).

In millions of euros	**Dec. 31, 2019**	**Dec. 31, 2018**
Undiscounted future minimum lease payments	878	919
Unguaranteed residual value accruing to the lessor	8	27
TOTAL GROSS INVESTMENT IN THE LEASE	**886**	**946**
Unearned financial income	**94**	**170**
NET INVESTMENT IN THE LEASE (STATEMENT OF FINANCIAL POSITION)	**792**	**777**
Of which present value of future minimum lease payments	*787*	*758*
Of which present value of unguaranteed residual value	*6*	*19*

Undiscounted minimum lease payments receivable under finance leases can be analyzed as follows:

In millions of euros	**Dec. 31, 2019**	**Dec. 31, 2018**
Year 1	118	182
Years 2 to 5 inclusive	470	420
Beyond year 5	290	317
TOTAL	**878**	**919**

16.1.2 Trade and other receivables, assets from contracts with customers

Information on trade and other receivables and assets from contracts with customers are provided in Note 7.2."Trade and other receivables, assets and liabilities from contracts with customers".

16.1.3 Cash and cash equivalents

Accounting standards

This item includes cash equivalents as well as short-term investments that are considered to be readily convertible into a known amount of cash and where the risk of a change in their value is deemed to be negligible based on the criteria set out in IAS 7.

Bank overdrafts are not included in the calculation of cash and cash equivalents and are recorded under “Short-term borrowings”.

Cash and cash equivalent items are subject to impairment tests in accordance with the expected credit losses model of IFRS 9.

Cash and cash equivalents totaled €10,519 million at December 31, 2019 (€8,700 million at December 31, 2018).

This amount included funds related to the green bond issues, which remain unallocated to the funding of eligible projects (*see section 5 of the Universal Registration Document*).

At December 31,2019, this amount also included €86 million in cash and cash equivalents subject to restrictions (€121 million at December 31, 2018), including €63 million of cash equivalents set aside to cover the repayment of borrowings and debt as part of project financing arrangements in certain subsidiaries.

Gains recognized in respect of “Cash and cash equivalents” amounted to €76 million at December 31, 2019 compared to €73million at December 31, 2018.

16.1.4 Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material

As indicated in Note 19.2 “Obligations relating to nuclear power generation activities”, the Belgian law of April 11, 2003, amended by the law of April 25, 2007, granted the Group’s wholly-owned subsidiary Synatom responsibility for managing and investing funds received from operators of nuclear power plants in Belgium and designed to cover the costs of dismantling nuclear power plants and managing radioactive fissile material.

Pursuant to the law, Synatom may lend up to 75% of these funds to nuclear power plant operators provided that certain credit quality criteria are met. The funds that cannot be lent to nuclear operators are invested in assets to cover the liabilities.

Following the triennial review of nuclear provisions carried out by Belgium's Commission for Nuclear Provisions (see Note 19.2 “Obligations relating to nuclear power generation activities”), Electrabel undertook not to take out any further loans in respect of provisions for the back-end nuclear fuel cycle and to repay all of the loans taken out for that purpose by 2025. Over the next five years, therefore, Synatom will invest in financial assets to cover future costs of managing radioactive fissile material, up to the amount of the corresponding provisions, i.e., about €6 billion more than the assets set aside to cover those provisions at December 31, 2019, plus the annual recurring charge arising from the unwinding of the discount on those provisions and the additional quantities of fuel consumed.

The financial assets covering future costs of dismantling nuclear facilities and managing radioactive fissile material are either loans to legal entities that meet the credit quality criteria required by law or other external assets with sufficient diversification and spread to minimize the risk. The Commission for Nuclear Provisions issues an opinion on the asset classes in which Synatom may invest. Synatom has also undertaken to develop an Investment Department, appoint two outside directors to its Board and set up an Audit Committee.

Loans to entities outside the Group and other cash investments are shown in the table below:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Loans to third parties	**467**	**512**
Loan to Eso/Elia	453	454
Loan to Ores Assets	-	40
Loan to Sibelga	14	18
Others loans and receivables at amortized cost	**85**	**163**
Debt instruments - restricted cash	85	163
Equity and debt instruments at fair value	**2,054**	**1,539**
Equity instruments at fair value through other comprehensive income	207	47
Debt instruments at fair value through other comprehensive income	1,138	1,025
Debt instruments at fair value through income	709	467
TOTAL	**2,606**	**2,214**

Loans to entities outside the Group and the cash subject to restriction held by money market funds are shown in the statement of financial position as “Loans and receivables at amortized cost”. Bonds and money market funds held by Synatom are shown as “equity instruments at fair value through other comprehensive income”, “debt instruments at fair value through other comprehensive income” or “debt instruments at fair value through income” (*see Note 16.1 “Financial assets”*).

16.1.5 Transfer of financial assets

At December 31, 2019, the outstanding amount of transferred financial assets (as well as the risks to which the Group remains exposed following the transfer of those financial assets) as part of transactions leading to either (i) all or part of those assets being retained in the statement of financial position, or (ii) their full deconsolidation while retaining a continuing involvement in these financial assets, was not material in terms of the Group’s indicators.

In 2019, the Group carried out disposals without recourse to financial assets as part of transactions leading to full derecognition, for an outstanding amount of €944 million at December 31, 2019.

16.1.6 Financial assets and equity instruments pledged as collateral for borrowings and debt

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Financial assets and equity instruments pledged as collateral	4,471	3,447

This item mainly includes the carrying amount of equity instruments pledged as collateral for borrowings and debt.

16.2 Financial liabilities

Accounting standards

Borrowings and other financial liabilities are measured at amortized cost using the effective interest rate method.

On initial recognition, any issue or redemption premiums and discounts and issuing costs are added to/deducted from the nominal value of the borrowings concerned. These items are taken into account when calculating the effective interest rate and are therefore recorded in the consolidated income statement over the life of the borrowings using the amortized cost method.

As regards structured debt instruments that do not have an equity component, the Group may be required to separate an “embedded” derivative instrument from its host contract. When an embedded derivative is separated from its host contract, the initial carrying amount of the structured instrument is broken down into an embedded derivative component, corresponding to the fair value of the embedded derivative, and a financial liability component, corresponding to the difference between the amount of the issue and the fair value of the embedded derivative. The separation of components upon initial recognition does not give rise to any gains or losses.

The debt is subsequently recorded at amortized cost using the effective interest method while the derivative is measured at fair value, with changes in fair value recognized in profit or loss.

Financial liabilities are recognized either:

- as “Amortized cost liabilities” for borrowings, trade payables and other creditors, and other financial liabilities;
- as “Liabilities measured at fair value through profit or loss” for derivative financial instruments and for financial liabilities designated as such.

The following table presents the Group’s different financial liabilities at December 31, 2019, broken down into current and non-current items:

		Dec. 31, 2019			Dec. 31, 2018 (1)		
In millions of euros	**Notes**	Non-current	Current	Total	**Non-current**	**Current**	**Total**
Borrowings and debt		30,002	8,543	38,544	26,434	5,745	32,178
Trade and other payables	16.2	-	19,109	19,109	-	19,759	19,759
Liabilities from contracts with customers	7.2	45	4,286	4,330	36	3,598	3,634
Derivative instruments	16.4	5,129	10,446	15,575	2,785	11,510	14,295
Other financial liabilities		38	-	38	46	-	46
TOTAL		**35,213**	**42,383**	**77,596**	**29,301**	**40,612**	**69,913**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

16.2.1 Trade and other payables

In millions of euros	Dec. 31, 2019	**Dec. 31, 2018**
Trade payables	18,683	19,192
Payable on fixed assets	426	568
TOTAL	**19,109**	**19,759**

The carrying amount of these financial liabilities represents a reasonable estimate of their fair value.

16.2.2 Liabilities from contracts with customers

Information on liabilities from contracts with customers are provided in Note 7.2. “Trade and other receivables, assets and liabilities from contracts with customers”.

16.3 Net financial debt

16.3.1 Net financial debt by type

In millions of euros		Dec. 31, 2019 Non-current	Dec. 31, 2019 Current	Dec. 31, 2019 Total	Dec. 31, 2018 [1] Non-current	Dec. 31, 2018 [1] Current	Dec. 31, 2018 [1] Total
Borrowings and debt	Bond issues	23,262	2,753	26,015	21,444	1,202	22,645
	Bank borrowings	4,229	1,063	5,292	4,272	349	4,620
	Negotiable commercial paper		3,233	3,233		2,894	2,894
	Lease liabilities [2]	1,935	578	2,512	262	118	380
	Other borrowings [3]	576	668	1,244	456	718	1,174
	Bank overdrafts and current account	-	247	247	-	464	464
	BORROWINGS AND DEBT	**30,002**	**8,543**	**38,544**	**26,434**	**5,745**	**32,178**
Other financial assets	Other financial assets deducted from net financial debt [4]	**(213)**	**(1,289)**	**(1,502)**	**(288)**	**(1,694)**	**(1,982)**
Cash and cash equivalents	Cash and cash equivalents [5]	**-**	**(10,519)**	**(10,519)**	**-**	**(8,700)**	**(8,700)**
Derivative instruments	Derivatives hedging borrowings [6]	**(521)**	**(83)**	**(604)**	**(419)**	**24**	**(395)**
NET FINANCIAL DEBT		**29,267**	**(3,348)**	**25,919**	**25,727**	**(4,625)**	**21,102**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 “Accounting framework and basis for preparing the consolidated financial statements”).

(2) At December 31, 2018, lease liabilities corresponds to liabilities under finance leases.

(3) This item corresponds to the revaluation of the interest rate component of debt in a qualified fair value hedging relationship.

(4) This item notably corresponds to assets related to financing, liquid debt instruments held for cash investment purposes and margin calls on derivatives hedging borrowings - carried in assets.

(5) Of which €619 million of financial instruments deducted from net financial debt and reclassified from “Other financial assets” to “Cash and cash equivalent”. (see Note 16.1 “Financial assets”), with no impact on net financial debt.

(6) This item represents the interest rate component of the fair value of derivatives hedging borrowings in a designated fair value hedging relationship. It also represents the exchange rate and outstanding accrued interest rate components of the fair value of all debt-related derivatives irrespective of whether or not they qualify as hedges.

The fair value of gross borrowings and debt (excluding lease liabilities) amounted to €38,893 million at December 31, 2019, compared with a carrying amount of €35,057 million.

Financial income and expenses related to borrowings and debt are presented in Note 10 “Net financial income/(loss)”.

16.3.2 Reconciliation between net financial debt and cash flow from (used in) financing activities

In millions of euros		Dec. 31, 2018 [(1)]	Cash flow from financing activities	Cash flow from operating and investing activities and variation of cash and cash equivalents	Change in fair value	Translation adjustments	Change in scope of consolidation and others	Dec. 31, 2019
Borrowings and debt	Bond issues	22,645	3,210	-	-	170	(10)	26,015
	Bank borrowings	4,620	705	-	-	13	(46)	5,292
	Negotiable commercial paper	2,894	317	-	-	22	-	3,233
	Lease liabilities[(2)]	380	(551)	-	-	9	2,674	2,512
	Other borrowings	1,174	133	-	66	19	(147)	1,244
	Bank overdrafts and current account	464	(150)	-	-	(2)	(65)	247
	BORROWINGS AND DEBT	**32,178**	**3,664**	**-**	**66**	**231**	**2,405**	**38,544**
Other financial assets	Other financial assets deducted from net financial debt [(3)]	**(1,982)**	**(135)**	**-**	**(8)**	**2**	**620**	**(1,502)**
Cash and cash equivalents	Cash and cash equivalents [(3)]	**(8,700)**	**-**	**(1,306)**	**-**	**(34)**	**(479)**	**(10,519)**
Derivative	Derivatives hedging borrowings	**(395)**	**(75)**	**-**	**25**	**(155)**	**(5)**	**(604)**
NET FINANCIAL		**21,102**	**3,454**	**(1,306)**	**83**	**45**	**2,542**	**25,919**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Lease liabilities: the amount of 551 million included into column "Cash flow from financing activities" corresponds to lease payments, excluding interest (total cash outflow for leases amounted to €590 million of which €39 million relating to interest). The amount included in the column "Changes in scope of consolidation and others" mainly correspond to the first-time application of IFRS 16.

(3) Cash and cash equivalents: the amount in column "Changes in scope of consolidation and others" mainly corresponds to the reclassification of financial assets amounting to €619 million from "Other financial assets" to "Cash and cash equivalents" (see Note 16.1 "Financial assets").

16.3.3 Main events of the period

16.3.3.1 Impact of changes in the scope of consolidation and in exchange rates on net financial debt

In 2019, changes in exchange rates resulted in a €45 million increase in net financial debt, including a €88 million increase in relation to the US dollar, which was offset by a €36 million decrease in debt denominated in Brazilian real and €20 million in pounds sterling.

Changes in the scope of consolidation (including the cash impact of acquisitions and disposals) led to a €78 million increase in net financial debt, reflecting:

- disposals of assets over the period, which reduced net financial debt by €3,094 million, notably including the disposal of the interest in GLOW, of coal-fired power plants in Germany and the Netherlands and assets held by Langa in France (*see Note 4.1 "Disposals carried out in 2019"*);
- the classification of renewable energy assets in Mexico and green gas production assets in France under "Assets held for sale" (*see Note 4.2 "Assets held for sale"*) which reduced net financial debt by €26 million;
- acquisitions carried out in 2019 which increased net financial debt by €3,198 million mainly due to the acquisition of a 90% interest in Transportadora Associada de Gás S.A. (TAG) in Brazil, of Conti in the North America and OTTO Luft-und Klimatechnik GmbH & Co in Germany (*see Note 4.3 "Acquisitions carried out in 2019"*).

16.3.3.2 Financing and refinancing transactions

The Group carried out the following main transactions in 2019:

- on June 21, 2019, ENGIE SA issued €1.5 billion worth of bonds:
  - a €750 million tranche maturing in June 2027 with a 0.375% coupon,
  - a €750 million tranche maturing in June 2039 with a 1.375% coupon;
- on September 4, 2019, ENGIE SA issued €750 million worth of bonds maturing in March 2027 with a 0% coupon;
- on October 24, 2019, ENGIE SA issued €1.5 billion worth of bonds:
  - a €900 million tranche, a green bond maturing in October 2030 with a 0.5% coupon,
  - a €600 million tranche maturing in October 2041 with a 1.25% coupon;
- ENGIE SA redeemed the €775 million worth of bonds that matured on January 24, 2019 with a 6.875% coupon;
- on December 5, 2018, ENGIE SA gave notice that it had exercised the annual prepayment option for the GBP 300 million tranche of deeply-subordinated notes (representing a total amount of €352 million including the accrued coupon) that had previously been recognized in equity in a net amount of €340 million with a 4.625% coupon. ENGIE SA redeemed the bonds on January 10, 2019;
- on May 21, 2019, ENGIE Brasil Energia carried out a bond issue of BRL 2,500 million (€547 million) maturing in November 2020;
- on July 15, 2019, ENGIE Brasil Energia carried out the following refinancing transactions
  - a BRL1 596 million (€360 million) worth of bonds including two tranches of BRL952 million maturing in July 2026 and two tranches of BRL644 million maturing in July 2029,
  - a partial redemption of the bond issued on May 21, 2019 for an amount of BRL1 500 million (€338 million) maturing in November 2020 ;
- on May 17, 2019, ENGIE Brasil Energia took out three bank loans totaling €252 million maturing in May 2022 including two bank loans totaling USD 150 million and a bank loan of BRL 534 million;;
- on November 26, 2019, ENGIE Brasil Energia took out 18 bank loans totaling BRL 1,197 million (€263 million) maturing in December 2038;
- on November 30, 2019, ENGIE Brasil Energia took out a bank loan of BRL 795 million (€176 million) maturing in January 2036.

16.4 Derivative instruments

Accounting standards

Derivative financial instruments are measured at fair value. This fair value is determined on the basis of market data, available from external contributors. In the absence of an external benchmark, a valuation based on internal models recognized by market participants and favoring data directly derived from observable data such as OTC quotations will be used.

The change in fair value of derivative financial instruments is recorded in the income statement except when they are designated as hedging instruments in a cash flow hedge or net investment hedge. In this case, changes in the value of the hedging instruments are recognized directly in equity, excluding the ineffective portion of the hedges.

The Group uses derivative financial instruments to manage and reduce its exposure to market risks arising from fluctuations in interest rates, foreign currency exchange rates and commodity prices, mainly for gas and electricity. The use of derivative instruments is governed by a Group policy for managing interest rate, currency and commodity risks (*see Note 17 – Risks arising from financial instruments*).

Derivative financial instruments are contracts (i) whose value changes in response to the change in one or more observable variables, (ii) that do not require any material initial net investment, and (iii) that are settled at a future date.

Derivative instruments therefore include swaps, options, futures and swaptions, as well as forward commitments to purchase or sell listed and unlisted securities, and firm commitments or options to purchase or sell non-financial assets that involve physical delivery of the underlying.

For purchases and sales of electricity and natural gas, the Group systematically analyzes whether the contract was entered into in the "normal" course of operations and therefore falls outside the scope of IFRS 9. This analysis consists firstly in demonstrating that the contract is entered into and continues to be held for the purpose of physical delivery or receipt of the commodity in accordance with the Group's expected purchase, sale or usage requirements.

The second step is to demonstrate that the Group has no practice of settling similar contracts on a net basis and that these contracts are not equivalent to written options. In particular, in the case of electricity and gas sales allowing the buyer a certain degree of flexibility concerning the volumes delivered, the Group distinguishes between contracts that are equivalent to capacity sales considered as transactions falling within the scope of ordinary operations and those that are equivalent to written financial options, which are accounted for as derivative financial instruments.

Only contracts that meet all of the above conditions are considered as falling outside the scope of IFRS 9. Adequate specific documentation is compiled to support this analysis.

Embedded derivatives

The main Group contracts that may contain embedded derivatives are contracts with clauses or options potentially affecting the contract price, volume or maturity. This is the case primarily with contracts for the purchase or sale of non-financial assets, whose price is revised based on an index, the exchange rate of a foreign currency or the price of an asset other than the contract's underlying.

An embedded derivative is a component of a hybrid (combined) instrument that also includes a non-derivative host contract – with the effect that some of the cash flows of the combined instrument vary in a way similar to a stand-alone derivative.

If a hybrid contract contains a host that is an asset within the scope of IFRS 9, the Group applies the presentation and measurements requirements described in paragraph 17.1. to the entire hybrid contract.

Conversely, when a hybrid contract contains a host that is not an asset within the scope of IFRS 9, an embedded derivative shall be separated from the host and accounted for as a derivative if, and only if:

- the economic characteristics and risks of the embedded derivative are not closely related to the economic characteristics and risks of the host;
- a separate instrument within the same terms as the embedded derivative would meet the definition of a derivative; and
- the hybrid contract is not measured at fair value with changes in fair value recognized in profit or loss (i.e., a derivative that is embedded in a financial liability at fair value through profit or loss is not separated).

If an embedded derivative is separate from the host contract, it shall be measured at fair value and fair value changes are recognized in profit or loss (except if the embedded derivative is documented in a hedge relationship).

Hedging instruments: recognition and presentation

Derivative instruments qualifying as hedging instruments are recognized in the consolidated statement of financial position and measured at fair value. However, their accounting treatment varies according to whether they are classified as (i) a fair value hedge of an asset or liability; (ii) a cash flow hedge or (iii) a hedge of a net investment in a foreign operation.

Fair value hedges

A fair value hedge is defined as a hedge of the exposure to changes in fair value of a recognized asset or liability such as a fixed-rate loan or borrowing, or of assets, liabilities or an unrecognized firm commitment denominated in a foreign currency. The gain or loss from remeasuring the hedging instrument at fair value is recognized in income. The gain or loss on the hedged item attributable to the hedged risk adjusts the carrying amount of the hedged item and is also recognized in income even if the hedged item is in a category in respect of which changes in fair value are recognized through other comprehensive income. These two adjustments are presented net in the consolidated income statement, with the net effect corresponding to the ineffective portion of the hedge.

Cash flow hedges

A cash flow hedge is a hedge of the exposure to variability in cash flows that could affect the Group's income. The hedged cash flows may be attributable to a particular risk associated with a recognized financial or non-financial asset or a highly probable forecast transaction.

The portion of the gain or loss on the hedging instrument that is determined to be an effective hedge is recognized directly in other comprehensive income, net of tax, while the ineffective portion is recognized in income. The gains or losses accumulated in equity are reclassified to the consolidated income statement under the same caption as the loss or gain on the hedged item – i.e., current operating income for operating cash flows and financial income or expenses for other cash flows – in the same periods in which the hedged cash flows affect income.

If the hedging relationship is discontinued, in particular because the hedge is no longer considered effective, the cumulative gain or loss on the hedging instrument remains recognized in equity until the forecast transaction occurs. However, if a forecast transaction is no longer expected to occur, the cumulative gain or loss on the hedging instrument is immediately recognized in income.

Hedge of a net investment in a foreign operation

In the same way as for a cash flow hedge, the portion of the gain or loss on the hedging instrument that is determined to be an effective hedge of the currency risk is recognized directly in other comprehensive income, net of tax, while the ineffective portion is recognized in income. The gains or losses accumulated in other comprehensive income are transferred to the consolidated income statement when the investment is liquidated or sold.

Hedging instruments: identification and documentation of hedging relationships

The hedging instruments and hedged items are designated at the inception of the hedging relationship. The hedging relationship is formally documented in each case, specifying the hedging strategy, the hedged risk and the method used to assess hedge effectiveness. Only derivative contracts entered into with external counterparties are considered as being eligible for hedge accounting

Hedge effectiveness is assessed and documented at the inception of the hedging relationship and on an ongoing basis throughout the periods for which the hedge was designated.

Hedge effectiveness is demonstrated both prospectively and retrospectively using various methods, based mainly on a comparison between changes in fair value or cash flows between the hedging instrument and the hedged item. Methods based on an analysis of statistical correlations between historical price data are also used.

Derivative instruments not qualifying for hedge accounting: recognition and presentation

These items mainly concern derivative financial instruments used in economic hedges that have not been – or are no longer – documented as hedging relationships for accounting purposes.

