Financials 2021

Financials 2021 – Reader's guide

This report consists of the operating and financial review and the consolidated financial statements of Fortum Group, including the parent company financial statements. Other parts of Fortum's reporting entity include CEO's business review, corporate governance statement, remuneration report as well as tax footprint, which are published on Fortum's webpage. Sustainability reporting is an integrated part of Fortum's annual reporting and additional information on sustainability operations can be found on Fortum's website in sustainability section.

Operating and financial review
This section includes description of Fortum's financial performance during 2021. Here you will also find a description of the risk management as well as information on sustainability and Fortum share performance.

Consolidated financial statements
Primary statements include Fortum's consolidated income statement, statement of comprehensive income, balance sheet, statement of changes in total equity and cash flow statement.

Notes
The notes to the consolidated financial statements are grouped to six sections based on their nature. Use the note number list on the right side of the notes pages to navigate in the financial statements.

Key figures
Key figures consist of financial key figures, share key figures and operational key figures for 2020–2021. The financial key figures derive mainly from the primary statements. Segment key figures include information on segments.

Parent company financial statements
Here you can read the parent company financial statements including the primary statements, cash flow and notes to the financial statements.

Signatures for the operating and financial review and financial statements
The Board of Directors' and the CEO's signatures of the operating and financial review and financial statements are in this section.

Auditor's report
This section includes the audit report issued by Fortum Oyj's auditor, Deloitte Oy.

Key figures 2012–2021, operational key figures and quarterly financial information
Look here for financial key figures, share key figures, operational key figures and volume-related key figures for 2012–2021, as well as capex and quarterly financial information for the years 2020 and 2021.

Investor information
Here you will find information on Fortum's Annual General Meeting, dividend payment, basic share information as well as details of the financial information available to shareholders in 2022.

Notes

1–3 Basis of preparation
These notes describe the basis of preparing the consolidated financial statements and consist of the accounting policies, critical accounting estimates and judgements and information about acquisitions and disposals.

4–5 Risks
In the Risks section you will find notes that disclose how Fortum manages financial risks and capital risks.

6–13 Income statement
These notes provide supporting information for the income statement.

14–34 Balance sheet
These notes provide supporting information for the balance sheet.

35–37 Off balance sheet items
The notes in this section provide information on items that are not included on the balance sheet.

38–40 Group structure and related parties
This section includes information on related party transactions, events after balance sheet date and the group companies of Fortum group.

The following symbols show which amounts in the notes reconcile to the items in income statement, balance sheet and cash flow statement.

IS = Income statement
BS = Balance sheet
CF = Cash flow

Financial statements and operating and financial review 2021

Financial performance and position

Outstanding performance under extraordinary and volatile market conditions

Key figures

EUR million	2021	2020	2019	Change 21/20
Reported				
IS Sales	112,400	49,015	5,447	129%
IS Operating Profit	-588	1,599	1,118	-137%
- of sales %	-0.5	3.3	20.5	
IS Share of profit of associates and joint ventures [1)]	192	656	744	-71%
IS Profit before income tax	-289	2,199	1,728	-113%
- of sales %	-0.3	4.5	31.7	
IS Net profit	-114	1,855	N/A	-106%
IS Net profit (after non-controlling interests)	739	1,823	N/A	-59%
IS Earnings per share, EUR	0.83	2.05	1.67	-60%
CF Net cash from operating activities	4,970	2,555	1,575	95%

EUR million	2021	2020	2019	Change 21/20
Comparable				
EBITDA [1)]	3,817	2,434	1,766	57%
IS Operating profit	2,536	1,344	1,191	89%
Share of profit of associates and joint ventures [1)]	154	656	N/A	-77%
Net profit (after non-controlling interests) [2)]	1,778	1,483	N/A	20%
Earnings per share, EUR [2)]	2.00	1.67	N/A	20%

EUR million	2021	2020	2019	Change 21/20
Shareholders' equity per share, EUR	13.66	14.58	14.61	-6%
Financial net debt (at end of period) [3)]	789	7,023	4,833	-89%
Adjusted net debt (at end of period) [3)]	3,227	9,784	4,978	-67%
Financial net debt/comparable EBITDA [1) 3)]	0.2	2.9	N/A	-93%
Return on shareholders' equity, %	-0.8	12.9	11.9	
Equity-to-assets ratio, %	9	27	57	

1) Comparable EBITDA is defined as an alternative performance measure and used as a component in the capital structure target 'Financial net debt-to-Comparable EBITDA'. In 2020 Comparable EBITDA includes contribution from Uniper for the period of 1 April to 31 December 2020 since Uniper was consolidated as a subsidiary from 31 March 2020. Until 31 of March 2020 Uniper's contribution to the income statement was recognised in the Share of profit/loss of associates and joint ventures. Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.
2) In 2021, Fortum introduced two new performance measures: comparable net profit and comparable earnings per share.
3) Following the consolidation of Uniper, Fortum has updated its definition of net debt and uses financial net debt and adjusted net debt.

See ▸ **Definitions and reconciliations of key figures**.

2021 was in many ways an extraordinary year in the energy business. We have experienced a rare combination of circumstances leading to unprecedented developments in the commodity market. During these turbulent times Fortum Group held course. We successfully continued the implementation of our strategy with active portfolio rotation and accelerated decarbonisation, and produced another great set of operative results.

After the drop in 2020, energy consumption in our market areas increased as economies recovered, and societies learned to cope with the Covid-19 pandemic. Market conditions were characterised by colder weather during the first half of the year, below normal European wind and Nordic hydro conditions as well as increasing EU emission allowance prices. It was gas that was in the driver's seat for the energy commodities. Lower-than-average gas storage levels coupled with tight LNG and pipeline supplies caused unprecedented volatility and a price rally in the second half of the year in Europe.

The higher power and gas prices have clearly impacted both our business and results in many ways. Both our Uniper and Generation segments significantly contributed to the Group's comparable operating profit, which increased by 89%. Uniper's gas business benefitted from the extraordinary market developments with volatile and rising prices despite additional liquidity requirements while the Generation segment significantly gained from the higher power prices supported by successful physical and financial optimisation. In the fourth quarter, the segment's achieved power price reached its highest quarterly level since 2009. Record-high nuclear and higher hydro volumes also contributed to the upsurge. The results of our Russia segment were supported by sales gains and higher power prices. Our City Solutions segment also produced a sound result improvement especially in power and heat sales year-on-year. Whilst large parts of the business benefitted from these developments, Consumer Solutions suffered from high electricity purchase costs due to the very high power prices in the fourth quarter and the intensifying competition in the Nordic market.

The extremely volatile commodity markets with record-high gas prices in December also caused a sharp increase in the margining requirements of Uniper's trading business. At the beginning of 2022, Uniper took precautionary financing measures including credit arrangements from Fortum and the German state-owned KfW Bank to ensure liquidity and financial flexibility, and to manage any further market volatility. These efforts were positively noted as S&P Global Ratings rating agency in January 2022 affirmed Fortum's and Uniper's long-term ratings of BBB with a stable outlook.

In this turbulent operating environment, we have kept our strategic priorities clear. Our goals for 2021 were to strengthen the balance sheet, to further decarbonise our portfolio and to drive profitable growth while balancing it with our dividend and financial position.

Actions taken during the year included the divestments of mainly district heating assets such as Stockholm Exergi (50%) and the Baltic district heating business as well as the 500 megawatts of solar power capacity in India. The total consideration recorded for divested assets amounted to more than EUR 4 billion in 2021, securing a strong balance sheet and bringing our financial net debt-to-comparable EBITDA to 0.2 times, significantly below our set target level of <2 times.