When a derivative financial instrument does not qualify or no longer qualifies for hedge accounting, changes in fair value are recognized directly in income under (i) current operating income for derivative instruments with non-financial assets as the underlying, and (ii) financial income or expenses for currency, interest rate and equity derivatives.

Derivative instruments not qualifying for hedge accounting used by the Group in connection with proprietary commodity trading activities and other derivatives expiring in less than 12 months are recognized in the consolidated statement of financial position in current assets and liabilities, while derivatives expiring after this period are classified as non-current items.

Fair value measurement

The fair value of instruments listed on an active market is determined by reference to the market price. In this case, these instruments are presented in level 1 of the fair value hierarchy.

The fair value of unlisted financial instruments for which there is no active market and for which observable market data exist is determined based on valuation techniques such as option pricing models or the discounted cash flow method.

Models used to evaluate these instruments take into account assumptions based on market inputs:

- the fair value of interest rate swaps is calculated based on the present value of future cash flows;
- the fair value of forward foreign exchange contracts and currency swaps is calculated by reference to current prices for contracts with similar maturities by discounting the future cash flow spread (difference between the forward exchange rate under the contract and the forward exchange rate recalculated in line with the new market conditions applicable to the nominal amount);
- the fair value of currency and interest rate options is calculated using option pricing models;
- commodity derivatives are valued by reference to listed market prices based on the present value of future cash flows (commodity swaps or commodity forwards) and option pricing models (options), for which market price volatility may be a factor. Contracts with maturities exceeding the depth of transactions for which prices are observable, or which are particularly complex, may be valued based on internal assumptions;
- exceptionally, for complex contracts negotiated with independent financial institutions, the Group uses the values established by its counterparties.

These instruments are presented in level 2 of the fair value hierarchy except when the evaluation is based mainly on data that are not observable; in which case they are presented in level 3 of the fair value hierarchy. Most often, this is the case for derivatives with a maturity that falls outside the observability period for market data relating to the underlying or when certain inputs such as the volatility of the underlying are not observable.

Except in case of enforceable master netting arrangements or similar agreements, counterparty risk is included in the fair value of financial derivative instrument assets and liabilities. It is calculated according to the "expected loss" method and takes into account the exposure at default, the probability of default and the loss given default. The probability of default is determined on the basis of credit ratings assigned to each counterparty ("historical probability of default" approach).

Derivative instruments recognized in assets and liabilities are measured at fair value and broken down as follows:

	Dec. 31, 2019						Dec. 31, 2018					
	Assets			Liabilities			Assets			Liabilities		
In millions of euros	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total	Non-current	Current	Total
Derivatives hedging borrowings	705	124	829	183	41	225	678	42	720	259	66	325
Derivatives hedging commodities	2,484	9,993	12,476	3,011	10,360	13,371	1,409	10,608	12,018	1,311	11,405	12,716
Derivatives hedging other items (1)	949	17	966	1,934	45	1,980	606	28	634	1,215	38	1,254
TOTAL	**4,137**	**10,134**	**14,272**	**5,129**	**10,446**	**15,575**	**2,693**	**10,679**	**13,372**	**2,785**	**11,510**	**14,295**

(1) Derivatives hedging other items mainly include the interest rate component of interest rate derivatives (not qualifying as hedges or qualifying as cash flow hedges) that are excluded from net financial debt, as well as net investment hedge derivatives.

16.4.1 Offsetting of derivative instrument assets and liabilities

The net amount of derivative instruments after taking into account enforceable master netting arrangements or similar agreements, whether or not they are set off in accordance with paragraph 42 of IAS 32, are presented in the table below:

		Dec. 31, 2019				Dec. 31, 2018			
In millions of euros		Gross amount	Net amount recognized in the statement of financial position (1)	Other offsetting agreements (2)	Total net amount	Gross amount	Net amount recognized in the statement of financial position (1)	Other offsetting agreements (2)	Total net amount
Assets	Derivatives hedging commodities	13,121	12,476	(7,704)	4,772	12,588	**12,018**	(8,409)	**3,609**
	Derivatives hedging borrowings and other items	1,795	1,795	(399)	1,397	1,354	**1,354**	(384)	**970**
Liabilities	Derivatives hedging commodities	(14,015)	(13,371)	9,872	(3,499)	(13,285)	**(12,716)**	10,449	**(2,267)**
	Derivatives hedging borrowings and other items	(2,204)	(2,204)	899	(1,305)	(1,579)	**(1,579)**	601	**(978)**

(1) Net amount recognized in the statement of financial position after taking into account offsetting agreements that meet the criteria set out in paragraph 42 of IAS 32.

(2) Other offsetting agreements include collateral and other guarantee instruments, as well as offsetting agreements that do not meet the criteria set out in paragraph 42 of IAS 32.

16.5 Fair value of financial instruments by level in the fair value hierarchy

16.5.1 Financial assets

The table below shows the allocation of financial instruments carried in assets to the different levels in the fair value hierarchy:

In millions of euros	Dec. 31, 2019 Total	Level 1	Level 2	Level 3	Dec. 31, 2018 Total	Level 1	Level 2	Level 3
Other financial assets (excluding loans and receivables at amortized cost)	3,714	2,069	-	1,645	3,887	1,554	-	2,332
Equity instruments at fair value through other comprehensive income	*921*	*222*	*-*	*698*	*742*	*62*	*-*	*680*
Equity instruments at fair value through income	*377*	*-*	*-*	*377*	*365*	*-*	*-*	*365*
Debt instruments at fair value through other comprehensive income	*1,149*	*1,138*	*-*	*11*	*1,947*	*1,025*	*-*	*922*
Debt instruments at fair value through income	*1,268*	*709*	*-*	*559*	*832*	*467*	*-*	*365*
Derivative instruments	14,272	8	12,993	1,270	13,372	38	12,912	422
Derivatives hedging borrowings	*829*	*-*	*829*	*-*	*720*	*-*	*720*	*-*
Derivatives hedging commodities - relating to portfolio management activities(1)	*3,521*	*-*	*2,928*	*593*	*2,075*	*-*	*2,036*	*39*
Derivatives hedging commodities - relating to trading activities(1)	*8,955*	*8*	*8,271*	*677*	*9,943*	*38*	*9,522*	*383*
Derivatives hedging other items	*966*	*-*	*966*	*-*	*634*	*-*	*634*	*-*
TOTAL	**17,986**	**2,077**	**12,993**	**2,916**	**17,259**	**1,593**	**12,912**	**2,754**

(1) Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and a power contract that are measured at fair value and relate to trading activities.

A definition of these three levels is presented in Note 16.4 "Derivative instruments".

Other financial assets (excluding loans and receivables at amortized cost)

Changes in level 3 equity and debt instruments at fair value can be analyzed as follows:

In millions of euros	Equity instruments at fair value through other comprehensive income	Debt instruments at fair value through other comprehensive income	Equity instruments at fair value through income	Debt instruments at fair value through income	Other financial assets (excluding loans and receivables
AT DECEMBER 31, 2018	**680**	**922**	**365**	**365**	**2,332**
Acquisitions	43	10	170	231	455
Disposals	(73)	(306)	(24)	(42)	(446)
Changes in fair value	76	-	(23)	5	58
Changes in scope of consolidation, foreign currency translation and other changes (1)	(28)	(614)	(112)	-	(755)
AT DECEMBER 31, 2019	**698**	**11**	**377**	**559**	**1,645**
Gains/(losses) recorded in income relating to instruments held at the end of the period					51

(1) Of which €619 million of financial instruments deducted from net financial debt and reclassified from "Other financial assets" to "Cash and cash equivalents" (see Note 16.1 "Financial assets").

Derivative instruments

Changes in level 3 derivative instruments commodities can be analyzed as follows:

In millions of euros	**Net Asset/(Liability)**
AT DECEMBER 31, 2018	**(99)**
Changes in fair value recorded in income	178
Settlements	(10)
Transfer out of level 3 to levels 1 and 2	(29)
Net fair value recorded in income	**40**
Deferred Day-One gains/(losses)	49
AT DECEMBER 31, 2019	**89**

16.5.2 Financial liabilities

The table below shows the allocation of financial instruments carried in liabilities to the different levels in the fair value hierarchy:

	Dec. 31, 2019				**Dec. 31, 2018**			
In millions of euros	**Total**	**Level**	**Level**	**Level**	**Total**	**Level**	**Level**	**Level**
Borrowings used in designated fair value hedges	6,510	-	6,510	-	5,358	-	5,358	-
Borrowings not used in designated fair value hedges	32,382	22,763	9,620	-	28,293	19,028	9,265	-
Derivative instruments	15,575	102	14,292	1,181	14,295	26	13,764	505
Derivatives hedging borrowings	*225*	-	*225*	-	*325*	-	*325*	-
Derivatives hedging commodities - relating to portfolio management activities(1)	*4,136*	-	*3,697*	*440*	*2,124*	-	*2,075*	*49*
Derivatives hedging commodities - relating to trading activities(1)	*9,234*	*102*	*8,391*	*741*	*10,592*	*26*	*10,110*	*456*
Derivatives hedging other items	*1,980*	-	*1,980*	-	*1,254*	-	*1,254*	-
TOTAL	**54,468**	**22,865**	**30,422**	**1,181**	**47,946**	**19,054**	**28,387**	**505**

(1) Derivative financial instruments relating to commodities classified in level 3 mainly include long-term gas supply contracts and a power contract that are measured at fair value and relating to trading activities.

A definition of these three levels is presented in Note 16.4 "Derivative instruments".

Borrowings used in designated fair value hedges

This caption includes bonds in a designated fair value hedging relationship, which are presented in level 2 in the above table. Only the interest rate component of the bonds is remeasured, with fair value determined by reference to observable inputs.

Borrowings not used in designated fair value hedges

Listed bond issues are included in level 1.

Other borrowings not used in a designated hedging relationship, are presented in level 2 in the above table. The fair value of these borrowings is determined on the basis of future discounted cash flows and relies on directly or indirectly observable data.

NOTE 17 RISKS ARISING FROM FINANCIAL INSTRUMENTS

The Group mainly uses derivative instruments to manage its exposure to market risks. Financial risk management procedures are set out in Chapter 2 “Risk factors” of the Universal Registration Document.

17.1 Market risks

17.1.1 Commodity risk

Commodity risk arises primarily from the following activities:

- portfolio management; and
- trading.

The Group has identified primarily two types of commodity risks: price risk resulting from fluctuations in market prices, and volume risk inherent to the business.

In the ordinary course of its operations, the Group is exposed to commodity risks on natural gas, electricity, coal, oil and oil products, other fuels, CO_2 and other “green” products. The Group is active on these energy markets either for supply purposes or to optimize and secure its energy production chain and its energy sales. The Group also uses derivatives to offer hedging instruments to its clients and to hedge its own positions.

17.1.1.1 Portfolio management activities

Portfolio management seeks to optimize the market value of assets (power plants, gas and coal supply contracts, energy sales and gas storage and transportation) over various timeframes (short-, medium- and long-term). Market value is optimized by:

- guaranteeing supply and ensuring the balance between physical needs and resources;
- managing market risks (price, volume) to unlock optimum value from portfolios within a specific risk framework.

The risk framework aims to safeguard the Group’s financial resources over the budget period and smooth out medium-term earnings (over three or five years, depending on the maturity of each market). It encourages portfolio managers to take out economic hedges on their portfolio.

Sensitivities of the commodity-related derivatives portfolio used as part of the portfolio management activities as at December 31, 2019 are detailed in the table below. They are not representative of future changes in consolidated earnings and equity, insofar as they do not include the sensitivities relating to the purchase and sale contracts for the underlying commodities.

Sensitivity analysis (1)

		Dec. 31, 2019		Dec. 31, 2018	
In millions of euros	**Changes in price**	**Pre-tax impact on income**	**Pre-tax impact on equity**	**Pre-tax impact on income**	**Pre-tax impact on equity**
Oil-based products	+USD 10/bbl	40	234	60	-
Natural gas	+€3/MWh	225	471	961	1
Electricity	+€5/MWh	82	(47)	65	(26)
Coal	+USD 10/ton	(2)	-	9	2
Greenhouse gas emission rights	+€2/ton	(89)	19	37	1
EUR/USD	+10%	(25)	(99)	67	(2)
EUR/GBP	+10%	33	-	87	-

(1) The sensitivities shown above apply solely to financial commodity derivatives used for hedging purposes as part of the portfolio management activities.

The sensitivity of shareholders' equity to changes in gas and oil product prices is due to the application of cash flow hedge accounting to certain supply hedges within marketing operations since 2019.

17.1.1.2 Trading activities

The Group's trading activities are primarily conducted within:

- ENGIE Global Markets and ENGIE Energy Management. The purpose of these wholly-owned companies is to (i) assist Group entities in optimizing their asset portfolios; (ii) create and implement energy price risk management solutions for internal and external customers;
- ENGIE SA for the optimization of part of its long-term gas supply contracts, of a power exchange contract and of part of its gas sales contracts with retail entities in France and Benelux and with power generation facilities in France and Belgium.

Revenues from trading activities totaled €684 million at December 31, 2019 (€526 million at December 31, 2018).

The use of Value at Risk (VaR) to quantify market risk arising from trading activities provides a transversal measure of risk taking all markets and products into account. VaR represents the maximum potential loss on a portfolio over a specified holding period based on a given confidence interval. It is not an indication of expected results but is back-tested on a regular basis.

The Group uses a one-day holding period and a 99% confidence interval to calculate VaR, as well as stress tests, in accordance with banking regulatory requirements.

The VaR shown below corresponds to the global VaR of the Group's trading entities.

Value at Risk

In millions of euros	Dec. 31, 2019	2019 average (1)	2019 maximum (2)	2019 minimum (2)	2018 average (1)
Trading activities	12	14	26	6	10

(1) Average daily VaR.
(2) Maximum and minimum daily VaR observed in 2019.

17.1.2 Hedges of commodity risks

Hedging instruments and sources of hedge ineffectiveness

The Group enters into cash flow hedges, using derivative instruments (firm or option contracts) contracted over the counter or on organized markets, to reduce its commodity risks which relate mainly to future cash flows from contracted or expected sales and purchases of commodities. These instruments may be settled net or involve physical delivery of the underlying.

Sources of hedge ineffectiveness are mainly related to uncertainty regarding the timing and potential mismatches in settlement dates and indices between the derivative instruments and the associated underlying exposures.

The fair values of commodity derivatives are indicated in the table below:

	Dec. 31, 2019				Dec. 31, 2018			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Derivative instruments relating to portfolio management activities	2,484	1,037	(3,011)	(1,125)	1,409	666	(1,311)	(813)
Cash flow hedges	*1,893*	*292*	*(1,953)*	*(557)*	*46*	*56*	*(61)*	*(129)*
Other derivative instruments	*591*	*746*	*(1,058)*	*(568)*	*1,364*	*610*	*(1,249)*	*(684)*
Derivative instruments relating to trading activities	-	8,955	-	(9,234)	-	9,943	-	(10,592)
TOTAL	**2,484**	**9,993**	**(3,011)**	**(10,360)**	**1,409**	**10,608**	**(1,311)**	**(11,405)**

The fair values shown in the table above reflect the amounts for which assets could be exchanged, or liabilities settled, at the end of the reporting period. They are not representative of expected future cash flows insofar as positions (i) are sensitive to changes in prices; (ii) can be modified by subsequent transactions; and (iii) can be offset by future cash flows arising on the underlying transactions.

17.1.2.1 Cash flow hedges

The fair values of cash flow hedges by type of commodity are as follows:

	Dec. 31, 2019				Dec. 31, 2018			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Natural gas	1,814	235	(1,937)	(550)	20	15	(1)	(3)
Electricity	14	35	(9)	(5)	1	3	(44)	(120)
Coal	-	1	(1)	-	7	3	-	-
Oil	51	-	-	-	-	-	-	-
Other (1)	14	21	(6)	(2)	18	35	(16)	(6)
TOTAL	**1,893**	**292**	**(1,953)**	**(557)**	**46**	**56**	**(61)**	**(129)**

(1) Includes mainly foreign currency hedges on commodities.

Notional amounts (net) (1)

Notional amounts and maturities of cash flow hedges are as follows:

	Unit	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019
Natural gas	*GWh*	212,024	123,387	23,887	4,827	2,147	-	**366,272**
Electricity	*GWh*	(4,461)	(3,787)	(1,384)	-	-	-	**(9,632)**
Coal	*Thousands of tons*	60	45	20	-	-	-	**125**
Oil-based products	*Thousands of barrels*	-	(12,476)	(12,476)	(12,476)	(12,476)	-	**(49,902)**
Forex	*Millions of euros*	21	20	4	-	-	-	**45**
Greenhouse gas emission rights	*Thousands of tons*	150	-	-	-	-	-	**150**

(1) Long/(short) position.

Effects of hedge accounting on the Group's financial position and performance

	Dec. 31, 2019				Dec. 31, 2018	
	Fair Value			Nominal	Fair value	Nominal
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	2,184	(2,510)	(325)	4,967	(88)	(244)
TOTAL	**2,184**	**(2,510)**	**(325)**	**4,967**	**(88)**	**(244)**

The fair values represented above are positive for assets and negative for liabilities.

In millions of euros		Nominal amount	Fair Value	Change in fair value used for calculating hedge effectiveness	Change in the value of the hedging instrument recognized in equity (1)	Ineffective portion recognized in profit or loss (1)	Amount reclassified from the hedge reserve to profit or loss (1)	Line item of profit or loss
Cash flow hedges	Hedging instruments	4,967	(325)		(781)	-	-	Current operating income including operating MtM
	Hedged items			(744)				

(1) Gains/(losses).

Hedge inefficiency is calculated based on the change in the fair value of the hedging instrument compared to the change in the fair value of the hedged items since inception of the hedge. The fair value of the hedging instruments at

December 31, 2019 reflects the cumulative change in the fair value of the hedging instruments since inception of the hedges.

Maturity of commodity derivatives designated as cash flow hedges

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Dec. 31, 2019	Dec. 31, 2018
Fair Value of derivatives by	(266)	-	(26)	(18)	(16)	-	(326)	(88)

Amounts presented in the statement of changes in equity and the statement of comprehensive income

The following table provides a reconciliation of each component of equity and an analysis of other comprehensive income:

	Cash flow hedge
In millions of euros	**Derivatives hedging commodities**
At December 31, 2018	**(71)**
Effective portion recognized in equity	(781)
Amount reclassified from hedge reserve to profit or loss	-
Translation differences	-
Changes in scope of consolidation and other	1
At December 31, 2019	**(837)**

17.1.2.2 Other commodity derivatives

Other commodity derivatives include:

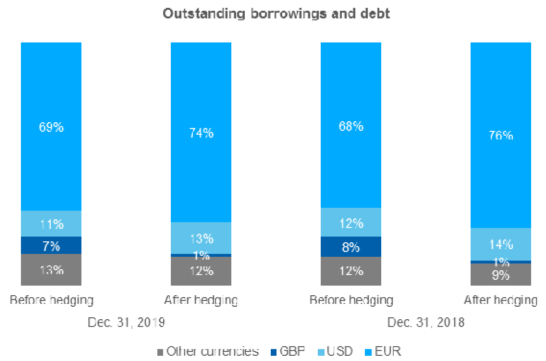
- commodity purchase and sale contracts that were not entered into or are no longer held for the purpose of the receipt or delivery of commodities in accordance with the Group's expected purchase, sale or usage requirements;
- embedded derivatives; and
- derivative financial instruments that are not eligible for hedge accounting in accordance with IFRS 9 or for which the Group has elected not to apply hedge accounting.

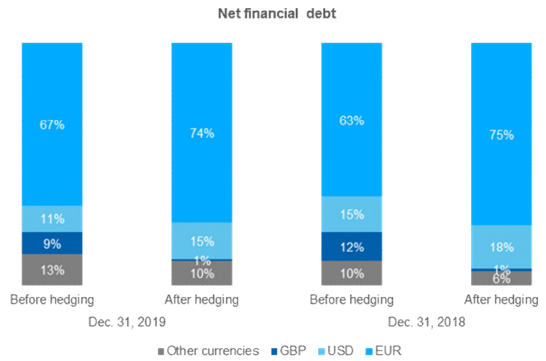
17.1.3 Currency risk

The Group is exposed to currency risk, defined as the impact on its statement of financial position and income statement of fluctuations in exchange rates affecting its operating and financing activities. Currency risk comprises (i) transaction risk arising in the ordinary course of business, (ii) specific transaction risk related to investments, mergers and acquisitions or disposal projects, and (iii) translation risk arising from the conversion into euros of income statement and statement of financial position items from subsidiaries with a functional currency other than the euro. The main translation risk exposures correspond, in order, to assets in US dollars, Brazilian real and pounds sterling.

17.1.3.1 Financial instruments by currency

The following tables present a breakdown by currency of outstanding borrowings and debt and net financial debt, before and after hedging:





17.1.3.2 Currency risk sensitivity analysis

A sensitivity analysis to currency risk on financial income/(loss) – excluding the income statement translation impact of foreign subsidiaries – was performed based on all financial instruments managed by the treasury department and representing a currency risk (including derivative financial instruments).

A sensitivity analysis to currency risk on equity was performed based on all financial instruments qualified as net investment hedges at the reporting date.

For currency risk, sensitivity corresponds to a 10% rise or fall in exchange rates of foreign currencies against the euro compared to closing rates.

	Dec. 31, 2019		
	Impact on income		Impact on equity
In millions of euros	+10% (1)	-10% (1)	+10% (1)
Exposures denominated in a currency other than the functional currency of companies carrying the liabilities on their statements of financial position (2)	(20)	20	NA
Financial instruments (debt and derivatives) qualified as net investment hedges (3)	NA	NA	216

(1) +(-)10%: depreciation (appreciation) of 10% of all foreign currencies against the euro.
(2) Excluding derivatives qualified as net investment hedges.
(3) This impact is countered by the offsetting change in the net investment hedged.