We also continued working towards our climate targets to be carbon neutral in our European generation at the latest by 2035 and in all operations by 2050. Within less than one year, we have been able to announce accelerated coal phase-out of six of our coal-fired power plants in Germany and the UK compared to the original timetable. In Russia, our Chelyabinsk CHP-2 plant is transitioning from the use of coal to gas, ending the use of coal in the Fortum Russia segment by the end of 2022. Towards the end of the year, we also set a reduction target for the Group's indirect emissions, i.e. Scope 3, which is -35% by 2035.

At the same time, we strengthened our position in CO_2-free power generation. Over the year, we commissioned a total of almost 600 MW of new wind and solar capacity in Russia and announced our first joint wind power project of 380 MW in Finland together with Uniper. In addition, we have won the right to build a total of 2 GW of wind and solar power capacity in the coming years in national auctions.

2021 was also the year in which Fortum and Uniper grew closer together. We announced new cooperation in the three strategic areas of Nordic hydro and physical trading optimisation, wind and solar development, as well as hydrogen with the ambition to create value for both companies, and, in particular, for our customers. We made management changes and announced more diverse leadership teams at both Fortum and Uniper.

As a group, our strategy execution will continue with the same determination and focus this year. We will continue to drive profitable growth and to further deepen the cooperation between Fortum and Uniper. Today we have also announced the decision to submit an application for a new operating licence for our nuclear power plant in Loviisa in Finland. In addition to financial, political and societal aspects, the EU taxonomy was a key factor that we took into account when preparing the decision – it is central in guiding investments towards sustainable and clean activities.

Based on the solid results of 2021 and the outlook for future years, Fortum's Board of Directors is proposing to the Annual General Meeting a dividend of EUR 1.14 per share for the financial year 2021. The proposal is in line with Fortum's dividend policy to pay a stable, sustainable, and over time increasing dividend.

Changes in reporting

In 2021, Fortum introduced two new Alternative Performance Measures (APM) to provide additional financial performance indicators that better reflect the underlying profitability.

- Comparable net profit
- Comparable earnings per share

Comparable net profit is shown after non-controlling interest and adjusted for items affecting comparability, as well as adjustments to share of profit of associates and joint ventures, net finance costs, income tax expenses, and non-controlling interest. Comparable earnings per share is calculated from comparable net profit.

See ▸ Note 7 and ▸ Definitions and reconciliations of key figures.

Financial results

Sales by segment

EUR million	2021	2020	Change 21/20
Generation	2,899	2,006	45%
Russia	906	929	-2%
City Solutions	1,302	1,075	21%
Consumer Solutions	2,622	1,267	107%
Uniper	105,992	44,514	138%
Other Operations	138	140	-2%
Netting of Nord Pool transactions [1]	-1,128	-317	
Eliminations	-331	-598	
IS Total	**112,400**	**49,015**	**129%**

1) Sales and purchases with Nord Pool Spot are netted at the Group level on an hourly basis and posted either as revenue or cost depending on whether Fortum is a net seller or net buyer during any particular hour.

Comparable EBITDA by segment

EUR million	2021	2020	Change 21/20
Generation	1,299	886	47%
Russia	404	394	2%
City Solutions	317	239	33%
Consumer Solutions	123	153	-20%
Uniper	1,789	856	109%
Other Operations	-114	-94	-21%
Total	**3,817**	**2,434**	**57%**

Comparable operating profit by segment

EUR million	2021	2020	Change 21/20
Generation	1,110	722	54%
Russia	261	251	4%
City Solutions	135	47	186%
Consumer Solutions	52	90	-43%
Uniper	1,120	363	209%
Other Operations	-142	-129	-10%
IS Total	**2,536**	**1,344**	**89%**

Operating profit by segment

EUR million	2021	2020	Change 21/20
Generation	1,054	711	48%
Russia	227	252	-10%
City Solutions	2,671	775	245%
Consumer Solutions	495	129	283%
Uniper	-4,901	29	-16,885%
Other Operations	-134	-298	55%
IS Total	**-588**	**1,599**	**-137%**