17.1.4 Interest rate risk

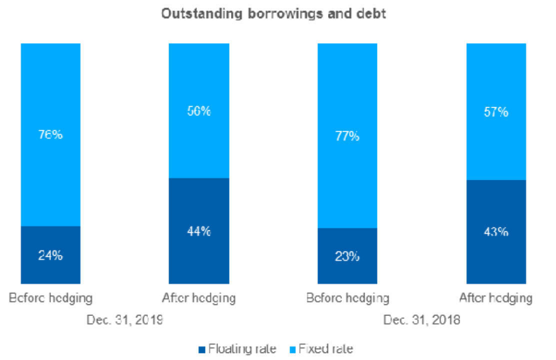
The Group seeks to manage its borrowing costs by limiting the impact of interest rate fluctuations on its income statement. The Group's policy is therefore to arbitrate between fixed rates, floating rates and capped floating rates for its net debt. The interest rate mix may shift within a range defined by the Group Management in line with market trends.

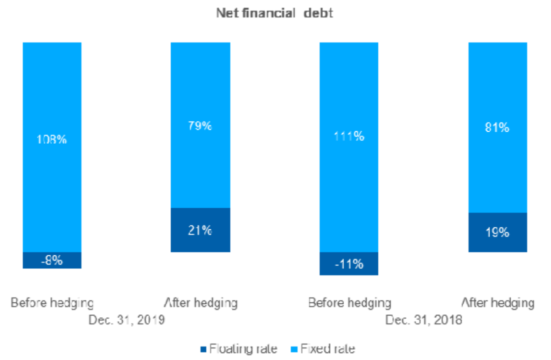
In order to manage the interest rate structure for its net debt, the Group uses hedging instruments, particularly interest rate swaps and options. At December 31, 2019, the Group had a portfolio of interest rate options (caps) protecting it from a rise in short-term interest rates for the euro.

The Group has a portfolio of 2020 and 2021 forward interest rate pre-hedges with respective 10- and 20/21-year maturities to protect the refinancing interest rate on a portion of its debt.

17.1.4.1 Analysis of financial instruments by type of interest rate

The following tables present a breakdown by type of interest rate of outstanding borrowings and debt and net financial debt before and after hedging.





17.1.4.2 Interest rate risk sensitivity analysis

Sensitivity was analyzed based on the Group's net debt position (including the impact of interest rate and foreign currency derivatives relating to net debt) at the reporting date.

For interest rate risk, sensitivity corresponds to a 100-basis-point rise or fall in the yield curve compared to year-end interest rates.

	Dec. 31, 2019			
	Impact on income		Impact on equity	
In millions of euros	+100 basis points	-100 basis points	+100 basis points	-100 basis points
Net interest expense on floating-rate net debt (nominal amount) and on floating-rate leg of derivatives	(49)	48	NA	NA
Change in fair value of derivatives not qualifying as hedges	78	(98)	NA	NA
Change in fair value of derivatives qualifying as cash flow hedges	NA	NA	403	(513)

17.1.5 Currency and interest rate hedges

17.1.5.1 Currency risk management

Foreign currency exchange risk (or "FX" risk) is reported and managed based on a Group-wide approach, reflected in a dedicated Group policy that is approved by Group Management. The policy distinguishes between the three following main sources of currency risk:

- **Regular transaction risk**

  Regular transaction risk corresponds to the potential negative financial impact of currency fluctuations on business and financial operations denominated in a currency other than the functional currency.

  The management of regular transaction risk is fully delegated to the subsidiaries for their scope of activities, while the risks related to central activities are managed at corporate level.

  FX risks related to operational activities are systematically hedged when the related cash flows are certain, with a hedging horizon that corresponds at least to the medium-term plan horizon. For cash flows that are not certain, in their entirety, the hedge is initially based on a "no regret" volume. Exposures are monitored and managed based on the sum of nominal cash flows in FX, including highly probable amounts and related hedges.

For FX risks related to financial activities, all significant exposures related to cash, financial debts, etc. are systematically hedged. Exposures are monitored based on the net sum of balance sheet items in FX.

- **Project transaction risk**

  Specific project transaction risk corresponds to the potential negative financial impact of FX fluctuations on specific major operations such as investment projects, acquisitions, disposals and restructuring projects, involving multiple currencies.

  The management of these FX risks includes the definition and implementation of hedging transactions, taking into account the likelihood of the risk (including probability of project completion) and its evolution, the availability of hedging instruments and their associated cost. Management's aim is to ensure the viability and the profitability of the transactions.

- **Translation risk**

  Translation risk corresponds to the potential negative financial impact of FX fluctuations concerning consolidated entities with a functional currency other than the euro. It relates to the translation of their income and expenses and their net assets.

  Translation risk is managed centrally, with a focus on securing the net asset value.

  The pertinence of hedging this translation risk is assessed regularly for each currency (as a minimum) or set of assets in the same currency, taking into account notably the value of the assets and the hedging costs.

Hedging instruments and sources of hedge ineffectiveness

The Group principally uses the following risk management levers for mitigating currency risk:

- derivative instruments: these mostly correspond to over-the-counter contracts and include FX forward transactions, FX swaps, currency swaps, cross currency swaps, plain vanilla FX options or combinations (calls, puts or collars);
- monetary items such as debt, cash and loans.

Sources of hedge ineffectiveness are mainly related to uncertainty regarding the timing and in some cases the amount of the future cash flows in foreign currency that are being hedged.

17.1.5.2 Interest rate risk management

The Group is exposed to interest rate risk through its financing and investing activities. Interest rate risk is defined as a financial risk resulting from fluctuations in base interest rates that may increase the cost of debt and affect the viability of investments. Base interest rates are market interest rates, such as EURIBOR, LIBOR, etc., that do not include the borrower's credit spread.

As part of the interest rate benchmark reform, the Group has elected to apply the transition reliefs permitted by the IASB in the amendments of IFRS 7 and IFRS 9 (Phase 1) which allow the uncertainties caused by the interest rate benchmark reform not to be taken into account in the "highly probable" requirement. The Group is following the status of the project prepared by the IASB in order to assess the impact of the interest rate reform (Phase 2). The Group's risk exposure is mainly related to the highly probable requirement in transactions for which the interest rate is based on US LIBOR.

A Group-wide approach on interest rate risk management is reflected in a dedicated Group policy that is approved by Group Management. This policy distinguishes between the two following main sources of interest rate risk:

- **Interest rate risk relating to Group net debt**

  Interest rate risk relating to Group net debt designates the financial impact of base rate movements on the debt and cash portfolio from recurring financing activities. This risk is mainly managed centrally.

Risk management objectives are, by order of importance:

- to protect the long term viability of assets;
- to optimize financing costs and ensure competitiveness; and
- to minimize uncertainty on the cost of debt.

Interest rate risk is managed actively by monitoring changes in market rates and their impact on the Group's gross and net debt.

- **Project interest rate risk**

Specific project interest rate risk corresponds to the potential negative financial impact of base rate movements on specific major operations such as investment projects, acquisitions, disposals and restructuring projects. Interest rate risk after the closing of an operation is considered as regular (see "Interest rate risk" above).

Interest rate risk is managed for specific project transactions in order to protect the economic viability of projects, acquisitions, disposals and restructuring initiatives against adverse changes in interest rates. It may include the implementation of hedging transactions, depending on a number of factors including the likeliness of completion, the availability of hedging instruments and their associated cost.

Hedging instruments and sources of hedge ineffectiveness

The Group uses principally the following risk management levers for mitigating interest rate risk:

- derivative instruments: these mostly correspond to over-the-counter contracts that are used to manage base interest rates. Such instruments include:
  - swaps, to change the nature of interest payments on debts, typically from fixed to floating rates or vice versa, and
  - plain vanilla interest rate options;
- caps, floors and collars that allow the impact of interest rate fluctuations to be limited by setting minimum and/or maximum limits on floating interest rates.

Sources of hedge ineffectiveness are mainly related to changes in the credit quality of the counterparties and related charges, as well as potential gaps in settlement dates and in indices between the derivative instruments and the related underlying exposures.

17.1.5.3 Currency and interest rate hedges

The Group has elected to apply hedge accounting whenever possible and suitable for currency risk and interest rate risk management and also manages a portfolio of undesignated derivative instruments, corresponding to economic hedges relating to net debt and foreign currency exposures.

The Group uses the three hedge accounting methods: cash flow hedging, fair value hedging and net investment hedging.

In general, the Group does not frequently reset hedging relationships, does not designate specific risk components as a hedged item and does not designate credit exposures as measured at fair value through income.

The Group qualifies interest rate or cross currency swaps transforming fixed-rate debt into floating-rate debt as fair value hedges.

Cash flow hedges are mainly used to hedge future cash flows in foreign currency, floating-rate debt as well as future refinancing requirements.

Net investment hedging instruments are mainly FX swaps and forwards.

The fair values of derivatives (excluding commodity instruments) are indicated in the table below:

	Dec. 31, 2019				Dec. 31, 2018			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Derivatives hedging borrowings	705	124	(183)	(41)	678	42	(259)	(66)
Fair value hedges	*530*	*81*	*(54)*	*(1)*	*521*	*1*	*(29)*	*(1)*
Cash flow hedges	*55*	*-*	*(93)*	*(7)*	*24*	*-*	*(191)*	*-*
Derivative instruments not qualifying for hedge accounting	*120*	*43*	*(36)*	*(34)*	*133*	*42*	*(39)*	*(65)*
Derivatives hedging other items	949	17	(1,934)	(45)	606	28	(1,215)	(38)
Cash flow hedges	*25*	*-*	*(571)*	*(4)*	*21*	*1*	*(284)*	*(4)*
Net investment hedges	*33*	*-*	*(6)*	*-*	*1*	*-*	*(5)*	*-*
Derivative instruments not qualifying for hedge accounting	*891*	*17*	*(1,357)*	*(41)*	*583*	*27*	*(927)*	*(34)*
TOTAL	**1,654**	**142**	**(2,118)**	**(86)**	**1,283**	**71**	**(1,474)**	**(105)**

The fair values shown in the table above reflect the amounts relating to the price that would be received for the sale of an asset or paid for the transfer of a liability between market participants in the normal course of business. They are not representative of expected future cash flows insofar as positions (i) are sensitive to changes in prices or to changes in credit ratings, (ii) can be modified by subsequent transactions, and (iii) can be offset by future cash flows arising on the underlying transactions.

Amount, timing and uncertainty of future cash flows

The following tables provide a profile of the timing at December 31, 2019 of the nominal amount of hedging instruments:

In millions of euros

Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2020	2021	2022	2023	2024	Beyond 5 years
Buy	Fixed	CCS	EUR	**(561)**	(288)	(271)	(2)	-	-	-
			USD	**(3,010)**	(1,549)	(1,371)	(45)	(45)	-	-
			GBP	**(14,518)**	(2,146)	(2,146)	(1,881)	(1,881)	(1,293)	(5,172)
			HKD	**(1,212)**	(263)	(263)	(263)	(263)	(160)	-
			JPY	**(902)**	(369)	(369)	(164)	-	-	-
			PEN	**(882)**	(273)	(262)	(218)	(130)	-	-
			CHF	**(737)**	(415)	(161)	(161)	-	-	-
			AUD	**(535)**	(125)	(125)	(125)	(53)	(53)	(53)
			Other currencies	**(152)**	(51)	(51)	(51)	-	-	-
	Floating	CCS	USD	**(413)**	(340)	(73)	-	-	-	-
Sale	Fixed	CCS	EUR	**17,561**	3,138	2,865	2,568	2,277	1,497	5,216
			USD	**908**	291	265	221	131	-	-
			GBP	**545**	272	270	2	-	-	-
			Other currencies	**158**	80	78	-	-	-	-
	Floating	CCS	EUR	**2,277**	1,180	953	144	-	-	-
		CCS	BRL	**1,256**	706	550	-	-	-	-

In millions of euros

Buy/Sell	Interest rate type	Derivative instrument type	Currency	Total	2020	2021	2022	2023	2024	Beyond 5 years
Buy	Fixed	CAP	EUR	**2,000**	1,000	1,000	-	-	-	-
			Other currencies	**-**	-	-	-	-	-	-
		IRS	EUR	**37,331**	6,295	8,933	7,246	4,986	3,758	6,112
			USD	**3,252**	999	1,236	299	259	212	248
			GBP	**12**	4	4	2	1	-	-
			Other currencies	**407**	111	106	88	64	33	5
		FRA	EUR	**1,650**	1,650	-	-	-	-	-
	Floating	IRS	EUR	**44,229**	13,536	11,648	7,387	4,820	3,080	3,758
			BRL	**687**	379	308	-	-	-	-

The tables presented above exclude currency derivatives (except for cross currency swaps - CCS). These hedges are mainly short term, with maturity dates aligned with those of the hedged items.

Pursuant to the FX and interest rate risk management policy, FX sensitivity is presented in Note 17.1.3.2 “Currency risk sensitivity analysis” and the average cost of debt is 2.70% as presented in Note 10 “Net financial income/(loss)”.

Effects of hedge accounting on the Group’s financial position and performance

Currency derivatives

	Dec. 31, 2019				Dec. 31, 2018	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Cash flow hedges	77	(381)	(305)	3,814	(335)	3,268
Net investment hedges	33	(6)	27	3,027	(3)	1,114
Derivative instruments not qualifying for hedge accounting	70	(77)	(6)	8,985	(23)	10,996
TOTAL	**180**	**(464)**	**(284)**	**15,827**	**(361)**	**15,379**

Interest rate derivatives

	Dec. 31, 2019				Dec. 31, 2018	
	Fair value			Nominal amount	Fair value	Nominal amount
In millions of euros	Assets	Liabilities	Total	Total	Total	Total
Fair value hedges	611	(55)	556	6,089	491	4,846
Cash flow hedges	-	(290)	(290)	3,649	(98)	1,434
Derivative instruments not qualifying for hedge accounting	998	(1,391)	(393)	21,487	(257)	25,216
TOTAL	**1,609**	**(1,736)**	**(126)**	**31,224**	**136**	**31,496**

The fair values shown in the table above are positive for an asset and negative for a liability.

In millions of euros		Nominal and outstanding amount	Fair value (1)	Change in fair value used for calculating hedge ineffectiveness	Change in the value of the hedging instrument recognized in equity (2)	Ineffective portion recognized in profit or loss (2)	Amount reclassified from the hedge reserve to profit or loss (2)	Line item of the income statement
Fair value hedges	Hedging instruments	6,089	556	556	NA	(3)	NA	Cost of net debt
	Hedged items (3) (4)	6,034	353	1,152	NA		NA	
Cash flow hedges	Hedging instruments	4,702	(433)	(583)	320	(5)	(82)	Other financial income and expenses / Income/(loss) from operating activities
	Hedged items			580				
Net investment hedges	Hedging instruments	1,114	(3)	36	61	NA	(90)	Other financial income and expenses / Income/(loss) from operating activities
	Hedged items			(36)				

(1) The adjustment of the fair value of hedged items is presented as long term and short-term borrowings and debt for an amount of €353 million.
(2) Gains/(losses)
(3) The difference between the fair value used to determine the ineffective portion relating to hedging instruments and that relating to the hedged items corresponds to the amortized cost of borrowings and debt that are part of a fair value hedge relationship.
(4) Of which €126 million relating to hedging items that have ceased to be adjusted as a result of disqualification as a fair value hedge.

Hedge inefficiency is calculated based on the change in the fair value of the hedging instrument compared to the change in the fair value of the hedged items since inception of the hedge. The fair value of the hedging instruments at December 31, 2019 reflects the cumulative change in the fair value of the hedging instruments since inception of the hedges. For fair value hedges, the same principle applies to the hedged items.

Foreign currency and interest rate derivatives designated as cash flow hedges can be analyzed as follows by maturity

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Fair value of derivatives by maturity	(9)	(10)	(21)	(27)	(17)	(510)	(594)	(433)

Amounts presented in the statement of changes in equity and the statement of comprehensive income

The following table provides a reconciliation of each component of equity and an analysis of other comprehensive income:

	Cash flow hedge			Net investment hedge
In millions of euros	Derivatives hedging borrowings - currency risk hedging (1) (3)	Derivatives hedging other items - interest rate risk hedging (1) (3)	Derivatives hedging other items - currency risk hedging (2) (3)	Derivatives hedging other items - currency risk hedging (2) (4)
AT DECEMBER 31, 2018	**46**	**(741)**	**(28)**	**(313)**
Effective portion recognized in equity	(293)		(27)	(61)
Amount reclassified from the hedge reserve to profit or loss	53		29	90
Translation differences	-	-	-	-
Changes in scope of consolidation and other	-	14	(1)	-
AT DECEMBER 31, 2019	**45**	**(1,010)**	**16**	**(284)**

(1) Cash flow hedges for given periods.
(2) Cash flow hedges for given transactions.
(3) Of which €-425 million of cash flow hedge reserves for which hedge accounting is no longer applied.
(4) All of the reserves relate to continuing hedging relationships.

17.2 Counterparty risk

Due to its financial and operational activities, the Group is exposed to the risk of default of its counterparties (customers, suppliers, EPC contractors, partners, intermediaries, and banks). Default could affect payments, goods delivery and/or asset performance.

The principles of counterparty risk management are set out in the Group counterparty risk policy, which:

- assigns roles and responsibilities for managing and controlling counterparty risk at different levels (Corporate, BU or entity), and ensures operational procedures are in place and consistent across the Group;
- characterizes counterparty risk and the mechanisms by which it impacts the economic performance and financial statements of the Group;
- defines indicators, reporting and control mechanisms to ensure visibility and to provide tools for financial performance management; and
- provides guidelines on the use of mitigating mechanisms such as collateral and guarantees, which are widely used by some businesses.

Depending on the nature of the business, the Group is exposed to different types of counterparty risk. As a result some businesses use collateral instruments – particularly the Energy Management business, where the use of margin calls and other types of financial collateral (standardized legal framework) is a market standard. In addition, other businesses may request guarantees from their counterparties in certain cases (parent company guarantees, bank guarantees, etc.).

Under the new standard IFRS 9, the Group has defined and applied a Group-wide methodology including the two different approaches:

- a portfolio approach, whereby the Group determines that:
  - coherent customer portfolios and sub-portfolios have to be considered (i.e., portfolios that have comparable credit risk and/or comparable payment behavior), taking into account different aspects:
    - public or private counterparties,
    - residential or BtoB counterparties,
    - geography,
    - type of activity,
    - size of the counterparty,
    - any other aspects the Group may consider relevant, and
  - impairment rates must be determined based on historical aging balances and, when correlation is proven and documentation possible, historical data must be adjusted by forward-looking elements;

- an individualized approach for significant counterparties, for which the Group has set rules for defining the stage of the concerned asset for Expected Credit Loss (ECL) calculations:

  - stage 1 covers financial assets that have not deteriorated significantly since initial recognition. The ECL for stage 1 is calculated on a 12-month basis,
  - stage 2 covers financial assets for which the credit risk has significantly increased. The ECL for stage 2 is calculated on a lifetime basis. The decision to move an asset from stage 1 to stage 2 is based on certain criteria such as:
    - a significant downgrade in the counterparty's creditworthiness and/or its parent company and/or its guarantor (if any),
    - significant adverse change in the regulatory environment,
    - changes in political or country-related risk, and
    - any other aspect the Group may consider relevant.

  Regarding financial assets that are more than 30 days past due, the move to stage 2 is not systematically applied as long as the Group has reasonable and supportable information that demonstrates that, even if payments become more than 30 days past due, this does not represent a significant increase in the credit risk since initial recognition.

- stage 3 covers assets for which default has already been observed, such as:
  - when there is evidence of significant and ongoing financial difficulty of the counterparty,
  - when there is evidence of failure in credit support from a parent company to its subsidiary (in this case the subsidiary is the Group's counterparty at risk),
  - when a Group entity has initiated legal proceedings against the counterparty for non-payment.

  Regarding financial assets that are more than 90 days past due, the presumption can be rebutted if the Group has reasonable and supportable information that demonstrates that even if payments become more than 90 days past due, this does not indicate counterparty default.

The ECL formula applicable in stages 1 and 2 is ECL = EAD x PD x LGD, where:

- for 12-month ECL, Exposure At Default (EAD) equals the carrying amount of the financial asset, to which the relevant Probability of Default (PD) and the Loss Given Default (LGD) are applied;

- for lifetime ECL, the calculation method consists in identifying changes in exposure for each year, especially the expected timing and amount of the contractual repayments, and then applying to each repayment the relevant PD and the LGD, and discounting the figures obtained. ECL is then the sum of the discounted figures; and

- probability of default: is the likelihood of default over a particular time horizon (in stage 1, this time horizon is 12 months after the reporting period; in stage 2 this time horizon is the entire lifetime of the financial asset). This information is based on external data from a well-known rating agency. The PD depends on the time horizon and of the rating of the counterparty. The Group uses external ratings if they are available; ENGIE's credit risk experts determine an internal rating for major counterparties with no external rating.

LGD levels are notably based on Basel standards:

- 75% for subordinated assets; and
- 45% for standard assets.

For assets considered to be of strategic importance for the counterparty, such as essential public services or goods, LGD is set at 30%.

The Group has decided that write-offs apply in the following situations:

- assets for which a legal recovery procedure is pending: should not be written off as long as the procedure is ongoing;
- assets for which no legal recovery procedure is pending: should be written off once the trade receivable is 3 years overdue (5 years overdue for public counterparties).

17.2.1 Operating activities

Counterparty risk arising on operating activities is managed via standard mechanisms such as third-party guarantees, netting agreements and margin calls, using dedicated hedging instruments or special prepayment and debt recovery procedures, particularly for retail customers.

Under the Group's policy, each business unit is responsible for managing counterparty risk, although the Group continues to manage the biggest counterparty exposures centrally.

The credit rating of large- and mid-sized counterparties with which the Group has exposures above a certain threshold is measured based on a specific rating process, while a simplified credit scoring process is used for commercial customers with which the Group has fairly low exposures. These processes are based on formally documented, consistent methods across the Group. Consolidated exposures are monitored by counterparty and by segment (credit rating, sector, etc.) using standard indicators (payment risk, mark-to-market exposure).

The Group's Energy Market Risk Committee (CRME) consolidates and monitors the Group's exposure to its main energy counterparties on a quarterly basis and ensures that the exposure limits set for these counterparties are respected.

17.2.1.1 Trade and other receivables, assets from contracts with customers

Total outstanding exposures presented in the tables hereafter do not include impacts relating to VAT or to any other item not subject to credit risk, which amounted to €2,898 million and €1 million respectively for "Trade and other receivables" and "Assets from contract with customers" at December 31, 2019 (compared to €2,547 million and €13 million at December 31, 2018).

Individual approach

In millions of euros		Dec. 31, 2019 Individual approach	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade [1]	Other	Total by counterparty type
Trade and other receivables, net	Gross	**9,395**	8,300	802	294	**9,395**	7,814	1,581	**9,395**
	Expected credit losses	**(318)**	(64)	(66)	(187)	**(318)**	(172)	(146)	**(318)**
TOTAL		**9,077**	**8,235**	**735**	**107**	**9,077**	**7,642**	**1,436**	**9,077**
Assets from contracts with customers	Gross	**2,896**	2,672	196	28	**2,896**	1,782	1,115	**2,896**
	Expected credit losses	**(15)**	(13)	(1)	(1)	**(15)**	(10)	(6)	**(15)**
TOTAL		**2,881**	**2,659**	**195**	**27**	**2,881**	**1,772**	**1,109**	**2,881**

In millions of euros		Dec. 31, 2018 Individual approach	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade [1]	Other	Total by counterparty type
Trade and other receivables, net	Gross	**10,339**	9,694	422	222	**10,339**	9,161	1,178	**10,339**
	Expected credit losses	**(323)**	(109)	(71)	(145)	**(323)**	(205)	(118)	**(323)**
TOTAL		**10,016**	**9,586**	**352**	**77**	**10,016**	**8,956**	**1,060**	**10,016**
Assets from contracts with customers	Gross	**3,052**	2,730	261	61	**3,052**	2,358	694	**3,052**
	Expected credit losses	**(7)**	(6)	-	(1)	**(7)**	(4)	(3)	**(7)**
TOTAL		**3,045**	**2,725**	**261**	**59**	**3,045**	**2,354**	**691**	**3,045**

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.

Collective approach

In millions of euros		Dec. 31 , 2019 Collective approach	0 to 6 months	6 to 12 months	beyond	Total past due assets at Dec. 31, 2019
Trade and other receivables, net	Gross	4,019	875	113	293	1,281
	Expected credit losses	(754)	(24)	(29)	(159)	(213)
TOTAL		**3,265**	**851**	**83**	**134**	**1,068**
Assets from contracts with customers	Gross	4,953	486	4	2	492
	Expected credit losses	(2)	-	-	-	-
TOTAL		**4,951**	**485**	**4**	**2**	**492**

		Dec. 31, 2018				
In millions of euros		Collective approach	0 to 6 months	6 to 12 months	beyond	Total past due assets at Dec. 31, 2018
Trade and other receivables, net	Gross	3,804	730	146	368	1,243
	Expected credit losses	(762)	(18)	(19)	(243)	(281)
TOTAL		**3,042**	**711**	**126**	**125**	**962**
Assets from contracts with customers	Gross	4,381	43	3	4	51
	Expected credit losses	(1)	-	-	-	-
TOTAL		**4,379**	**43**	**3**	**4**	**51**

17.2.1.2 Commodity derivatives

In the case of commodity derivatives, counterparty risk arises from positive fair value. Counterparty risk is taken into account when calculating the fair value of these derivative instruments.

	Dec. 31, 2019		Dec. 31, 2018	
In millions of euros	Investment Grade(1)	Total	Investment Grade(1)	Total
Gross exposure (2)	9,849	12,466	9,325	12,027
Net exposure (3)	3,501	4,422	2,701	3,683
% of credit exposure to "Investment Grade" counterparties	79.2%		73.4%	

(1) Investment Grade corresponds to transactions with counterparties that are rated at least BBB- by Standard & Poor's, Baa3 by Moody's, or equivalent by Dun & Bradstreet. "Investment Grade" is also determined based on an internal rating tool that has been rolled out within the Group, and covers its main counterparties.

(2) Corresponds to the maximum exposure, i.e., the value of the derivatives shown under assets (positive fair value).

(3) After taking into account the liability positions with the same counterparties (negative fair value), collateral, netting agreements and other credit enhancement techniques.

17.2.2 Financing activities

For its financing activities, the Group has put in place procedures for managing and monitoring risk based on (i) the accreditation of counterparties according to external credit ratings, objective market data (credit default swaps, market capitalization) and financial structure, and (ii) counterparty risk exposure limits.

To reduce its counterparty risk exposure, the Group drew increasingly on a structured legal framework based on master agreements (including netting clauses) and collateralization contracts (margin calls).

The oversight procedure for managing counterparty risk arising from financing activities is managed by a Middle Office that operates independently of the Group's Treasury department and reports to the Finance division.

17.2.2.1 Loans and receivables at amortized cost

The total outstanding exposures presented in the tables hereafter do not include impacts relating to VAT or to any other item not subject to credit risk, which amount at December 31, 2019 to €899 million (compared to €809 million at December 31, 2018).

	Dec. 31, 2019						
In millions of euros	Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
Gross	4,257	564	49	**4,870**	2,772	2,098	**4,870**
Expected credit losses	(53)	(56)	(30)	**(139)**	(36)	(104)	**(139)**
TOTAL	**4,204**	**508**	**19**	**4,731**	**2,736**	**1,995**	**4,731**

In millions of euros	Dec. 31, 2018 Level 1: low credit risk	Level 2: increased credit risk	Level 3: impaired assets	Total by risk level	Investment Grade (1)	Other	Total by counterparty type
Gross	3,402	466	233	**4,100**	2,003	2,098	**4,100**
Expected credit losses	(91)	-	(227)	**(319)**	(86)	(233)	**(319)**
TOTAL	**3,311**	**466**	**5**	**3,781**	**1,917**	**1,865**	**3,781**

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's.

17.2.2.2 Counterparty risk arising from investing activities and the use of derivative financial instruments

The Group is exposed to counterparty risk arising from investments of surplus cash and from the use of derivative financial instruments. In the case of financial instruments at fair value through income, counterparty risk arises on instruments with a positive fair value. Counterparty risk is taken into account when calculating the fair value of these derivative instruments.

In millions of euros	Dec. 31, 2019				Dec. 31, 2018			
	Total	Investment Grade (1)	Unrated (2)	Non-Investment Grade (2)	Total	Investment Grade (1)	Unrated (2)	Non-Investment Grade (2)
Exposure	10,686	85.7%	4.7%	9.6%	9,634	85.0%	6.0%	8.0%

(1) Investment Grade corresponds to counterparties that are rated at least BBB- by Standard & Poor's or Baa3 by Moody's.

(2) Most of these two exposures is carried by consolidated companies that include non-controlling interests, or by Group companies that operate in emerging countries, where cash cannot be pooled and is therefore invested locally.

Furthermore, at December 31, 2019, Crédit Agricole Corporate and Investment Bank (CACIB) is the main Group counterparty and represents 30% of cash surpluses. This relates mainly to a depositary risk.

17.3 Liquidity risk

In the context of its operating activities, the Group is exposed to a risk of having insufficient liquidity to meet its contractual obligations. As well as the risks inherent in managing working capital requirements (WCR), margin calls are required in certain market activities.

The Group has set up a quarterly committee tasked with managing and monitoring liquidity risk throughout the Group, by maintaining a broad range of investments and sources of financing, preparing forecasts of cash investments and divestments, and performing stress tests on the margin calls put in place when commodity, interest rate and currency derivatives are negotiated.

The Group centralizes virtually all financing needs and cash flow surpluses of the companies it controls, as well as most of their medium- and long-term external financing requirements. Centralization is provided by financing vehicles (long-term and short-term) and by dedicated Group cash pooling vehicles based in France, Belgium and Luxembourg.

Surpluses held by these structures are managed in accordance with a uniform policy. Unpooled cash surpluses are invested in instruments selected on a case-by-case basis in light of local financial market imperatives and the financial strength of the counterparties concerned.

The onslaught of successive financial crises since 2008 and the ensuing rise in counterparty risk prompted the Group to tighten its investment policy with the aim of keeping an extremely high level of liquidity and protecting invested capital and a daily monitoring of performance and counterparty risks for both investment types, allowing the Group to take immediate action where required in response to market developments. Consequently, 76% of cash pooled at December 31, 2019 was invested in overnight bank deposits and standard money market funds with daily liquidity.

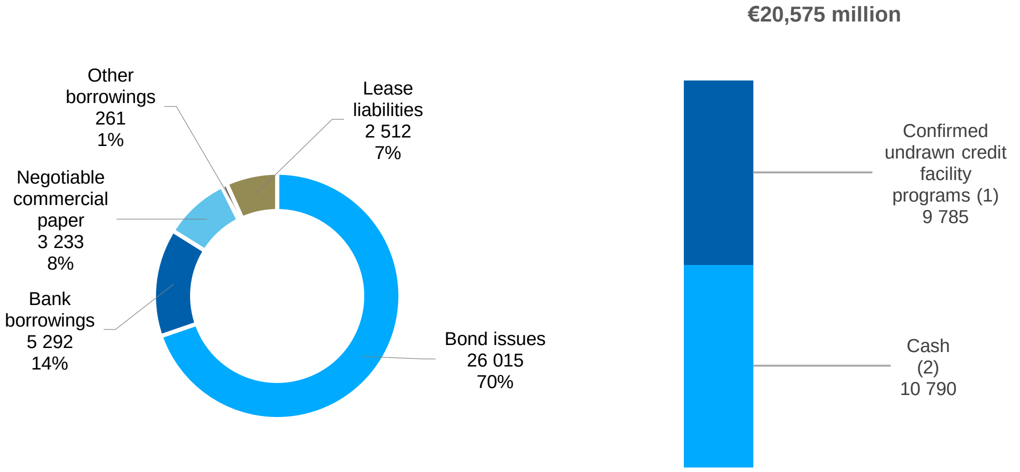
The Group's financing policy is based on:

- centralizing external financing;
- diversifying sources of financing between credit institutions and capital markets;

- achieving a balanced debt repayment profile.

The Group seeks to diversify its sources of financing by carrying out public or private bond issues within the scope of its Euro Medium Term Notes program. It also issues negotiable commercial paper in France and in the United States. As negotiable commercial paper is relatively inexpensive and highly liquid, it is used by the Group in a cyclical or structural fashion to finance its short-term cash requirements. However, the refinancing of all outstanding negotiable commercial paper remains secured by confirmed bank lines of credit – mainly centralized – allowing the Group to continue to finance its activities if access to this financing source were to dry up. These facilities are appropriate for the scale of its operations and for the timing of contractual debt repayments.

Diversifying sources of financing and liquidity
In millions of euros



(1) Net amount of negotiable commercial paper.
(2) Cash corresponds to cash and cash equivalents, other financial assets deducted from net financial debt, net of bank overdrafts and current accounts, of which 64% was invested in the Eurozone.

At December 31, 2019, all the entities of the Group whose debt is consolidated complied with the covenants and declarations included in their financial documentation, except for some non-significant entities for which compliance actions are being implemented. None of these centralized facilities contain a default clause linked to covenants or minimum credit ratings.

17.3.1 Undiscounted contractual payments relating to financial activities

Undiscounted contractual payments on outstanding borrowings and debt break down as follows by maturity:

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Bond issues	2,753	1,805	2,628	2,600	1,156	15,074	**26,015**	22,645
Bank borrowings	1,063	465	694	368	233	2,469	**5,292**	4,620
Negotiable commercial paper	3,233	-	-	-	-	-	**3,233**	2,894
Lease liabilities	491	446	311	245	218	1,075	**2,512**	380
Other borrowings	33	19	155	6	6	41	**261**	191
Bank overdrafts and current accounts	247	-	-	-	-	-	**247**	464

Other financial assets and cash and cash equivalents deducted from net financial debt have a liquidity of less than 1 year.

Undiscounted contractual interest payments on outstanding borrowings and debt break down as follows by maturity:

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Undiscounted contractual interest flows on outstanding borrowings and debt	1,023	798	703	613	508	6,227	**9,872**	9,335

Undiscounted contractual payments on outstanding derivatives (excluding commodity instruments) break down as follows by maturity:

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Derivatives (excluding commodity instruments)	(215)	(136)	(124)	33	(11)	217	**(237)**	(138)

To better reflect the economic substance of these transactions, the cash flows linked to the derivatives recognized in assets and liabilities shown in the table above relate to net positions.

Group's undrawn credit facility programs

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Confirmed undrawn credit facility programs	1,200	582	5,837	204	5,000	196	**13,019**	13,232

Of these undrawn programs, an amount of €3,233 million is allocated to covering commercial paper issues.

At December 31, 2019, no single counterparty represented more than 5% of the Group's confirmed undrawn credit lines.

17.3.2 Undiscounted contractual payments relating to operating activities

The table below provides an analysis of undiscounted fair values due and receivable in respect of commodity derivatives recorded in assets and liabilities at the statement of financial position date.

The Group provides an analysis of residual contractual maturities for commodity derivative instruments included in its portfolio management activities. Derivative instruments relating to trading activities are considered to be liquid in less than one year, and are presented under current items in the statement of financial position.

In millions of euros	2020	2021	2022	2023	2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Derivative instruments carried in liabilities								
relating to portfolio management	*(1,135)*	*(2,171)*	*(360)*	*(224)*	*(86)*	*(452)*	*(4,428)*	*(2,114)*
relating to trading activities	*(9,238)*	*-*	*-*	*-*	*-*	*-*	*(9,238)*	*(10,579)*
Derivative instruments carried in assets								
relating to portfolio management	*1,042*	*1,634*	*316*	*120*	*35*	*215*	*3,363*	*2,080*
relating to trading activities	*8,954*	*-*	*-*	*-*	*-*	*-*	*8,954*	*9,952*
TOTAL	**(376)**	**(537)**	**(43)**	**(104)**	**(51)**	**(237)**	**(1,349)**	**(661)**

17.3.3 Commitments relating to commodity purchase and sale contracts entered into within the ordinary course of business

Some Group operating companies have entered into long-term contracts, some of which include “take-or-pay” clauses. These consist of firm commitments to purchase or sell specified quantities of gas, electricity or steam as well as related services, in exchange for a firm commitment from the other party to deliver or purchase said quantities and services. These contracts were documented as falling outside the scope of IFRS 9. The table below shows the main future commitments arising from contracts entered into by Others (GEM BU) and Latin America (expressed in TWh):

In TWh	2020	2021-2024	Beyond 5 years	Total at Dec. 31, 2019	Total at Dec. 31, 2018
Firm purchases	(370)	(910)	(1,218)	(2,498)	(3,070)
Firm sales	480	613	480	1,573	1,329

NOTE 18 EQUITY

18.1 Share capital

	Number of shares			Value *(in millions of euros)*		
	Total	**Treasury stock**	**Outstanding**	**Share capital**	**Additional paid-in capital**	**Treasury stock**
AT DECEMBER 31, 2018	**2,435,285,011**	**(23,891,170)**	**2,411,393,841**	**2,435**	**32,565**	**(460)**
Dividend paid in cash	-	-	-	-	(1,096)	-
Purchase/disposal of treasury stock	-	1,737,451	1,737,451	-	-	29
Delivery of treasury stock (bonus)	-	-	-	-	-	-
Revaluation	-	-	-	-	-	128
AT DECEMBER 31, 2019	**2,435,285,011**	**(22,153,719)**	**2,413,131,292**	**2,435**	**31,470**	**(303)**

Changes in the number of shares during 2019 result solely from the disposal of for 1.7 million treasury shares, as part of bonus share plans.

18.1.1 Potential share capital and instruments providing a right to subscribe for new ENGIE SA shares

Since 2017, the Group no longer has any stock purchase option plan.

Shares to be allocated under the performance share award plans described in Note 21 "Share-based payments" are covered by existing ENGIE SA shares.

18.1.2 Treasury stock

Accounting standards

Treasury shares are recognized at acquisition cost and deducted from equity. Gains and losses on disposals of treasury shares are recorded directly in equity and do not therefore impact income for the period.

The Group has a stock repurchase program as a result of the authorization granted to the Board of Directors by the Ordinary and Extraordinary Shareholders' Meeting of May 17, 2019. This program provides for the repurchase of up to 10% of the shares comprising the share capital of ENGIE SA at the date of the said Shareholders' Meeting. The aggregate amount of acquisitions net of expenses under the program may not exceed €7.3 billion, and the purchase price must be less than €30 per share excluding acquisition costs.

At December 31, 2019, the Group held 22.2 million treasury shares. To date, 20.4 million shares have been allocated to cover the Group's share commitments to employees and corporate officers.

The liquidity agreement signed with an investment service provider assigns to the latter the role of operating on the market on a daily basis, to buy or sell ENGIE SA shares, in order to ensure liquidity and an active market for the shares on the Paris and Brussels stock exchanges. To date, the resources allocated to the implementation of this agreement amount to €150 million.

18.2 Other disclosures concerning additional paid-in capital, consolidated reserves and issuance of deeply-subordinated perpetual notes (Group share)

Total additional paid-in capital, consolidated reserves and issuance of deeply-subordinated perpetual notes (including net income for the fiscal year), amounted to €34,014 million at December 31, 2019, including €31,470 million in additional paid-in capital.

Consolidated reserves include the cumulative income of the Group, the legal and statutory reserves of ENGIE SA, cumulative actuarial gains and losses, net of tax and the change in fair value of equity instruments at fair value through OCI.

Under French law, 5% of the net income of French companies must be allocated to the legal reserve until the latter reaches 10% of share capital. This reserve can only be distributed to shareholders in the event of liquidation. The ENGIE SA legal reserve amounts to €244 million.

18.2.1 Issuance of deeply-subordinated perpetual notes

On January 28, 2019, ENGIE SA carried out an early refinancing of deeply-subordinated perpetual notes, resulting in:

- an issue of green deeply-subordinated perpetual notes for an amount of €1 billion offering a coupon of 3.25% with an annual reimbursement option from February 2025, accounted for in equity for a net amount of €983 million;
- notification of a partial early redemption proposal for the €1 billion tranche (coupon 3%) for a total amount of €839 million. The first reimbursement option for this hybrid debt was planned for June 2019. The Group made a squeeze-out for the balance of €161 million since it reimbursed more than 80% of this hybrid debt. ENGIE SA reimbursed the balance on March 12, 2019.

On July 8, 2019, ENGIE SA also carried out a second early refinancing of deeply-subordinated perpetual notes, resulting in:

- an issue of a green deeply-subordinated perpetual notes for an amount of €500 million offering a coupon of 1.625% with an annual reimbursement option from July 2025, accounted for in equity for a net amount of €495 million;
- notification of a partial early redemption proposal for €750 million (4.75% coupon) for a total amount of €337 million. The first reimbursement option for this hybrid debt was planned for July 2021.

In accordance with the provisions of IAS 32 – *Financial Instruments – Presentation*, and given their characteristics, these new instruments were accounted for in equity in the Group's consolidated financial statements for a total amount of €1,478 million.

At December 31, 2019 the nominal value of the deeply-subordinated notes amounted to €3,913 million.

In 2019, the Group paid €150 million to the owners of these notes, including €108 million relating to coupons and €42 million for early repayment compensation. This amount is accounted for as a deduction from equity in the Group's consolidated financial statements; the relating tax saving is accounted for in the income statement.

18.2.2 Distributable capacity of ENGIE SA

ENGIE SA's distributable capacity totaled €31,290 million at December 31, 2019 (compared with €33,320 million at December 31, 2018), after deducting the interim dividend paid on May 23, 2019 for a total amount of €1,833 million, including €31,470 million of additional paid-in capital.

18.2.3 Dividends

The table below shows the dividends and interim dividends paid by ENGIE SA in respect of 2018 and 2019.

	Amount distributed *(in millions of euros)*	Net dividend per share *(in euros)*
In respect of 2018		
Interim dividend (paid on October 12, 2018)	892	0.37
Remaining dividend for 2018 (paid on May 23, 2019)	917	0.38
Exceptional dividend for 2018 (paid on May 23, 2019)	893	0.37
Remaining additional dividend for 2018 (paid on May 23, 2019)	24	0.11
In respect of 2019		-
Interim dividend	-	-

The Shareholders' Meeting of May 17, 2019 approved the distribution of a total dividend of €1.12 per share in respect of 2018. In accordance with Article 26.2 of the bylaws, a dividend increase of 10% (€0.11 per share) has been allocated to shares registered in the name of the holder for at least two years at December 31, 2018, provided they are held in this form by the same shareholder until the payment date. This 10% increase may only apply, for any one shareholder, for a number of shares not representing more than 0.5% of the capital.

As an interim dividend of €0.37 per share was paid on October 12, 2018, for an amount of €892 million. ENGIE SA settled the remaining dividend balance of €0.75 per share in cash on May 23, 2019, for an amount of €1,810 million, for shares benefiting from an ordinary dividend, as well as the remaining €0.86 per share for shares benefiting from the bonus dividend for an amount of €24 million, i.e., a total dividend of €1,833 million.

Proposed dividend in respect of 2019

Shareholders at the Shareholders' Meeting convened to approve the ENGIE Group financial statements for the year ended December 31, 2019, will be asked to approve a dividend of €0.80 per share, representing a total payout of €1,931 million based on the number of shares outstanding at December 31, 2019. It will be increased by 10% for all shares held for at least two years on December 31, 2019 and up to the 2019 dividend payment date. Based on the number of outstanding shares on December 31, 2019, this increase is valued at €17 million.

Subject to approval by the Shareholders' Meeting of May 14 2020, this dividend, net of the interim dividend paid will be detached on May 18, 2020 and paid on May 20, 2020. It is not recognized as a liability in the financial statements at December 31, 2019, since the financial statements at the end of 2019 were presented before the appropriation of earnings.

18.3 Total gains and losses recognized in equity (Group share)

All items shown in the table below correspond to cumulative gains and losses (Group share) at December 31, 2019 and December 31, 2018, which are recyclable to income in subsequent periods.