Share of profits of associated companies and joint ventures

EUR million	2021	2020	Change 21/20
Generation	36	29	26%
Russia	62	47	33%
City Solutions	42	57	-26%
Consumer Solutions	-	-	-
Uniper	51	54	-5%
Other Operations	0	470	-100%
IS Total	**192**	**656**	**-71%**

Comparable share of profits of associated companies and joint ventures

EUR million	2021	2020	Change 21/20
Generation	11	13	-16%
Russia	62	47	33%
City Solutions	42	57	-26%
Consumer Solutions	-	-	-
Uniper	39	38	2%
Other Operations	0	502	-100%
Total [1]	**154**	**656**	**-77%**

1) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

For further information see Note 6.

Sales were EUR 112,400 (49,015) million due to record high commodity prices.

Comparable operating profit was EUR 2,536 (1,344) million. A strong performance in an exceptional commodity market enabled the highest comparable operating profit in Fortum's history following volatile commodity prices and the consolidation of Uniper as a subsidiary. Additionally, the Uniper segment's gas business could take profit from extraordinarily volatile market fundamentals. Earnings increased in the Generation segment due to the higher achieved power price and higher nuclear and hydro volumes. In the first quarter of 2020, Uniper was consolidated as an associated company.

Operating profit for the period was impacted by EUR -3,124 (255) million of items affecting comparability, mainly due to changes in fair values of non-hedge-accounted derivatives of EUR -5,424 (-675) million almost entirely related to the Uniper segment. Items affecting comparability also includes the tax-exempt capital gains of EUR 2,681 million, the main part of which is related to the divestment of the 50% ownership in Stockholm Exergi Holding AB and the divestment of the Baltic district heating operations (Note 7).

Comparable share of profits of associates and joint ventures was EUR 154 (656) million (Note 18). The comparison period includes the comparable share of profit from Uniper of EUR 502 million based on Uniper's fourth-quarter 2019 and first-quarter 2020 results.

Finance costs – net, i.e. net finance income, amounted to EUR 107 (-56) million. Comparable finance costs - net amounted to EUR -38 (-103) million. The change mainly relates to the positive effect of changes in discount rates on Other provisions in the Uniper segment.

Profit before income taxes was EUR -289 (2,199) million. Comparable profit before income taxes was EUR 2,651 (1,897) million.

Income taxes for the period totalled EUR 175 (tax income) (-344) million. Comparable income tax expenses were EUR -605 (-299) million (Note 12).

Net profit was EUR -114 (1,855) million. Comparable net profit was EUR 1,778 (1,483) million after the deduction of adjusted non-controlling interest. Comparable net profit is adjusted for items affecting comparability, adjustments to share of profit of associates and joint ventures, net finance costs, and income tax expenses. The alternative performance measure (APM) 'comparable net profit' was introduced in the first quarter of 2021 to better reflect the underlying profitability (Note 7.2 and Definitions and reconciliations of key figures).

Earnings per share were EUR 0.83 (2.05) and comparable earnings per share were EUR 2.00 (1.67).

Financial position and cash flow

EUR million	2021	2020	Change 21/20
Interest expense	-202	-170	19%
Interest income	156	111	40%
Other financial items - net	154	3	-5,250%
IS Finance costs - net	**107**	**-56**	**293%**
Financial net debt	789	7,023	89%
Adjusted net debt	3,227	9,784	67%

Cash flow

In 2021, net cash from operating activities increased by EUR 2,415 million to EUR 4,970 (2,555) million. The change in working capital was impacted by operational liquidity measures in the Uniper segment, which are done to manage the increased margin receivables in investing activities.

Net cash used in investing activities was EUR 5,727 (2,140) million. Capital expenditure increased by EUR 77 million to EUR 1,178 (1,101) million. Acquisition of shares, net of liquid funds, was EUR 294 (1,801) million. Acquisition of shares mainly relates to the acquisition of Uniper shares. Divestment of shares and capital returns of EUR 3,863 (1,244) million mainly include the divestments of the 50% ownership in Stockholm Exergi Holding AB and the district heating business in the Baltics. In 2020, divestment of shares mainly included the divestment of the Joensuu and Järvenpää district heating operations. The change in margin receivables was EUR -7,964 (-552) million as a result of the higher commodity prices.