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Debt instruments	76	28
Net investment hedges	(284)	(313)
Cash flow hedges (excl. commodity instruments)	(958)	(725)
Commodity cash flow hedges	(837)	(30)
Deferred taxes on the items above	505	244
Share of equity method entities in recyclable items, net of tax	(462)	(223)
TOTAL RECYCLABLE ITEMS BEFORE TRANSLATION ADJUSTMENTS	**(1,961)**	**(1,019)**
Translation adjustments	(1,098)	(1,130)
TOTAL RECYCLABLE ITEMS	**(3,060)**	**(2,149)**

18.4 Capital management

ENGIE SA seeks to optimize its financial structure at all times by pursuing an optimal balance between its net financial debt and its EBITDA. The Group's key objective in managing its financial structure is to maximize value for shareholders and reduce the cost of capital, while ensuring that the Group has the financial flexibility required to continue its expansion. The Group manages its financial structure and makes any necessary adjustments in light of prevailing economic conditions. In this context, it may choose to adjust the amount of dividends paid to shareholders, reimburse a portion of capital, carry out share buybacks *(see Note 18.1.2 "Treasury stock")*, issue new shares, launch share-based payment plans, recalibrate its investment budget, or sell assets in order to scale back its net debt.

The Group's policy is to maintain an "A" rating by the rating agencies. To achieve this, it manages its financial structure in line with the indicators usually monitored by these agencies, namely the Group's operating profile, financial policy and a series of financial ratios. One of the most commonly used ratios is the ratio where the numerator includes operating cash flows less net financial expense and taxes paid, and the denominator includes adjusted net financial debt. Net financial debt is mainly adjusted for nuclear provisions, provisions for unfunded pension plans and operating lease commitments.

The Group's objectives, policies and processes for managing capital have remained unchanged over the past few years.

ENGIE SA is not obliged to comply with any minimum capital requirements except those provided for by law.

NOTE 19 PROVISIONS

Accounting standards

General principles related to the recognition of a provision

The Group recognizes a provision where it has a present obligation (legal or constructive) towards a third party arising from past events and where it is probable that an outflow of resources will be necessary to settle the obligation with no expected consideration in return.

A provision for restructuring costs is recognized when the general criteria for setting up a provision are met, i.e. when the Group has a detailed formal plan relating to the restructuring and has raised a valid expectation in those affected that it will carry out the restructuring by starting to implement that plan or announcing its main features to those affected by it.

Provisions with a maturity of over 12 months are discounted when the effect of discounting is material. The Group's main long-term provisions are provisions for the back-end of the nuclear fuel cycle, provisions for dismantling facilities and provisions for site restoration costs. The discount rates used reflect current market assessments of the time value of money and the risks specific to the liability concerned. Expenses with respect to unwinding the discount on the provision are recognized as other financial income and expenses.

Estimates of provisions

Factors having a significant influence on the amount of provisions, and particularly, but not solely, those relating to the back-end of the nuclear fuel cycle, to the dismantling of nuclear facilities and of gas infrastructures in France, include:

- cost estimates (notably the retained scenario for managing radioactive nuclear fuel consumed) *(see Note 19.2)*;
- the timing of expenditure (notably, for nuclear power generation activities, the timetable for reprocessing radioactive nuclear fuel consumed and for dismantling facilities as well as the timetable for the end of gas operations regarding the main gas infrastructure businesses in France) *(see Notes 19.2 and 19.3)*; and
- the discount rate applied to cash flows.

These factors are based on information and estimates deemed by the Group to be the most appropriate as of today.

Modifications to certain factors could lead to a significant adjustment in these provisions.

In millions of euros	Post-employment and other long-term benefits	Back-end of the nuclear fuel cycle	Dismantling of plant and equipment (2) and Site rehabilitation	Other contingencies	Total
AT DECEMBER 31, 2018 (1)	**6,371**	**6,170**	**6,303**	**2,969**	**21,813**
IFRS 16 & IFRIC 23 (see Note 1)	-	-	-	(301)	(301)
AT JANUARY 1, 2019 with IFRS 16 & IFRIC 23	**6,371**	**6,170**	**6,303**	**2,667**	**21,512**
Additions	285	1,362	72	467	2,187
Utilizations	(331)	(164)	(150)	(677)	(1,322)
Reversals	(1)	-	(1)	(47)	(48)
Changes in scope of consolidation	(41)	-	(73)	60	(54)
Impact of unwinding discount adjustments	123	220	213	24	580
Translation adjustments	-	-	5	2	6
Other	1,075	23	1,196	(40)	2,254
AT DECEMBER 31, 2019	**7,481**	**7,611**	**7,566**	**2,458**	**25,115**
Non-current	7,346	7,487	7,550	433	**22,817**
Current	135	123	15	2,024	**2,298**

(1) Published data at December 31, 2018 were not restated due to the transition method used for the application of IFRS 16 and IFRIC 23 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

(2) Of which €6,573 million in provisions for dismantling nuclear facilities, compared to €5,337 million at December 31, 2018.

The impact of unwinding discount adjustments in respect of post-employment and other long-term benefits relates to the interest expense on the benefit obligation, net of the interest income on plan assets.

The "Other" line mainly comprises actuarial gains and losses arising on post-employment benefit obligations in 2019, which are recorded in "Other comprehensive income" as well as provisions recorded against a dismantling or site rehabilitation asset.

Additions, utilizations, reversals and the impact of unwinding discount adjustments are presented as follows in the consolidated income statement:

In millions of euros	Dec. 31, 2019
Income/(loss) from operating activities	(823)
Other financial income and expenses	(573)
TOTAL	**(1,397)**

The different types of provisions and the calculation principles applied are described below.

19.1 Post-employment benefits and other long-term benefits

See Note 20 "Post-employment benefits and other long-term benefits".

19.2 Obligations relating to nuclear power generation activities

In the context of its nuclear power generation activities, the Group assumes obligations relating to the management of the back-end nuclear fuel cycle and the dismantling of nuclear facilities.

19.2.1 Legal framework

The Belgian law of April 11, 2003 granted Group subsidiary Synatom responsibility for managing provisions set aside to cover the costs of dismantling nuclear power plants and managing spent nuclear fuel in those plants. The tasks of the Commission for Nuclear Provisions (CNP) set up pursuant to the above-mentioned law is to oversee the process of computing and managing these provisions.

To enable the Commission for Nuclear Provisions to carry out its work in accordance with the above-mentioned law, Synatom is required to submit a report every three years describing the core inputs used to measure these provisions. If any changes are observed from one triennial report to another that could materially impact the financial inputs used, i.e., the industrial scenario, estimated costs and timing, the Commission may revise its opinion.

Synatom submitted its triennial report to the Commission on September 12, 2019. The Commission issued its opinion on December 12, 2019 based on the opinion given by ONDRAF, the Belgian agency for radioactive waste and enriched fissile material. The CNP's findings take into account:

- the impact of the new baseline scenario for the long-term management of Class B and C radioactive waste (medium and high level) in Belgium, agreed by ONDRAF in June 2018, which is estimated at a gross amount of €10.7 billion;
- ONDRAF's recommendations as regards including various certain or probable costs;
- the scenario prepared ahead of the shutdown and dismantling of nuclear power plants based on industrial experience, and in particular the ongoing dismantling in Germany;
- the financial calculation based on lower discount rates to obtain a prudent estimate of the provisions required today to cover expenditure that will only be incurred in some cases in more than 70 years' time.

The CNP's decision includes a decrease in discount rates to reflect the current low interest rate environment. This means that Belgian nuclear plant owners will have to set aside larger amounts as of now. Discount rates, which were set at 3.50% at December 31, 2018, have been reduced at December 31, 2019 to 2.5% for dismantling, for which expenditure will begin as of next year, and 3.25% for spent nuclear fuel, for which expenditure will be incurred over the coming decades.

All in all, the opinion of the Commission for Nuclear Provisions and the obligations related to projects to dispose of nuclear waste have resulted in a €2.1 billion increase in the ENGIE Group's nuclear provisions, in addition to the recurring annual discount unwinding charge and provisions for additional quantities of fuel consumed during the year.

The provisions recognized by the Group were measured taking into account the prevailing contractual and legal framework, which sets the operating life of the Tihange 1 reactor and the Doel 1 and 2 reactors at 50 years, and the other reactors at 40 years.

The provisions set aside take into account all existing or planned environmental regulatory requirements on a European, national and regional level. If new legislation were to be introduced in the future, the cost estimates used as a basis for the calculations could vary. However, the Group is not aware of any planned legislation on this matter that could materially impact the amount of the provisions.

The estimated provision amounts include margins for contingencies and other risks that may arise in connection with dismantling and radioactive spent fuel management procedures. The contingency margins relating to the disposal of waste are determined by ONDRAF and built into its fees. The Group also estimates appropriate margins for each cost category.

The Group considers that, to the best of its knowledge, the provisions approved by the Commission take into account all currently available information to manage the contingencies and other risks associated with processes such as dismantling nuclear facilities and managing radioactive spent fuel.

19.2.2 Provisions for the back-end of the nuclear fuel cycle

Accounting standards

Allocations to the provisions for the back-end of the nuclear fuel cycle are computed based on the average unit cost of the quantities expected to be used up to the end of the operating life of the plants, applied to quantities used at the closing date. An annual allocation is also recognized with respect to unwinding the discount on the provisions.

When spent nuclear fuel is removed from a reactor and temporarily stored on-site, it requires conditioning and potentially reprocessing to separate the most active radionuclides, before being consigned to long-term storage.

ONDRAF proposed on February 9, 2018 that geological storage be adopted as the national policy for managing high-level and/or long-lived radioactive waste. The proposal is subject to the approval of the Belgian government after obtaining the opinion of the Federal Agency for Nuclear Control (*Agence Fédérale de Contrôle Nucléaire* – AFCN).

In addition, ENGIE considers that the “mixed” scenario adopted by the Commission for Nuclear Provisions continues to apply, whereby the fuel containing the most active radionuclides is reprocessed, and the rest disposed of directly without reprocessing.

The provisions booked by the Group for nuclear fuel processing and storage cover all of the costs linked to the “mixed” scenario, including on-site storage, transportation, reprocessing, conditioning, storage and geological disposal. They are calculated based on the following principles and inputs:

- storage costs primarily comprise the costs of building and operating additional dry storage facilities and operating existing facilities, along with the costs of purchasing containers;
- part of the radioactive spent fuel is transferred for reprocessing. The resulting plutonium and uranium is sold to a third party;
- radioactive spent fuel that has not been reprocessed is to be conditioned, which requires conditioning facilities to be built according to ONDRAF's approved criteria. ONDRAF's recommendations as regards the cost of these facilities have been fully taken into account;
- the reprocessing residues and conditioned spent fuel are transferred to ONDRAF; the cost of burying fuel in deep geological repositories is estimated by ONDRAF and evaluated not based on the amount of the fees set by ONDRAF in 2018 based on a total disposal facility cost of €8.0 billion$_{2017}$, but using a “virtual prudential tariff” established by ONDRAF at the request of the Commission for Nuclear Provisions, based on a total disposal facility cost of €10.7 billion$_{2017}$ excluding potential areas for optimization subject to appraisal; The estimated cost of the AFCN's preliminary recommendation as regards an additional well has also been included based on ONDRAF recommendations.
- the long-term obligation is calculated using estimated internal costs and external costs assessed based on offers received from third parties;
- the new baseline scenario includes ONDRAF's updated scenario, which is delayed by about 30 years compared with the scenario used in 2016, with geological storage beginning in about 2070 and ending in about 2135, and the intermediate reprocessing and conditioning storage delayed accordingly;
- the discount rate used is reduced to 3.25%. It takes into account (i) an analysis of trends in long-term benchmark rates and their historical and forecast averages, (ii) the extension of the life of the liabilities based on the new ONDRAF scenario, and (iii) the undertakings relating to the funding of those provisions made by Electrabel to Synatom (*see Note 16.1.4 “Financial assets set aside to cover the future costs of dismantling nuclear facilities and managing radioactive fissile material*”);
- an inflation rate assumption of 2.0% (actual rate of 1.25%).

The costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment. In its opinion to the Commission for Nuclear Provisions, ONDRAF pointed out the uncertainty over some costs, which in principle are covered by the contingency margins, but for which the Commission will set up a work and further analysis program as of 2020. The provisions may be subsequently adjusted in line with changes in the above-mentioned inputs and related cost estimates. Belgium's current legal framework does not permit partial reprocessing and has not yet confirmed the adoption of geological storage as the policy for managing medium and high level nuclear waste.

As regards the partial reprocessing scenario, following a resolution adopted by the House of Representatives in 1993, reprocessing contracts that had not already begun were suspended and then terminated in 1998. The scenario adopted is based on the assumption that the Belgian government will allow Synatom to reprocess spent fuel and that an agreement will be reached between Belgium and France designating Orano (formerly Areva) as responsible for these reprocessing operations. A scenario assuming the direct disposal of waste without reprocessing would lead to a decrease in the provision compared to the provision resulting from the “mixed” scenario currently used and approved by the Commission for Nuclear Provisions.

The Belgian government has not yet taken a decision as to whether the waste should be buried in a deep geological repository or stored over the long term. On November 27, 2019, the European Commission sent a reasoned opinion to Belgium under the breach procedure provided for in Article 258 of the Treaty on the Functioning of the European Union, on the grounds that Belgium had not adopted a national program for managing radioactive waste in compliance with various requirements set out in the directive on spent fuel and radioactive waste (Council directive 2011/70/Euratom). At this stage, therefore, there is only one national program for the safe storage of spent fuel pending reprocessing or long-term storage.

The scenario adopted by the Commission for Nuclear Provisions is based on the assumption that the waste will be buried in a deep geological repository at a site yet to be identified and classified in Belgium.

Sensitivity

Provisions for the back-end of the nuclear fuel cycle remain sensitive to assumptions regarding costs, the timing of operations and expenditure, as well as to discount rates:

- a 10% increase in ONDRAF fees above the virtual prudential tariff requested by the Commission for Nuclear Provisions for the removal of high-level and/or long-lived waste would lead to an increase in provisions of approximately €170 million based on unchanged contingency margins;
- a five-year advance in ONDRAF's expenditure on temporary storage, conditioning and long-term storage for high-level and/or long-lived radioactive waste would lead to an increase in provisions of approximately €165 million. A five-year delay in the payment schedule for these various expenses would lead to a decrease of less than €165 million;
- a change of 10 basis points in the discount rate used could lead to an adjustment of approximately €250 million in provisions for the back-end of the nuclear fuel cycle. A fall in discount rates would lead to an increase in outstanding provisions, while a rise in discount rates would reduce the provision amount.

These sensitivities are calculated on a purely financial basis and should therefore be interpreted with appropriate caution in view of the variety of other inputs – some of which may be interdependent – included in the evaluation.

19.2.3 Provisions for dismantling nuclear facilities

Accounting standards

A provision is recognized when the Group has a present legal or constructive obligation to dismantle facilities or to restore a site. The present value of the engagement at the time of commissioning represents the initial amount of the provision for dismantling with, as counterpart, an asset for the same amount, which is included in the carrying amount of the facilities concerned. This asset is depreciated over the operating life of the facilities. Adjustments to the provision due to subsequent changes in (i) the expected outflow of resources, (ii) the timing of dismantling expenses or (iii) the discount rate, are deducted from or, subject to specific conditions, added to the cost of the corresponding asset. The impacts of unwinding the discount are recognized in expenses for the period.

A provision is also recorded for nuclear units for which the Group holds a capacity right up to its share of the expected decommissioning costs to be borne by the Group.

Nuclear power plants have to be dismantled at the end of their operating life. Provisions are set aside in the Group's financial statements to cover all costs relating to (i) the shutdown phase, which involves removing radioactive spent fuel from the site and (ii) the dismantling phase, which consists of decommissioning and cleaning up the site.

The dismantling strategy is based on the facilities being dismantled (i) immediately after the reactor is shut down, (ii) on a mass basis rather than on a site-by-site basis, and (iii) completely, the land being subsequently returned to greenfield status.

Provisions for dismantling nuclear facilities are calculated based on the following principles and inputs:

- costs payable over the long term are calculated by reference to the estimated costs for each nuclear facility, based on a study conducted by independent experts under the assumption that the facilities will be dismantled on a mass basis;
- fees for handling Class A and B dismantling waste are determined using the 'virtual prudential tariff' established by ONDRAF at the request of the Commission for Nuclear Provisions and include the margins recommended by ONDRAF for waste reclassification risk given the uncertainty over the definition of the criteria for classification in those classes;

- for the various phases, margins for usual contingencies, reviewed by ONDRAF and the Commission for Nuclear Waste, are included;
- an inflation rate of 2.0% is applied until the dismantling obligations expire in order to determine the value of the future obligation;
- a discount rate reduced to 2.5% (including inflation of 2.0%) is applied to determine the present value (NPV) of the obligation. It is different from the rate used to calculate the provision for processing spent nuclear fuel due to the major differences in horizon of the two liabilities after taking into account ONDRAF's new scenario;
- the operating life is 50 years for Tihange 1 and Doel 1 and 2, and 40 years for the other facilities;
- the start of the technical shutdown procedures depends on the facility concerned and on the timing of operations for the nuclear reactor as a whole. The shutdown procedures are immediately followed by dismantling operations.

The costs effectively incurred in the future may differ from the estimates in terms of their nature and timing of payment. In its opinion to the Commission for Nuclear Provisions, ONDRAF pointed out the uncertainty over some costs, which in principle are covered by the contingency margins, but for which the Commission will set up a work and further analysis program as of 2020. The provisions may be subsequently adjusted in line with changes in the above-mentioned inputs. However, these inputs and assumptions are based on information and estimates which the Group deems reasonable to date and which have been approved by the Commission for Nuclear Provisions.

The scenario adopted is based on a dismantling program and on timetables that have to be approved by the nuclear safety authorities.

Sensitivity

Based on currently applied inputs for estimating costs and the timing of payments, a change of 10 basis points in the discount rate used could lead to an adjustment of approximately €60 million in dismantling provisions. A fall in discount rates would lead to an increase in outstanding provisions, while a rise in discount rates would reduce the provision amount.

This sensitivity is calculated on a purely financial basis and should therefore be interpreted with appropriate caution in view of the variety of other inputs – some of which may be interdependent – included in the evaluation.

19.3 Dismantling of non-nuclear plant and equipment and site rehabilitation

19.3.1 Dismantling obligations arising on other non-nuclear plant and equipment

Certain plant and equipment, including conventional power stations, transmission and distribution pipelines, storage facilities and LNG terminals, have to be dismantled at the end of their operational lives. This obligation is the result of prevailing environmental regulations in the countries concerned, contractual agreements, or an implicit Group commitment.

Based on estimates of proven and probable gas reserves through 2260 using current production levels, dismantling provisions for gas infrastructures in France have a present value near zero.

19.3.2 Hazelwood Power Station & Mine (Australia)

The Group and its partner Mitsui announced in November 2016 their decision to close the coal-fired Hazelwood Power Station, and cease coal extraction operations from the adjoining mine from late March 2017. The Group holds a 72% interest in the former 1,600 MW power station and adjoining mine, which was previously fully consolidated and has been consolidated on joint operation since September 2018.

At December 31, 2019, the Group's share (72%) of the provision covering the obligation to dismantle and rehabilitate the mine amounted to €280 million.

Dismantling and site rehabilitation work commenced in 2017 and focused on: managing site contamination; planning site-wide environmental clean-up; the demolition and dismantling of all of the site's industrial facilities, including the former power station; and ongoing aquifer pumping and designated earthworks within the mine to ensure mine floor and batter stability with a view to long-term rehabilitation into a pit lake.

Several laws that have a direct or indirect impact on mine rehabilitation and on the agencies that administer the laws are currently being reformed. Consequently, the ultimate regulatory obligations are likely to be revised during the life of the project and could therefore have an impact on provisions.

The average discount rate used to determine the amount of the provisions is 3.17%.

The amount of the provision recognized is based on the Group's best current estimate of the demolition and rehabilitation costs that Hazelwood is expected to incur. However, the amount of this provision may be adjusted in the future to take into account any changes in the key inputs.

19.4 Other contingencies

This caption includes essentially provisions for commercial litigation, tax claims and disputes (except income tax, under the rule of IFRIC 23) as well as provisions for onerous contracts relating to storage and transport capacity reservation contracts.

NOTE 20 POST-EMPLOYMENT BENEFITS AND OTHER LONG-TERM BENEFITS

Accounting standards

Depending on the laws and practices in force in the countries where the Group operates, Group companies have obligations in terms of pensions, early retirement payments, retirement bonuses and other benefit plans. Such obligations generally apply to all employees within the companies concerned.

The Group's obligations in relation to pensions and other employee benefits are recognized and measured in compliance with IAS 19. Accordingly:

- the cost of defined contribution plans is expensed based on the amount of contributions payable in the period;
- the Group's obligations concerning pensions and other employee benefits payable under defined benefit plans are assessed on an actuarial basis using the projected unit credit method. These calculations are based on assumptions relating to mortality, staff turnover and estimated future salary increases, as well as the economic conditions specific to each country or entity of the Group. Discount rates are determined by reference to the yield, at the measurement date, on investment grade corporate bonds in the related geographical area (or on government bonds in countries where no representative market for such corporate bonds exists).

Pension commitments are measured on the basis of actuarial assumptions. The Group considers that the assumptions used to measure its obligations are relevant and documented. However, any change in these assumptions could have a significant impact on the resulting calculations.

Provisions are recorded when commitments under these plans exceed the fair value of plan assets. Where the value of plan assets (capped where appropriate) is greater than the related commitments, the surplus is recorded as an asset under "Other assets" (current or non-current).

As regards post-employment benefit obligations, actuarial gains and losses are recognized in other comprehensive income. Where appropriate, adjustments resulting from applying the asset ceiling to net assets relating to overfunded plans are treated in a similar way. However, actuarial gains and losses on other long-term benefits such as long-service awards, are recognized immediately in income.

Net interest on the net defined benefit liability (asset) is presented in net financial income/(loss).

20.1 Description of the main pension plans

20.1.1 Companies belonging to the Electricity and Gas Industries sector in France

Since January 1, 2005, the CNIEG (*Caisse Nationale des Industries Électriques et Gazières*) has operated the pension, disability, death, occupational accident and occupational illness benefit plans for electricity and gas industry (hereinafter "EGI") companies in France. The CNIEG is a social security legal entity under private law placed under the joint responsibility of the ministries in charge of social security and the budget.

Employees and retirees of EGI sector companies have been fully affiliated to the CNIEG since January 1, 2005. The main affiliated Group entities are ENGIE SA, GRDF, GRTgaz, Elengy, Storengy, ENGIE Thermique France, CPCU, CNR and SHEM.

Following the funding reform of the special EGI pension plan introduced by Law No. 2004-803 of August 9, 2004 and its implementing decrees, specific benefits (pension benefits on top of the standard benefits payable under ordinary law) already vested at December 31, 2004 ("past specific benefits") were allocated between the various EGI entities. Past specific benefits (benefits vested at December 31, 2004) relating to regulated transmission and distribution businesses ("regulated past specific benefits") are funded by the levy on gas and electricity transmission and distribution services (*Contribution Tarifaire d'Acheminement*) and therefore no longer represent an obligation for the ENGIE Group. Unregulated past specific benefits (benefits vested at December 31, 2004) are funded by EGI sector companies to the extent defined by Decree No. 2005-322 of April 5, 2005.

The special EGI pension plan is a legal pension plan available to new entrants.

The specific benefits vested under the plan since January 1, 2005 are wholly financed by EGI sector companies in proportion to their respective weight in terms of payroll costs within the EGI sector.

As this plan represents a defined benefit plan, the Group has set aside a pension provision in respect of specific benefits payable to employees of unregulated activities and specific benefits vested by employees of regulated activities since January 1, 2005. This provision also covers the Group's early retirement obligations. The provision amount may be subject to fluctuations based on the weight of the Group's companies within the EGI sector.

Pension benefit obligations and other "mutualized" obligations are assessed by the CNIEG.

At December 31, 2019, the projected benefit obligation in respect of the special pension plan for EGI sector companies amounted to €3.7 billion.

The duration of the pension benefit obligation of the EGI pension plan is 22 years.

20.1.2 Companies belonging to the electricity and gas sector in Belgium

In Belgium, the rights of employees in electricity and gas sector companies, principally Electrabel, Laborelec and some ENGIE Energy Management Trading and ENGIE CC employee categories, are governed by collective bargaining agreements.

These agreements, applicable to "wage-rated" employees recruited prior to June 1, 2002 and managerial staff recruited prior to May 1, 1999, specify the benefits entitling employees to a supplementary pension equivalent to 75% of their most recent annual income, for a full career and in addition to the statutory pension. These top-up pension payments provided under defined benefit plans are partly reversionary. In practice, the benefits are paid in the form of a lump sum for the majority of plan participants. Most of the obligations resulting from these pension plans are financed through pension funds set up for the electricity and gas sector and by certain insurance companies. Pre-funded pension plans are financed by employer and employee contributions. Employer contributions are calculated annually based on actuarial assessments.

The projected benefit obligation relating to these plans represented around 15% of total pension obligations and related liabilities at December 31, 2019. The average duration is nine years.

"Wage-rated" employees recruited after June 1, 2002 and managerial staff (i) recruited after May 1, 1999 or (ii) having opted for the transfer through defined contribution plans, are covered under defined contribution plans. Prior to January 1, 2017, the law specified a minimum average annual return (3.75% on wage contributions and 3.25% on employer contributions) when savings are liquidated.

The law on supplementary pensions, approved on December 18, 2016 and enforced on January 1, 2017 henceforth specifies a minimum rate of return, depending on the actual rate of return of Belgian government bonds, within a range of 1.75%-3.25% (the rates are now identical for employee and employer contributions). In 2019, the minimum rate of return stood at 1.75%.

An expense of €36 million was recognized in 2019 in respect of these defined contribution plans (€24 million in 2018).

20.1.3 Multi-employer plans

Employees of some Group companies are affiliated to multi-employer pension plans.

Under multi-employer plans, risks are pooled to the extent that the plan is funded by a single contribution rate determined for all affiliated companies and applicable to all employees.

Multi-employer plans are particularly common in the Netherlands, where employees are normally required to participate in a compulsory industry-wide plan. These plans cover a significant number of employers, thereby limiting the impact of potential default by an affiliated company. In the event of default, the vested rights are maintained in a special compartment and are not transferred to the other members. Refinancing plans may be set up to ensure the funds are balanced.

The ENGIE Group accounts for multi-employer plans as defined contribution plans.

The expense recognized in 2019 in respect of multi-employer pension plans was stable as compared to 2018 at €71 million.

20.1.4 Other pension plans

Most other Group companies also grant their employees retirement benefits. In terms of financing, pension plans within the Group are almost equally split between defined benefit and defined contribution plans.

The Group's main pension plans outside France, Belgium and the Netherlands concern:

- the United Kingdom: the large majority of defined benefit pension plans is now closed to new entrants and future benefits no longer vest under these plans. All entities run a defined contribution scheme. The pension obligations of International Power's subsidiaries in the United Kingdom are covered by the special Electricity Supply Pension Scheme (ESPS). The assets of this defined benefit scheme are invested in separate funds. Since June 1, 2008, the scheme has been closed and a defined contribution plan has been set up for new entrants;
- Germany: the Group's German subsidiaries have closed their defined benefit plans to new entrants and now offer defined contribution plans;
- Brazil: ENGIE Brasil Energia operates its own pension scheme. This scheme has been split into two parts, one for the (closed) defined benefit plan, and the other for the defined contribution plan that has been available to new entrants since the beginning of 2005.

20.2 Description of other post-employment benefit obligations and other long-term benefits

20.2.1 Other benefits granted to current and former EGI sector employees

Other benefits granted to EGI sector employees are:

Post-employment benefits:

- reduced energy prices;
- end-of-career indemnities;
- bonus leave;
- death capital benefits.

Long-term benefits:

- allowances for occupational accidents and illnesses;
- temporary and permanent disability allowances;
- long-service awards.

The Group's main obligations are described below.

20.2.1.1 Reduced energy prices

Under Article 28 of the national statute for electricity and gas industry personnel, all employees (current and former employees, provided they meet certain length-of-service conditions) are entitled to benefits in kind, which take the form of reduced energy prices known as “employee rates”.

This benefit entitles employees to electricity and gas supplies at a reduced price. For retired employees, this provision represents a post-employment defined benefit. Retired employees are only entitled to the reduced rate if they have completed at least 15 years’ service within EGI sector companies.

In accordance with the agreements signed with EDF in 1951, ENGIE provides gas to all current and former employees of ENGIE and EDF, while EDF supplies electricity to these same beneficiaries. ENGIE pays (or benefits from) the balancing contribution payable in respect of its employees as a result of energy exchanges between the two utilities.

The obligation to provide energy at a reduced price to current and former employees is measured as the difference between the energy sale price and the preferential rate granted.

The provision set aside in respect of reduced energy prices stood at €3.6 billion at December 31, 2019. The duration of the obligation is 23 years.

20.2.1.2 End-of-career indemnities

Retiring employees (or their dependents in the event of death during active service) are entitled to end-of-career indemnities, which increase in line with the length of service within the EGI sector.

20.2.1.3 Compensation for occupational accidents and illnesses

EGI sector employees are entitled to compensation for accidents at work and occupational illnesses. These benefits cover all employees or the dependents of employees who die as a result of occupational accidents or illnesses, or injuries suffered on the way to work.

The amount of the obligation corresponds to the likely present value of the benefits to be paid to current beneficiaries, taking into account any reversionary annuities.

20.2.2 Other benefits granted to employees of the gas and electricity sector in Belgium

Electricity and gas sector companies also grant other employee benefits such as the reimbursement of medical expenses, electricity and gas price reductions, as well as length-of-service awards and early retirement schemes. These benefits are not prefunded, with the exception of the special “*allocation transitoire*” termination indemnity, considered as an end-of-career indemnity.

20.2.3 Other collective agreements

Most other Group companies also grant their staff post-employment benefits (early retirement plans, medical coverage, benefits in kind, etc.) and other long-term benefits such as jubilee and length-of-service awards.

20.3 Defined benefit plans

20.3.1 Amounts presented in the statement of financial position and statement of comprehensive income

In accordance with IAS 19, the information presented in the statement of financial position relating to post-employment benefit obligations and other long-term benefits results from the difference between the gross projected benefit obligation and the fair value of plan assets. A provision is recognized if this difference is positive (net obligation), while a prepaid benefit cost is recorded in the statement of financial position when the difference is negative, provided that the conditions for recognizing the prepaid benefit cost are met.

Changes in provisions for post-employment benefits and other long-term benefits, plan assets and reimbursement rights recognized in the statement of financial position are as follows:

In millions of euros	**Provisions**	**Plan assets**	**Reimbursement rights**
AT DECEMBER 31, 2018	**(6,371)**	**108**	**168**
Exchange rate differences	7	(5)	-
Changes in scope of consolidation and other	96	(39)	8
Actuarial gains and losses	(1,142)	(7)	(18)
Periodic pension cost of continued operations	(427)	(66)	2
Asset ceiling	-	-	-
Contributions/benefits paid	356	63	1
AT DECEMBER 31, 2019	**(7,481)**	**53**	**161**

Plan assets and reimbursement rights are presented in the statement of financial position under “Other non-current assets” or “Other current assets”.

The cost recognized for the period amounted to €492 million in 2019 (€525 million in 2018). The components of this defined benefit cost in the period are set out in Note 20.3.4 “Components of the net periodic pension cost”.

The Eurozone represented 97% of the Group’s net obligation at December 31, 2019, unchanged compared to December 31, 2018).

Cumulative actuarial gains and losses recognized in equity amounted to €4,594 million at December 31, 2019, compared to €3,472 million at December 31, 2018.

Net actuarial differences arising in the period and presented on a separate line in the statement of comprehensive income represented a net actuarial loss of €1,149 million in 2019 and of €231 million in 2018.

20.3.2 Change in benefit obligations and plan assets

The table below shows the amount of the Group's projected benefit obligations and plan assets, changes in these items during the periods presented, and their reconciliation with the amounts reported in the statement of financial position:

	Dec. 31, 2019				Dec. 31, 2018			
In millions of euros	Pension benefit obligations (1)	Other post-employment benefit obligations (2)	Long-term benefit obligations (3)	Total	Pension benefit obligations (1)	Other post-employment benefit obligations (2)	Long-term benefit obligations (3)	Total
A - CHANGE IN PROJECTED BENEFIT OBLIGATION								
Projected benefit obligation at January 1	**(7,713)**	**(3,794)**	**(499)**	**(12,006)**	**(7,653)**	**(3,739)**	**(539)**	**(11,931)**
Service cost	(291)	(63)	(43)	(397)	(308)	(62)	(42)	(412)
Interest expense	(173)	(76)	(9)	(258)	(165)	(73)	(8)	(245)
Contributions paid	(16)	-	-	(16)	(16)	-	-	(16)
Amendments	(1)	-	-	(1)	(3)	(5)	10	2
Changes in scope of consolidation	172	(5)	(1)	166	(37)	31	49	43
Curtailments/settlements	75	-	1	76	1	-	-	1
Non-recurring items	-	-	-	-	-	2	-	2
Financial actuarial gains and losses	(887)	(698)	(5)	(1,590)	(44)	(35)	(1)	(80)
Demographic actuarial gains and losses	(120)	57	(14)	(76)	101	1	1	103
Benefits paid	373	108	39	521	397	97	40	533
Other (of which translation adjustments)	10	-	-	10	16	(11)	(10)	(5)
Projected benefit obligation at December 31 A	**(8,570)**	**(4,470)**	**(531)**	**(13,572)**	**(7,713)**	**(3,794)**	**(499)**	**(12,006)**
B - CHANGE IN FAIR VALUE OF PLAN ASSETS								
Fair value of plan assets at January 1	**5,767**	**-**	**-**	**5,767**	**5,904**	**-**	**-**	**5,904**
Interest income on plan assets	133	-	-	133	128	-	-	128
Financial actuarial gains and losses	497	-	-	497	(253)	-	-	(253)
Contributions received	197	-	-	197	309	15	-	324
Changes in scope of consolidation	(109)	-	-	(109)	32	-	-	32
Settlements	(28)	-	-	(28)	-	-	-	-
Benefits paid	(282)	-	-	(282)	(341)	(15)	-	(357)
Other (of which translation adjustments)	(7)	-	-	(7)	(11)	-	-	(11)
Fair value of plan assets at December 31 B	**6,169**	**-**	**-**	**6,169**	**5,767**	**-**	**-**	**5,767**
C - FUNDED STATUS A+B	**(2,402)**	**(4,470)**	**(531)**	**(7,403)**	**(1,945)**	**(3,794)**	**(499)**	**(6,239)**
Asset ceiling	(25)	-	-	(25)	(25)	-	-	(25)
NET BENEFIT OBLIGATION	**(2,427)**	**(4,470)**	**(531)**	**(7,428)**	**(1,970)**	**(3,794)**	**(499)**	**(6,263)**
ACCRUED BENEFIT LIABILITY	(2,480)	(4,470)	(531)	(7,481)	(2,078)	(3,794)	(499)	(6,371)
PREPAID BENEFIT COST	53	-	-	53	108	-	-	108

(1) Pensions and retirement bonuses.
(2) Reduced energy prices, healthcare, gratuities and other post-employment benefits.
(3) Length-of-service awards and other long-term benefits.

20.3.3 Change in reimbursement rights

The fair value of reimbursement rights relating to plan assets managed by amounted to €161 million at December 31, 2019 (€168 million at December 31, 2018).

20.3.4 Components of the net periodic pension cost

The net periodic cost recognized in respect of defined benefit obligations for the years ended December 31, 2019 and 2018 breaks down as follows:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Current service cost	397	412
Actuarial gains and losses (1)	19	(1)
Plan amendments	-	(2)
Gains or losses on pension plan curtailments, terminations and settlements	(49)	(1)
Non-recurring items	-	(2)
Total accounted for under current operating income including operating MtM and share in net income of equity method entities	**368**	**407**
Net interest expense	125	117
Total accounted for under net financial income/(loss)	**125**	**117**
TOTAL	**492**	**525**

(1) On the long-term benefit obligation.

20.3.5 Funding policy and strategy

When defined benefit plans are funded, the related plan assets are invested in pension funds and/or with insurance companies, depending on the investment practices specific to the country concerned. The investment strategies underlying these defined benefit plans are aimed at striking the right balance between return on investment and acceptable levels of risk.

The objectives of these strategies are twofold: to maintain sufficient liquidity to cover pension and other benefit payments; and as part of risk management, to achieve a long-term rate of return higher than the discount rate or, where appropriate, at least equal to future required returns.

When plan assets are invested in pension funds, investment decisions are the responsibility of the fund management concerned. For French companies, where plan assets are invested with an insurance company, the latter manages the investment portfolio for unit-linked policies or euro-denominated policies, in a manner adapted to the risk and long-term profile of the liabilities.

The funding of these obligations at December 31 for each of the periods presented can be analyzed as follows:

In millions of euros	Projected benefit obligation	Fair value of plan assets	Asset ceiling	Total net obligation
Underfunded plans	(7,399)	5,616	(25)	(1,809)
Overfunded plans	(517)	553	-	36
Unfunded plans	(5,655)	-	-	(5,655)
AT DECEMBER 31, 2019	**(13,571)**	**6,169**	**(25)**	**(7,428)**
Underfunded plans	(5,648)	4,294	(23)	(1,377)
Overfunded plans	(1,375)	1,473	(2)	96
Unfunded plans	(4,977)	-	-	(4,977)
AT DECEMBER 31, 2018	**(12,000)**	**5,767**	**(25)**	**(6,258)**

The allocation of plan assets by principal asset category can be analyzed as follows:

In %	Dec. 31, 2019	Dec. 31, 2018
Equity investments	27	27
Sovereign bond investments	26	25
Corporate bond investments	27	27
Money market securities	3	4
Real estate	2	2
Other assets	15	15
TOTAL	**100**	**100**

All plan assets were quoted on an active market at December 31, 2019.

The actual return on assets of EGI sector companies stood at a positive 9% in 2019.

In 2019, the actual return on plan assets of Belgian entities amounted to approximately 3% in Group insurance and a positive 14% in pension funds.

The allocation of plan asset categories by geographic area of investment can be analyzed as follows:

In %	Europe	North America	Latin America	Asia - Oceania	Rest of the World	Total
Equity investments	58	26	3	10	3	100
Sovereign bond investments	76	1	22	-	2	100
Corporate bond investments	75	18	1	3	2	100
Money market securities	72	-	5	-	23	100
Real estate	86	-	7	-	6	100
Other assets	11	8	3	3	76	100

20.3.6 Actuarial assumptions

Actuarial assumptions are determined individually by country and company in conjunction with independent actuaries. Weighted discount rates for the main actuarial assumptions are presented below:

		Pension benefit obligations		Other post-employment benefit obligations		Long-term benefit obligations		Total benefit obligations	
		2019	2018	2019	2018	2019	2018	2019	2018
Discount rate	Eurozone	1.2%	2.0%	1.2%	2.1%	1.0%	1.6%	1.2%	1.9%
	UK Zone	1.7%	2.5%	-	-	-	-	-	-
Inflation rate	Eurozone	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
	UK Zone	3.4%	3.3%	-	-	-	-	-	-

20.3.6.1 Discount and inflation rate

The discount rate applied is determined based on the yield, at the date of the calculation, investment grade corporate bonds with maturities mirroring the term of the plan.

The rates were determined for each monetary area based on data for AA corporate bond yields. For the Eurozone, data (from Bloomberg) are extrapolated on the basis of government bond yields for long maturities.

According to the Group’s estimates, a 100-basis-point increase or decrease in the discount rate would result in a change of approximately 17% in the projected benefit obligation.

The inflation rates were determined for each monetary area. A 100-basis-point increase or decrease in the inflation rate (with an unchanged discount rate) would result in a change of approximately 16% in the projected benefit obligation.

20.3.6.2 Other assumptions

The increase in the rate of medical costs (including inflation) was estimated at 2.8%.

A 100-basis-point change in the assumed increase in medical costs would have the following impacts:

In millions of euros	**100-basis-point increase**	**100-basis-point decrease**
Impact on expenses	-	-
Impact on pension obligations	4	(5)

20.3.7 Estimated employer contributions payable in 2020 under defined benefit plans

The Group expects to pay around €200 million in contributions into its defined benefit plans in 2020, including €121 million for EGI sector companies. Annual contributions in respect of EGI sector companies will be made by reference to rights vested during the year, taking into account the funding level for each entity in order to even out contributions over the medium term.

20.4 Defined contribution plans

In 2019, the Group recorded a €121 million expense in respect of amounts paid into Group defined contribution plans (€133 million in 2018). These contributions are recorded under “Personnel costs” in the consolidated income statement.

NOTE 21 SHARE-BASED PAYMENTS

Accounting standards

Under IFRS 2, share-based payments made in consideration for services provided are recognized as personnel costs. These services are measured at the fair value of the instruments awarded.

The fair value of bonus share plans is estimated by reference to the share price at the grant date, taking into account the fact that no dividend is payable over the vesting period, and based on the estimated turnover rate for the employees concerned and the probability that the Group will meet its performance targets. The fair value measurement also takes into account the non-transferability period associated with these instruments. The cost of shares granted to employees is expensed over the vesting period of the rights and offset against equity.

A Monte Carlo pricing model is used for performance shares granted on a discretionary basis and subject to external performance criteria.

Expenses recognized in respect of share-based payments break down as follows:

	Expense for the year	
In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Employee share issues [(1)]	(1)	(31)
Bonus/performance share plans [(2)]	(48)	(46)
Other Group companies' plans	(2)	(3)
TOTAL	**(51)**	**(80)**

(1) Including Share Appreciation Rights set up within the scope of employee share issues in certain countries.
(2) Of which a reversal of €2 million in 2019 for failure to meet the condition of continuing employment within the Group.

21.1 Performance shares

21.1.1 New awards in 2019

ENGIE Performance Share plan of December 17, 2019

On December 17, 2019, the Board of Directors approved the award of 5 million performance shares to members of the Group's executive and senior management, breaking down into three tranches:

- performance shares vesting on March 14, 2023, subject to a one-year lock-up period;
- performance shares vesting on March 14, 2023, without a lock-up period; and
- performance shares vesting on March 14, 2024, without a lock-up period.

In addition to a condition requiring employees to be employed with the Group at the vesting date, each tranche is made up of instruments subject to three different conditions, excluding the first 150 performance shares granted to beneficiaries (excluding top management), which are exempt from performance conditions. The performance conditions, each of which accounts for one-third of the total grant, are as follows:

- a market performance condition relating to ENGIE’s Total Shareholder Return compared to that of a reference panel of ten companies, as assessed between November 2019 and January 2023;
- two internal performance conditions relating to net recurring income Group share and to Return On Capital Employed (ROCE) in 2021 and 2022.

Under this plan, performance shares without conditions were also awarded to the winners of the Innovation and Incubation programs (18,000 shares awarded).

21.1.2 Fair value of bonus share plans with or without performance conditions

The following assumptions were used to calculate the fair value of the new plans awarded by ENGIE in 2019:

Award date	Vesting date	End of the lock-up period	Price at the award date	Expected dividend	Financing cost for the employee	Non-transferability cost	Market-related performance condition	Fair value per unit
December 17, 2019	March 14, 2023	March 14, 2024	14.7	0.75	4.3%	0.44	yes	11.03
December 17, 2019	March 14, 2023	March 14, 2023	14.7	0.75	4.3%	0.44	yes	11.55
December 17, 2019	March 14, 2023	March 14, 2023	14.7	0.75	4.3%	0.56	no	12.45
December 17, 2019	March 14, 2024	March 14, 2024	14.7	0.75	4.3%	0.44	yes	10.84
Weighted average fair value of the December 17, 2019 plan								11.01

21.1.3 Review of internal performance conditions applicable to the plans

In addition to the condition of continuing employment within the Group, eligibility for certain bonus share and performance share plans is subject to an internal performance condition. When this condition is not fully met, the number of bonus shares granted to employees is reduced in accordance with the plans' regulations, leading to a decrease in the total expense recognized in relation to the plans in accordance with IFRS 2. Performance conditions are reviewed at each reporting date.

NOTE 22 RELATED PARTY TRANSACTIONS

This note describes material transactions between the Group and its related parties.

Compensation payable to key management personnel is disclosed in Note 23 "Executive compensation".

Transactions with joint ventures and associates are described in Note 3 "Investments in equity method entities".

Only material transactions are described below.

22.1 Relations with the French State and with entities owned or partly owned by the French State

22.1.1 Relations with the French State

The French State's interest in the Group at December 31, 2019 was unchanged from the previous year at 23.64%. This entitles it to three seats on the Board of Directors out of a total of 14 (compared to four out of a total of 19).

The French State holds 34.23% of the theoretical voting rights (34.47% of exercisable voting rights) compared with 34.51% at end-2018.

On May 22, 2019, the PACTE act ("Action plan for business growth and transformation") was passed, enabling the French State to dispose of its ENGIE shares without restrictions.

In addition, the French State holds a golden share aimed at protecting France's critical interests and ensuring the continuity and safeguarding of supplies in the energy sector. The golden share is granted to the French State indefinitely and entitles it to veto decisions taken by ENGIE if it considers they could harm France's interests.

Public service engagements in the energy sector are defined by the law of January 3, 2003.

Transmission rates on the GRTgaz transportation network and the gas distribution network in France, as well as rates for accessing the French LNG terminals and revenues from storage capacities are all regulated.

The Law on Energy and Climate passed on November 8, 2019 will put an end to regulated gas tariffs and will restrict regulated electricity tariffs for consumers and small businesses. The final date for the discontinuation of regulated gas tariffs is July 1, 2023.

22.1.2 Relations with EDF

Following the creation on July 1, 2004 of the French gas and electricity distribution network operator (EDF Gaz de France Distribution), Gaz de France SA and EDF entered into an agreement on April 18, 2005 setting out their relationship as regards the distribution business. The December 7, 2006 law on the energy sector reorganized the natural gas and electricity distribution networks. Enedis SA (previously ERDF SA), a subsidiary of EDF SA, and GRDF SA, a subsidiary of ENGIE SA, were created on January 1, 2007 and January 1, 2008, respectively, and act in accordance with the agreement previously signed by the two incumbent operators.

22.2 Relations with the CNIEG (*Caisse Nationale des Industries Électriques et Gazières*)

The Group's relations with the CNIEG, which manages all old-age, death and disability benefits for active and retired employees of the Group who belong to the special EGI pension plan, employees of EDF and Non-Nationalized Companies (*Entreprises Non Nationalisées* – ENN), are described in Note 20 "Post-employment benefits and other long-term benefits".

NOTE 23 EXECUTIVE COMPENSATION

The executive compensation presented below includes the compensation of the members of the Group's Executive Committee and Board of Directors.

The Executive Committee had 14 members at December 31, 2019 (11 members at December 31, 2018).

Their compensation breaks down as follows:

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Short-term benefits	21	21
Post-employment benefits	10	6
Share-based payments	5	5
Termination benefits	-	0
TOTAL	**36**	**31**

The amount of pension benefit obligations in respect of members of the Group’s Executive Committee stood at €37 million at December 31, 2019, being specified that this is an estimated amount as these obligations are, as a rule, not individualized. The Group has a policy of financing pension obligations through hedging assets, without these being specifically allocated to the retirement obligations of a dedicated population.

NOTE 24 WORKING CAPITAL REQUIREMENTS, INVENTORIES, OTHER ASSETS AND OTHER LIABILITIES

Accounting standards

In accordance with IAS 1, the Group's current and non-current assets and liabilities are shown separately in the consolidated statement of financial position. For most of the Group's activities, the breakdown into current and non-current items is based on when assets are expected to be realized, or liabilities extinguished. Assets expected to be realized or liabilities extinguished within 12 months of the reporting date are classified as current, while all other items are classified as non-current.

24.1 Composition of change in working capital requirements

In millions of euros	**Change in working capital requirements at Dec. 31, 2019**	**Change in working capital requirements at Dec. 31, 2018 (1)**
Inventories	465	(268)
Trade and other receivables, net	802	(2,311)
Trade and other payables, net	(1,107)	2,177
Tax and employee-related receivables/payables	(36)	237
Margin calls and derivative instruments hedging commodities relating to trading activities	(981)	197
Other	(253)	117
TOTAL	**(1,110)**	**149**

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

24.2 Inventories

Accounting standards

Inventories are measured at the lower of cost and net realizable value. Net realizable value corresponds to the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

The cost of inventories is determined based on the first-in, first-out method or the weighted average cost formula.

Nuclear fuel purchased is consumed in the process of producing electricity over a number of years. The consumption of this nuclear fuel inventory is recorded based on estimates of the quantity of electricity produced per unit of fuel.

Gas inventories

Gas injected into underground storage facilities includes working gas, which can be withdrawn without adversely affecting the subsequent operation of the reservoirs, and cushion gas, which is inseparable from the reservoirs and essential for their operation (*see Note 15 "Property, plant and equipment"*).

Working gas is classified in inventories and measured at weighted average purchase cost upon entering the transportation network regardless of its source, including any regasification costs.

Group inventory outflows are valued using the weighted average unit cost method.

An impairment loss is recognized when the net realizable value of inventories is lower than their weighted average cost.

Certain inventories are used for trading purposes and are recognized at fair value less the estimated costs necessary to make the sale in accordance with IAS 2. Any changes in this fair value are recognized in the consolidated income statement for the year to which they occur.

Greenhouse gas emissions allowances

European Directive 2003/87/EC establishes a scheme for greenhouse gas (GHG) emissions allowance trading within the European Union. Under the Directive, each year the entities concerned must surrender a number of allowances equal to the total GHG emissions of their installations during the previous year. As there are no specific rules under IFRS dealing with the accounting treatment of GHG emissions allowances, the Group decided to apply the following principles:

- emissions allowances are classified as inventories, as they are consumed in the production process;
- emissions allowances purchased on the market are recognized at acquisition cost;
- emissions allowances granted free of charge are recorded in the statement of financial position for a value of nil.

The Group records a liability at the year-end in the event that it does not have enough emissions allowances to cover its GHG emissions during the year. This liability is measured at the market value of the allowances required to meet its obligations at the year-end or based on the price of future contracts concluded to hedge this lack of emissions allowances.

Energy savings certificates (ESC)

In the absence of current IFRS Standards or IFRIC Interpretations on accounting for energy savings certificates (ESC), the following principles are applied:

- in the event that the number of ESCs held exceeds the obligation at the reporting date, they are accounted for in inventories; otherwise, a liability is recorded;
- ESC inventories are valued at weighted average cost (acquisition cost for ESCs acquired or cost incurred for ESCs generated internally).

In millions of euros	Dec. 31, 2019	Dec. 31, 2018
Inventories of natural gas, net	1,104	1,274
Inventories of uranium	538	595
CO_2 emissions allowances, green certificates and energy saving certificates, net	682	654
Inventories of commodities other than gas and other inventories, net	1,294	1,635
TOTAL	**3,617**	**4,158**

24.3 Other assets and other liabilities

	Dec. 31, 2019				Dec. 31, 2018 (1)			
	Assets		Liabilities		Assets		Liabilities	
In millions of euros	Non-current	Current	Non-current	Current	Non-current	Current	Non-current	Current
Other assets and liabilities	384	10,216	(1,222)	(13,101)	474	9,337	(960)	(12,529)
Tax receivables/payables	*-*	*6,986*	*-*	*(7,750)*	*-*	*6,999*	*-*	*(7,449)*
Employee receivables/payables	*214*	*39*	*(6)*	*(2,594)*	*275*	*72*	*(5)*	*(2,461)*
Dividend receivables/payables	*-*	*21*	*-*	*(104)*	*-*	*12*	*-*	*(170)*
Other	*171*	*3,170*	*(1,215)*	*(2,653)*	*198*	*2,255*	*(954)*	*(2,449)*

(1) Published data at December 31, 2018, were not restated due to the transition method used for the application of IFRS 16 (see Note 1 "Accounting framework and basis for preparing the consolidated financial statements").

At December 31, 2019, other non-current assets also include a receivable towards EDF Belgium in respect of nuclear provisions amounting to €92 million (€74 million at December 31, 2018).

NOTE 25 LEGAL AND ANTI-TRUST PROCEEDINGS

The Group is party to a number of legal and anti-trust proceedings with third parties or with legal and/or administrative authorities (including tax authorities) in the normal course of its business.

The main disputes and investigations presented hereafter are recognized as liabilities or give rise to contingent assets or liabilities.

In the normal course of its business, the Group is involved in a number of disputes and investigations before state courts, arbitral tribunals or regulatory authorities. The disputes and investigations that could have a material impact on the Group are presented below.

25.1 France excluding Infrastructures

25.1.1 Withholding tax

In their tax deficiency notice dated December 22, 2008, the French tax authorities questioned the tax treatment of the non-recourse sale by SUEZ (now ENGIE) of a withholding tax (*précompte*) receivable in 2005 for an amount of €995 million (receivable relating to the *précompte* paid in respect of the 1999-2003 fiscal years). The Montreuil Administrative Court handed down a judgment in ENGIE's favor in April 2019, which led to the French tax authorities appealing the decision before the Versailles Court of Appeal in May 2019. Exchanges of pleadings between the parties are currently ongoing.

Regarding the dispute over the *précompte* itself, on February 1, 2016, the *Conseil d'État* dismissed the appeal before the Court of Cassation seeking the repayment of the *précompte* in respect of the 1999, 2000 and 2001 fiscal years, and the cases seeking the repayment of the *précompte* in respect of the 2002, 2003 and 2004 fiscal years are still pending before the courts of appeal.

Furthermore, after ENGIE and several French groups lodged a complaint, on April 28, 2016, the European Commission issued a reasoned opinion to the French State as part of infringement proceedings, setting out its view that the *Conseil d'État* did not comply with European Union law when handing down decisions in disputes regarding the *précompte*, such as those involving ENGIE. On July 10, 2017, the European Commission referred the matter to the Court of Justice of the European Union (CJEU) on the grounds of France's failure to comply. On October 4, 2018, the Court of Justice of the European Union ruled partially in favor of the European Commission. Following this decision, France must revisit its methodology in order to determine the *précompte* repayment amounts in closed and pending court cases.

25.2 France Infrastructures

25.2.1 Commissioning

In the dispute between GRDF and various gas suppliers, in a decision dated June 2, 2016, overturning a decision handed down in September 2014 by the Energy Regulatory Commission (*Commission de la Régulation de l'Énergie* – CRE)'s Standing Committee for Disputes and Sanctions (*Comité de règlement des différends et des sanctions* – CoRDiS), the Paris Court of Appeal ruled that the transmission services delivered to suppliers should be, and should have been since the market was opened up, delivered to end customers. Prior to these rulings, only distributors provided delivery services to end customers in exchange for payment from the suppliers for customer management services, as there was only one contract.

Because the supplier now also provides customer management services associated with natural gas transmission on the distributors' behalf, the supplier has become the intermediary between the distributor and the end customer for delivery and transmission services. The contractual relations have therefore been completely reorganized, and as a result (i) the risk of unpaid compensation for the "transmission" part of the agreement with the end customer would henceforth be borne by the grid manager and not the gas supplier; (ii) the compensation for customer management services related to transmission and distribution services provided by the supplier on behalf of the grid manager should be fair and commensurate with the grid manager's cost savings. The Paris Court of Appeal ordered GRDF to bring its transmission agreements into compliance with these principles and ordered the CoRDiS to evaluate the amount of the customer management services. GRDF appealed the decision handed down by the Court of Appeal before the Court of Cassation.

In March 2018, the Court of Cassation referred the case to the Court of Justice of the European Union (CJEU), asking it to rule as to whether the CoRDiS could apply these rulings retroactively under European law. The CJEU's attorney general submitted his conclusions in May 2019. The CJEU delivered its ruling on December 19, 2019, considering that the Gas Directive (Directive 2009/73/EC) does not prohibit dispute settlement authorities from making decisions with retroactive effects dating to before the date of the dispute. Following the ruling of the CJEU, the Court of Cassation has scheduled a hearing for April 2020. The Court of Cassation's ruling could be made before the end of first-half 2020.

In June 2018 the CoRDiS, which has been tasked by the Paris Court of Appeal with evaluating the amount of the customer management services, instructed GRDF to propose to Direct Energie and ENI a new addendum providing for compensation based on the pricing terms established by the CRE in its decisions of October 2017 and January 2018. Both GRDF on the one hand and Direct Energie and ENI on the other have appealed the ruling before the Paris Court of Appeal. GRDF disputes the compensation paid in the past, and in particular asserts that the supplier has already passed on the corresponding amounts to the end customers. On January 23, 2020, the Paris Court of Appeal handed down its decision in which it considered that the suppliers are the mandatory grid service providers for customer management and initiated further discussions on the amount of customer management for Direct Energie and ENI for the period 2005-2018.

Because in 2016 the Paris Court of Appeal considered that ENI had not requested retrospective compensation (its requests prior to 2016 referred only to the future), ENI lodged a claim with the CoRDiS in March 2017 seeking retroactive compensation (€87.8 million for the period from 2008 to 2016) for customer management services. The CoRDiS handed down its decision in July 2019 dismissing ENI's request. ENI has appealed this decision before the Paris Court of Appeal.

In May 2017, Direct Energie also lodged a claim with the Paris Commercial Court for abuse of a dominant position and material inequality in the contractual obligations provided for in the transmission agreements, initially seeking €89.5 million in damages for the period from 2009 to 2016. This claim has since been raised to €140 million. This is a claim for indemnification, unlike the claims before the CoRDiS, which are seeking compensation for customer management services in respect of distribution services.

The Paris Commercial Court handed down a decision in January 2019, ordering GRDF to pay Direct Energie €17 million.

GRDF and Direct Energie have appealed this decision and filed their preliminary submissions in June 2019.

In July 2019, ENI launched proceedings against GRDF before the Paris Commercial Court for abuse of a dominant position and material inequality on the grounds that GRDF had required ENI, without compensation, to perform customer management services in respect of distribution. ENI is seeking a little over €300 million.

Regarding the customer management services carried out on behalf of the grid manager in the electricity sector (in this case ERDF, now ENEDIS), following proceedings brought by ENGIE, in a decision of July 13, 2016, the *Conseil d'État* also ruled that the same principle whereby the grid manager pays compensation to the supplier should apply. In the same decision, the *Conseil d'État* denied the CRE the right to set a customer threshold beyond which the compensation would not be payable, which hitherto prevented ENGIE from receiving any compensation. In light of this decision, ENGIE brought an action against ENEDIS with the purpose of obtaining payment for these customer management services. The legislature has adopted a decision that retroactively validates the agreements entered into with ENEDIS. In a decision handed down on April 19, 2019, the Constitutional Court ruled that this provision was constitutional. The proceedings against ENEDIS are still underway. ENGIE had also brought action before the *Conseil d'État* against the CRE's decision of October 26, 2017 in respect of the compensation for customer management services in the electricity sector for the period prior to January 1, 2018, but has withdrawn from the proceedings.

25.3 Rest of Europe

25.3.1 Resumption and extension of operations at the nuclear power plants

Various associations have brought actions before the Constitutional Court, the *Conseil d'État* and the ordinary courts against the laws and administrative decisions authorizing the extension of operations at the Doel 1 and 2 and Tihange 1 reactors. The Brussels Court of Appeal dismissed Greenpeace's claims in a decision dated June 12, 2018. Greenpeace appealed this decision before the Court of Cassation. This appeal was rejected by a ruling of the Court of Cassation dated January 9, 2020, such that the decision by the Brussels Court of Appeal dated June 12, 2018 is now final. As for the action brought before the Constitutional Court, on June 22, 2017 the Court referred the case to the Court of Justice of the European Union (CJEU) for a preliminary ruling. In its decision of July 29, 2019, the CJEU ruled that the Belgian law extending the operating lives of the Doel 1 and Doel 2 reactors was adopted without having made the prior environmental evaluations required, but that the effects of the law extending the operating lives may be maintained temporarily in the event of a serious and significant threat of electricity shortage, and then only for the length of time that is strictly necessary to rectify this threat. The decision of the Constitutional Court is expected soon. In addition, the appeal before the *Conseil d'État* is still ongoing.

In addition, some local authorities and various organizations have challenged the authorization to restart operations at the Tihange 2 reactor. On November 9, 2018, the *Conseil d'État* rejected the action brought by some local German authorities seeking the annulment of this decision. Civil proceedings are still ongoing before the Brussels Court of First Instance.

25.3.2 Claim by the Dutch tax authorities related to interest deductibility

Based on a disputable interpretation of a statutory modification that came into force in 2007, the Dutch tax authorities refuse the deductibility of a portion (€1.1 billion) of the interest paid on financing contracted for the acquisition of investments made in the Netherlands since 2000. Following the Dutch tax authorities' rejection of the administrative claim against the 2007 tax assessment, action was brought before the Arnhem Court of First Instance in June 2016. On October 4, 2018, the court ruled in favor of the tax authorities. However, given that ENGIE Energie Nederland Holding BV considers the court's reasoning to be contradictory and disputable, both in light of Dutch and European law, it has appealed the decision.

25.3.3 Claim by the Dutch tax authorities related to power plant impairment losses

The Dutch tax authorities have disallowed the tax deduction of asset impairment losses reported by ENGIE Energie Nederland NV on its 2010-2013 tax returns. The authorities challenged both the period of coverage of the impairment losses and the amount. Accordingly, they added back the full amount of the accumulated asset impairment losses over the abovementioned period, i.e., an amount of €1.9 billion. ENGIE has contested the tax authorities position as regards both the period and the amount and filed an administrative appeal in November 2018, which was rejected in February 2019. ENGIE is considering whether to launch legal proceedings.

25.3.4 Transfer price of gas

The Belgian tax authorities' Special Tax Inspectorate has issued two tax deficiency notices in respect of taxable income for fiscal years 2012 and 2013 for an aggregate amount of €706 million, considering that the price applied for the supply of gas by ENGIE (then GDF SUEZ) to Electrabel S.A. was excessive. ENGIE and Electrabel S.A. are challenging this adjustment. Belgium and France have begun conciliation proceedings to settle the dispute.

25.3.5 Spain – Punica

In the Punica case (investigation into the awarding of contracts), 12 Cofely España employees, as well as the company itself were placed under investigation by the examining judge in charge of the case. The criminal investigation is in progress and is scheduled to be closed by June 6, 2020.

25.3.6 Italy – Vado Ligure

On March 11, 2014, the Court of Savona seized and closed down the VL3 and VL4 coal-fired production units at the Vado Ligure thermal power plant belonging to Tirreno Power S.p.A. (TP), a company which is 50%-owned by the ENGIE Group. This decision was taken as part of a criminal investigation against the present and former executive managers of TP into environmental infringements and public health risks. The investigation was closed on July 20, 2016. The case was referred to the Savone Court to be tried on the merits. The proceedings began on December 11, 2018 and will continue through 2020.

25.3.7 Italy – Tax dispute relating to excise duties and ENGIE Italia VAT (formerly GDF SUEZ Energie)

In 2017, the Italian tax authorities challenged the excise duty waiver for gas transfers carried out by ENGIE Italia for industrial customers in Italy on the grounds that it did not have a certificate for these customers. The authorities plan to issue a tax reassessment for a total amount of €126 million (excise duties, VAT, late payment penalties and interest). ENGIE Italia has challenged the legality of this procedure both in light of Italian and European law and in any event deems the sanction to be disproportionate compared to a formal requirement.

In 2018, ENGIE Italia launched an appeal with the Perugia Court of First Instance requesting the cancellation of the tax reassessment notice.

In October 2018, the Court of First Instance dismissed the cancellation request, simply applying an outdated ministerial decree and ignoring ENGIE Italia's legal arguments.

ENGIE Italia appealed the ruling in November 2018 and the Court of Appeal ruled in its favor in November 2019 on the grounds that the documents requested by the Italian tax authorities were not legal and that the authorities needed to take into account the factual situation of the taxpayer to determine its requirement to pay excise duties. The Italian tax authorities may refer the case to the Court of Cassation.

25.3.8 Italy – Competition procedure

On May 9, 2019, a fine of €38 million was jointly and severally imposed on ENGIE Servizi SpA and ENGIE Energy Services International S.A. by the Italian Competition Authority for certain alleged anti-competitive practices relating to the award of the Consip FM4 2014 contract. An appeal has been lodged with the Regional Administrative Court of Lazio (TAR Lazio). The TAR Lazio has suspended payment of the fine. The appeal proceedings are pending.

25.4 Latin America

25.4.1 Concessions in Buenos Aires and Santa Fe

In 2003, ENGIE and its joint shareholders, water distribution concession operators in Buenos Aires and Santa Fe, initiated two arbitration proceedings against the Argentinean State before the International Center for Settlement of Investment Disputes (ICSID). The purpose of these proceedings was to obtain compensation for the loss in value of investments made since the start of the concession, in accordance with bilateral investment protection treaties.

As a reminder, prior to the stock market listing of SUEZ Environnement Company, ENGIE and SUEZ (formerly SUEZ Environnement) entered into an agreement providing for the economic transfer to SUEZ of the rights and obligations relating to the ownership interests held by ENGIE in Aguas Argentinas and Aguas Provinciales de Santa Fe, including the rights and obligations resulting from the arbitration proceedings.

On April 9, 2015, the ICSID ordered the Argentinean State to pay USD 405 million in respect of the termination of the Buenos Aires water distribution and treatment concession contracts (including USD 367 million to ENGIE and its subsidiaries), and on December 4, 2015, to pay USD 225 million in respect of the termination of the Santa Fe concession contracts. The Argentinean State sought the annulment of these awards. By decision dated May 5, 2017, the claim for the annulment of the Buenos Aires award was rejected. The claim to annul the award in the Santa Fe case was rejected by a decision dated December 14, 2018. Consequently, the two ICSID awards, which are a step in the settlement of the dispute, are now final.

The Argentinean government and the various shareholders of Aguas Argentinas entered into and implemented a settlement agreement in accordance with the arbitral award of April 9, 2015, handed down in respect of the water distribution and treatment concession contracts in Buenos Aires. In accordance with the above-mentioned agreement concerning the economic transfer to SUEZ of ENGIE's rights and obligations, SUEZ and its subsidiaries received €224.1 million in cash. Furthermore, the December 14, 2018 ruling pertaining to the water distribution and wastewater treatment concessions granted to Aguas Provinciales de Santa Fe has yet to be applied.

25.4.2 Planned construction of an LNG terminal in Uruguay

GNLS SA, a joint subsidiary of Marubeni and ENGIE, was selected in 2013 to build an offshore LNG terminal in Uruguay. On November 20, 2013, GNLS contracted out the design and construction of the terminal to Construtora OAS SA. Following a number of problems and defects, GNLS terminated the contract in March 2015 and made use of its guarantees. OAS challenged the termination of the contract but did not take action against GNLS. OAS went bankrupt in Uruguay on April 8, 2015. In September 2015, GNLS and the authorities agreed to cancel the planned construction.

On May 24, 2017, OAS and GNLS appeared before the Uruguayan courts in a conciliation process at the request of OAS. The conciliation process was unsuccessful. OAS then threatened to call GNLS before the Uruguayan courts to claim damages.

Since GNLS had incurred significant losses as a result of the termination of the contract, it filed a request for arbitration on August 22, 2017 in accordance with the terms of the contract providing for dispute resolution in Madrid by the ICC International Court of Arbitration, claiming a principal amount of USD 373 million. OAS responded by summonsing GNLS before the Montevideo Commercial Court, claiming USD 311 million in damages. ENGIE was officially named as a party to the proceedings on December 5, 2018. Both proceedings are still pending.

25.4.3 Claim against sales tax adjustments in Brazil

On December 14, 2018, the Brazilian Tax Administration sent ENGIE Brasil Energia notices of tax assessment for the 2014, 2015 and 2016 fiscal years believing that the company was liable for PIS and COFINS taxes (federal value added taxes) on reimbursement of certain fuels used in the production of energy by thermoelectric plants. The adjustments amounted to a total of 492 million Brazilian reals, including 229 million Brazilian reals in taxes to which are added fines and interest.

ENGIE Brasil Energia disputes these notices of tax assessment and introduced tax claims in 2019, which the tax authorities have rejected, however. A final claim at administrative level (prior to possible appeals before tax courts at judicial level) was filed by ENGIE Brasil Energia in January 2020.

25.5 Other

25.5.1 Luxembourg – State aid investigation

On September 19, 2016, the European Commission announced its decision to open an investigation into whether or not two private rulings granted by the Luxembourg State in 2008 and 2010 covering two similar transactions between several of the Group's Luxembourg subsidiaries constituted State aid. On June 20, 2018, the European Commission adopted a final, unfavorable decision deeming that Luxembourg had provided ENGIE with State aid. On September 4, 2018, ENGIE requested the annulment of the decision before the European Courts, thereby challenging the existence of a selective advantage. As these proceedings do not have a suspensive effect, ENGIE paid a sum of €123 million into an escrow account on October 22, 2018 in respect of one of the two transactions in question, since no aid was actually received for the other. Following the proceedings before the European Courts, this sum will be returned to ENGIE or paid to the Luxembourg State depending on whether or not the Commission's decision is annulled.

25.5.2 Poland – Competition procedure

On November 7, 2019, a fine of 172 million Polish zloty (€40 million) was imposed on ENGIE Energy Management Holding Switzerland AG (EEMHS) for failing to respond to a request for disclosure of documents from the Polish Competition Authority (UOKiK) in a proceeding initiated by the UOKiK which suspected a potential failure to notify by EEMHS and other financial investors involved in the financing of the Nord Stream 2 pipeline. EEMHS filed ann appeal with the Competition Protection Court. The appeal proceedings are pending.

NOTE 26 SUBSEQUENT EVENTS

On January 22, 2020, the Group announced a partnership with Edelweiss Infrastructure Yield Plus Fund (EIYP) to sell the majority of its stake in solar assets in India. The completion of this transaction is expected to occur during the first half of 2020 and will allow ENGIE to reduce its net debt by more than €400 million.

In addition, on January 23, 2020, the Group announced that it had won a competitive tender launched by Sterlite for the acquisition of a 30-year greenfield concession project. The project comprises the construction, operation and maintenance of a 1,800 km electric power transmission line, a new substation and the expansion of three additional substations in northern Brazil. All necessary installation licenses have been secured to start construction in 2020. The total investment cost of the project is expected to be €750 million.

NOTE 27 FEES PAID TO THE STATUTORY AUDITORS AND TO MEMBERS OF THEIR NETWORKS

Pursuant to Article 222-8 of the General Regulations of the French Financial Markets Authority (AMF), the following table presents information on the fees paid by ENGIE SA, its fully consolidated subsidiaries and joint operations to each of the auditors in charge of auditing the annual and consolidated financial statements of the ENGIE Group.

The Shareholders' Meeting of ENGIE SA of April 28, 2014 decided to renew the terms of office of Deloitte and EY as Statutory Auditors for a six-year period from 2014 to 2019.

	Deloitte			EY			
In millions of euros	**Deloitte & Associés**	**Network**	**Total**	**EY & others**	**Network**	**Total**	**Total**
Statutory audit and review of consolidated and parent company financial statements	**5.5**	**6.7**	**12.2**	**5.9**	**7.0**	**12.9**	**25.1**
ENGIE SA	2.2	-	2.2	2.7	-	2.7	5.0
Controlled entities	3.3	6.7	10.0	3.2	7.0	10.2	20.2
Non-audit services	**0.8**	**1.4**	**2.3**	**0.8**	**0.9**	**1.8**	**4.0**
ENGIE SA	**0.6**	**-**	**0.6**	**0.7**	**-**	**0.7**	**1.3**
Of which services related to legal and regulatory requirements	*0.4*	*-*	*0.4*	*0.3*	*-*	*0.3*	*0.7*
Of which other audit services	*0.2*	*-*	*0.2*	*0.4*	*-*	*0.4*	*0.6*
Of which reviews of internal control	-	-	-	-	-	-	-
Of which due diligence services	-	-	-	-	-	-	-
Of which tax services	*0.0*	-	0.0	*0.0*	-	0.0	0.0
Controlled entities	**0.2**	**1.4**	**1.7**	**0.1**	**0.9**	**1.0**	**2.7**
Of which services related to legal and regulatory requirements	-	*0.5*	*0.5*	*0.1*	*0.3*	*0.3*	*0.9*
Of which other audit services	*0.1*	*0.1*	*0.2*	*0.0*	*0.2*	*0.2*	*0.4*
Of which reviews of internal control	*0.0*	*0.0*	*0.1*	-	-	-	*0.1*
Of which due diligence services	*0.1*	*0.2*	*0.3*	-	*0.0*	*0.0*	*0.3*
Of which tax services	*0.0*	*0.6*	*0.6*	*0.0*	*0.5*	*0.5*	*1.0*
Total	**6.4**	**8.1**	**14.5**	**6.8**	**7.9**	**14.7**	**29.2**

NOTE 28 INFORMATION REGARDING LUXEMBOURG AND DUTCH COMPANIES EXEMPTED FROM THE REQUIREMENTS TO PUBLISH ANNUAL FINANCIAL STATEMENTS

Some companies in the Rest of Europe and Others reportable segments do not publish annual financial statements pursuant to domestic provisions in Luxembourg law (Article 70 of the Law of December 19, 2002) and Dutch law (Article 403 of the Civil Code) relating to the exemption from the requirement to publish audited annual financial statements.

The companies exempted are notably: ENGIE Energie Nederland NV, ENGIE Energie Nederland Holding BV, ENGIE Nederland Retail BV, ENGIE United Consumers Energie BV, Epon Eemscentrale III BV, Epon Eemscentrale IV BV, Epon Eemscentrale V BV, Epon Eemscentrale VI BV, Epon Eemscentrale VII BV, Epon Eemscentrale VIII BV, Epon International BV, Epon Power Engineering BV, ENGIE Portfolio Management BV, IPM Energy Services BV, Electrabel Invest Luxembourg, ENGIE Corp Luxembourg SARL, ENGIE Treasury Management SARL and ENGIE Invest International SA.

04 STATUTORY AUDITORS' REPORT ON THE CONSOLIDATED FINANCIAL STATEMENTS

ENGIE

Société anonyme

1, place Samuel de Champlain
92400 Courbevoie

Statutory auditors' report on the consolidated financial statements

Year ended December 31, 2019

This is a free translation into English of the statutory auditors' report on the consolidated financial statements of the Company issued in French and it is provided solely for the convenience of English-speaking users.

This statutory auditors' report includes information required by European regulation and French law, such as information about the appointment of the statutory auditors or verification of the information concerning the Group presented in the management report.

This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

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S.A.S au capital de € 2.188.160
572 028 051 R.C.S Nanterre

Commissaire aux Comptes
Membre de la compagnie
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TSA 14444
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Commissaire aux Comptes
Membre de la compagnie
régionale de Versailles

ENGIE

Société anonyme

1, place Samuel de Champlain
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Statutory auditors' report on the consolidated financial statements

Year ended December 31, 2019

To the Shareholders' Meeting of ENGIE,

Opinion

In compliance with the engagement entrusted to us by your Shareholder's Meeting, we have audited the accompanying financial statements of ENGIE ("the Company") for the year ended December 31, 2019.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the Company as of December 31, 2019 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit Committee.

Basis for opinion

Audit framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the “Statutory Auditors’ Responsibilities for the Audit of the consolidated Financial Statements” section of our report.

Independence

We conducted our audit in compliance with independence rules applicable to us, for the period from January 1, 2019 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No 537/2014 or in the French Code of Ethics (*Code de déontologie*) for statutory auditors.

Emphasis of matter

We draw attention to the following matter described in Note 1 to the consolidated financial statements relating to the change in accounting method relating to the first-time application from January 1st, 2019 of IFRS 16 "Lease Contracts" and the impacts of IFRIC's March 2019 decision related to the "physical settlement of contracts to buy or sell a non-financial item". Our opinion is not modified in respect of this matter.

Justification of Assessments - Key Audit Matters

In accordance with the requirements of Articles L.823-9 and R.823-7 of the French Commercial Code (*Code de commerce)* relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the financial statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon. We do not provide a separate opinion on specific elements, accounts or items of the consolidated financial statements.

Measurement of the recoverable amount of goodwill, intangible assets and property, plant & equipment

[notes 13, 14 and 15]

Key audit matter	Our response
As of December 31, 2019, the net carrying amount of fixed assets (goodwill, intangible assets and property, plant & equipment) amounted to €77.7 billion (after recognition of impairment losses of €1.8 billion), or 48.6% of total assets. Fixed assets are comprised of: – €18.7 billion of goodwill, mainly allocated to the Cash-Generating Units (CGU) Benelux (€4.3 billion), GRDF (€4 billion), France Renewable Energy (€1.2 billion), United Kingdom (€1.1 billion), France B to B (€1 billion) and France B to C (€1 billion); – €7 billion of intangible assets; – €52 billion of property, plant & equipment; For operating entities which your Group intends to hold on a long-term and going concern basis, the recoverable amount corresponds, in most cases, to the value in use, determined based on : – cash flow projections on the basis of the 2020 budget and 2021-2022 medium-term business plan approved by the Group's Executive Committee and the Board of Directors and, – beyond this time frame, extrapolated future cash flow projections determined on the basis of macroeconomic assumptions (inflation, exchange rates and growth rates) and price projections featured in the Group's reference scenario for 2023-2040 approved by the Executive Committee. These recoverable amounts are based on key assumptions relating to market outlook and changes in the regulatory environment of which any modification could have a material impact on the amount of impairment losses to be recognized. Concerning the goodwill of the main CGU, measurement is based on the following assumptions :	We examined the definition of CGU as well as the allocation of goodwill to the different CGU. We assessed the Group's measures aiming to identify indications of impairment losses as well as Management's procedures for approving the estimates. We examined the data and the key assumptions used to determine the recoverable amount of assets, assessed the sensitivity of the measurements to these assumptions and verified the calculations performed by the Group with the support of our valuation experts. Our work mainly covered; – the assumptions of the Group's long-term reference scenario (trends in electricity and gas prices and demand, price of CO_2, coal and oil, inflation) for which we have assessed the consistency with external studies carried out by international organizations or energy experts; – the operational and regulatory assumptions used to prepare cash flow forecasts for which we assessed the consistency of the asset's operating conditions and their intrinsic performance as well as the applicable regulations to date and their expected changes; – methods for determining cash flow forecasts for which we assessed: o the consistency of the baseline data with the budget, the medium-term business plan and beyond, the Group's long-term scenario ; o the consistency with past performances and market outlook ; – the discount rates for which we have examined the determination methods and the consistency with the underlying market assumptions, using internal specialists; – Management's sensitivity analysis to the key price, operational and regulatory assumptions for which we assessed the relevance;

- for the Benelux CGU, expected trends in the long-term electricity and gas demand, the price of CO_2, the price of electricity and fuel as well as changes in the regulatory environment for nuclear capacities in Belgium beyond 2025 and the extension of drawing rights agreements for French nuclear plants beyond their current legal terms ;
- for the Renewable Energy CGU, prospects and conditions of renewing the hydropower concession agreements in France ;

These measurements are sensitive to the applied macro-economic assumptions (inflation and discount rates).

For operating entities which the Group has decided to sell, the related recoverable amount of the assets concerned is based on market value less costs of disposal.

We considered the measurement of the recoverable amount of goodwill, intangible assets and property, plant & equipment to be a key audit matter due to their materiality in the Group's financial statements and because they require the use of assumptions and estimates to be assessed in a context which remains sensitive to trends in the energy market and whose consequences make the medium-term economic outlook difficult to anticipate.

- the assessment of the highly probable nature of disposals decided by the Group and the elements considered to measure the recoverable amount;
- the appropriateness of the disclosure given in the notes, notably on sensitivity analyses carried out by the Group.

Measurement of provisions relating to the back-end of nuclear fuel cycle and to the dismantling of nuclear facilities in Belgium

[note 19 and 19.2]

Key audit matter	Our response
Your Group has obligations relating to the reprocessing and storage of radioactive nuclear fuel consumed and the dismantling of nuclear facilities operated in Belgium. Pursuant to the Belgian law of April 11, 2003, the management of corresponding provisions is entrusted to the Group’s wholly-owned subsidiary Synatom which submits a report every three years to the Commission for Nuclear Provisions (CNP) describing the core inputs used to measure these provisions. The CNP issues its opinion based on the opinion issued by the Belgian agency for radioactive waste and enriched fissile material (ONDRAF) which reviews all of the characteristics and technical parameters of the report. The provisions, for the management of radioactive nuclear fuel and for the dismantling of nuclear facilities, are estimated from the current legal and contractual framework and on the basis of the opinion issued by the CNP on December 12, 2019. We considered the measurement of these provisions to be a key audit matter due to their amounts and their sensitivity to industrial scenarios used and estimates of related costs such as, in particular: – concerning provisions relating to the back-end of nuclear fuel cycle, the decisions will be ultimately made by the Belgian government relating to the management of radioactive spent fuel (reprocessing of a portion of spent fuel or direct removal, without prior reprocessing) and long-term management of fuel (cost of burying fuel in deep geological repositories or long-term on-site storage), – concerning the provisions for the dismantling of nuclear facilities, the dismantling program and the timetables approved, or not, by the nuclear safety authorities.	We analyzed the findings, observations and recommendations made in the opinions of the ONDRAF and the CNP. We examined the basis on which these provisions were measured and assessed the sensitivity of measurements to the technical assumptions and industrial scenarios, notably for the management of radioactive fuel, as well as assumptions relating to costs, operations timetable and discount rates applied to cash flows. Our work mainly consisted in assessing : – the consistency of industrial scenarios used with regard to the current legal and regulatory environment for the choice of nuclear policy remaining to be made in Belgium; – the consistency of forecasts of costs by nature and forecasts of cash outflows with available studies and quotes and, for dismantling, with a study of independent experts mandated by Synatom; – the level of margins for uncertainties and contingencies included in the provisions to take into account the degree of technical control over dismantling and management of radioactive fuel; – the consistency of the spent fuel volumes produced to date and the estimates of spent fuel volumes still to be produced with the Group's physical inventory and forecast data; – the methods for determining the discount rates used and their consistency with the underlying market assumptions. – the appropriateness of the disclosure given in the notes to the consolidated financial statements, notably on the sensitivity to measurement of the provisions to changes in key assumptions.

This measurement is sensitive to the applied macro-ecronomic assumptions (inflation and discount rates).

- **Valuation for provisions relating to commercial litigations, claims and tax risks**
  [notes 19, 19.4 and 25]

Key audit matter	Our response
Your Group is party to a number of legal and anti-trust proceedings with third parties or with legal and/or administrative authorities, including tax authorities, investigations before state courts, arbitral tribunals or regulated authorities, in the normal course of its business. The main disputes and investigations potentially having a significant impact on your Group are recognized as liabilities or give rise to contingent liabilities, as it is indicated in Note 25 to the consolidated financial statements. We have considered this topic as a key audit matter, provided the amounts at stake and the judgement required to determine the provisions for commercial litigations claims and tax risks, due to the regulatory context and the continuously changing market environment.	Our audit procedures consisted in: – investigating the procedures implemented by your Group in order to identify all the litigations and risk exposures; – corroborating these analyses with the confirmations received from the lawyers; – evaluating the analysis of the probability of occurrence performed by your Group, as well as the assumptions used, and the supporting documentation with, if any, consultations received by third parties. We have recourse to our experts for the most complex analysis; – appreciating the appropriateness of the disclosure given in the notes to the consolidated financial statements.

■ **Estimate of gas and electricity unbilled and un-metered revenues ("energy in the meter")**
[notes 7.1 and 7.2.1]

Key audit matter	Our response
Your Group uses an estimate in revenue, relating to the sales on networks generated from customers whose energy consumption is metered during the accounting period. Since the meter readings provided by the grid operators and their final allocations to the Group are sometimes only known several months down the line, this means that revenue figures are only an estimate. As of December 31, 2019, the receivables relating to the energy in the meter (gas and electricity un-metered and unbilled revenue) amount to €3.3 billion and mainly concern France and Belgium. These receivables are determined on the basis of a method that takes into account an estimate of customers' consumption based on the previous bill, or the last metering not yet billed, in line with the volume of energy allocated by grid managers, using measurement and modeling tools developed by your Group. The volumes are measured at the average energy price, which takes account of the category of customers and the age of the delivered unbilled energy in the meter. Considering the amount of revenue at stake and the sensitivity of the estimates to assumptions regarding volumes and the average energy price, we considered the estimate of the portion of un-metered revenue at the year-end to be a key audit matter.	Our work, both in France and in Belgium, mainly consisted in: – considering the internal control procedures implemented by the Group about the billing process, and the process enabling the reliability of the estimate about the energy in the metered revenue; – evaluating the models used by the Group and investigating the modality of the computation for the estimated volumes; we include a specialist in our audit team. We also: – compared the information about the volumes delivered and determined by the Group with the metering data provided by the grid operators; – examined that the modalities of the computation for the average price of the metered power take account of its anteriority and the different kinds of customers; – analyzed the coherence of the volumes delivered with the Energy Balance (which corresponds to the physical reality of the operations of allocations (revenues, injections and stocks) and resources (purchases, withdrawals and stocks) of energy on the networks) prepared by the Group; – assessed the regular clearance of the metered energy during the period; – assessed the age of the delivered but unbilled metered energy at the year-end.

Specific verifications

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations of the information pertaining to the Group presented in the Board of Director's management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

We attest that the consolidated non-financial performance statement provided for by Article L. 225-102-1 of the French Commercial Code (*Code de commerce*) is included in the information pertaining to the Group presented in the management report, it being specified that, in accordance with Article L. 823-10 of said Code, we have not verified the fairness of the information contained in this declaration or its consistency with the consolidated financial statements that has to be subject to a report by an independent third party.

Report on Other Legal and Regulatory Requirements

Appointment of the Statutory Auditors

We were appointed as statutory auditors of ENGIE by your Shareholders' Meeting held on May 19, 2008 for ERNST & YOUNG et Autres and on July 16, 2008 for Deloitte & Associés.

As of December 31, 2019, we were in their twelfth year of total uninterrupted engagement.

ERNST & YOUNG Audit was previously statutory auditor between 1995 and 2007.

Responsibilities of Management and those charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with International Financial Reporting Standards as adopted by the European Union for implementing internal control it deems necessary for the preparation of the consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Company'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 it is expected to liquidate the Company or to cease operations.

The Audit Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risks management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The consolidated financial statements were approved by the Board of Directors.

Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements

Objective and audit approach

Our role is to issue a report on the consolidated financial statements. Our objective is to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards 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 specified in Article L. 823-10-1 of the French Commercial Code (*Code de commerce*), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- Identifies and assesses the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his 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;
- Obtains 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 internal control;
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the consolidated financial statements;
- Assesses the appropriateness of management's 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 Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the consolidated financial statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein.
- Evaluates the overall presentation of the financial statements and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities of the Group to express an opinion on the consolidated financial statements. Is responsible for the direction, supervision and performance of the audit of the consolidated financial statements as well as for the audit opinion.

Report to the Audit Committee

We submit to the Audit Committee a report which includes, in particular, a description of the scope of the audit and the relating audit program implemented, as well as the results of our audit procedures. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the consolidated financial statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit Committee with the declaration provided for in Article 6 of Regulation (EU) N° 537/2014, confirming our independence within the meaning of the rules applicable in

France such as they are set in particular by Articles L. 822-10 to L. 822-14 of the French Commercial Code (*Code de commerce*) and in the French Code of Ethics (*Code de déontologie*) for statutory auditors. When appropriate, we discuss with the Audit Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

In Paris-La Défense, March 10, 2020

The Statutory Auditors

DELOITTE & ASSOCIÉS

Olivier Broissand

Patrick E. Suissa

ERNST & YOUNG et Autres

Charles-Emmanuel Chosson

Stéphane Pédron

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