The negative change of EUR 7,964 (552) million in margin receivables in net cash used in investing activities was partly offset by the positive change of EUR 649 (-623) million in margin liabilities in the cash flow from financing activities.

Cash flow before financing activities was EUR -756 (415) million.

Net cash from financing activities was EUR 6,013 (505) million. The net increase in long-term liabilities was EUR 1,124 (2,062) million while the increase in short-term liabilities was EUR 5,364 (207) million. The increase in short-term liabilities is mainly related to the use of commercial paper programmes and revolving credit facilities, which are used to manage the increased margin receivables. In 2020, Fortum drew a term loan of EUR 2,000 million and a bridge loan of EUR 300 million to finance the acquisition of shares in Uniper. (For additional information, see the Financing section.) The dividend, EUR 995 million, was paid on 7 May 2021. The change in margin liabilities was EUR 649 (-623) million, mainly due to higher commodity prices. The net increase in liquid funds was EUR 5,256 (920) million (Note 27).

Assets

At the end of 2021, total assets amounted to EUR 149,661 (57,810) million. The increase from December 2020 mainly relates to derivative financial instruments in the Uniper segment as a result of the higher commodity prices. Liquid funds at the end of 2021 were EUR 7,592 (2,308) million.

Equity

Total equity amounted to EUR 13,665 (15,577) million. Equity attributable to owners of the parent company totalled EUR 12,131 (12,953) million. The change from December 2020 was mainly related to the net profit for the period of EUR 739 million offset by the EUR -980 million impact from fair valuation of cash flow hedges and the dividend payment of EUR 995 million.

Financing

At the end of 2021, financial net debt was EUR 789 (7,023) million and adjusted net debt EUR 3,227 (9,784) million (Note 27).

At the end of 2021, the Group's liquid funds totalled EUR 7,592 (2,308) million. Liquid funds include EUR 2,966 (289) million held by the Uniper segment.

At the end of 2021, Fortum had undrawn committed credit facilities of EUR 400 million.

In May, Fortum repaid a maturing bond of EUR 500 million and in December 2021 Fortum prepaid EUR 1,550 million of a EUR 2,000 million bridge loan maturing in October 2022. Additionally, in October 2021 Fortum cancelled the remaining revolving credit facility that was part of the facility for the purchase of Uniper shares and liquidity purposes, EUR 1,350 million, with the original maturity date in November 2021.

In December, following the surge in commodity prices Fortum extended the credit facility agreement with Uniper, originally signed in September, to EUR 8,000 million comprising tranches for both a shareholder loan and a parent company guarantee. Both Fortum (EUR 1,750 million) and Uniper (EUR 1,800 million) withdrew their core revolving credit facilities as precautionary measures to secure sufficient liquidity for possible further increases and volatility in commodity prices and consequent additional requirement of collateral payments. In addition, Fortum signed new bilateral financing agreements to further strengthen the liquidity position. These agreements consisted of a EUR 400 million bank loan (maturing in September 2024), a EUR 500 million bank loan (maturing in June 2023 with an extension option of eight months) and a revolving credit facility of EUR 800 million (maturing in December 2022 with an extension option of one year), of which EUR 500 million was drawn as of 31 December 2021. Also in December, Uniper extended the existing EUR 400 million bank loan, maturing in September 2022, to mature in March 2023 and signed a new EUR 150 million bank loan with maturity in January 2024.

After year-end 2021, in January 2022, Uniper signed a EUR 2,000 million short-term revolving credit facility with the German state-owned KfW-Bank (maturing in April 2022). Fortum signed a EUR 3,000 million revolving credit facility (maturing in April 2022 with an extension option of three months). These facilities have not been used.

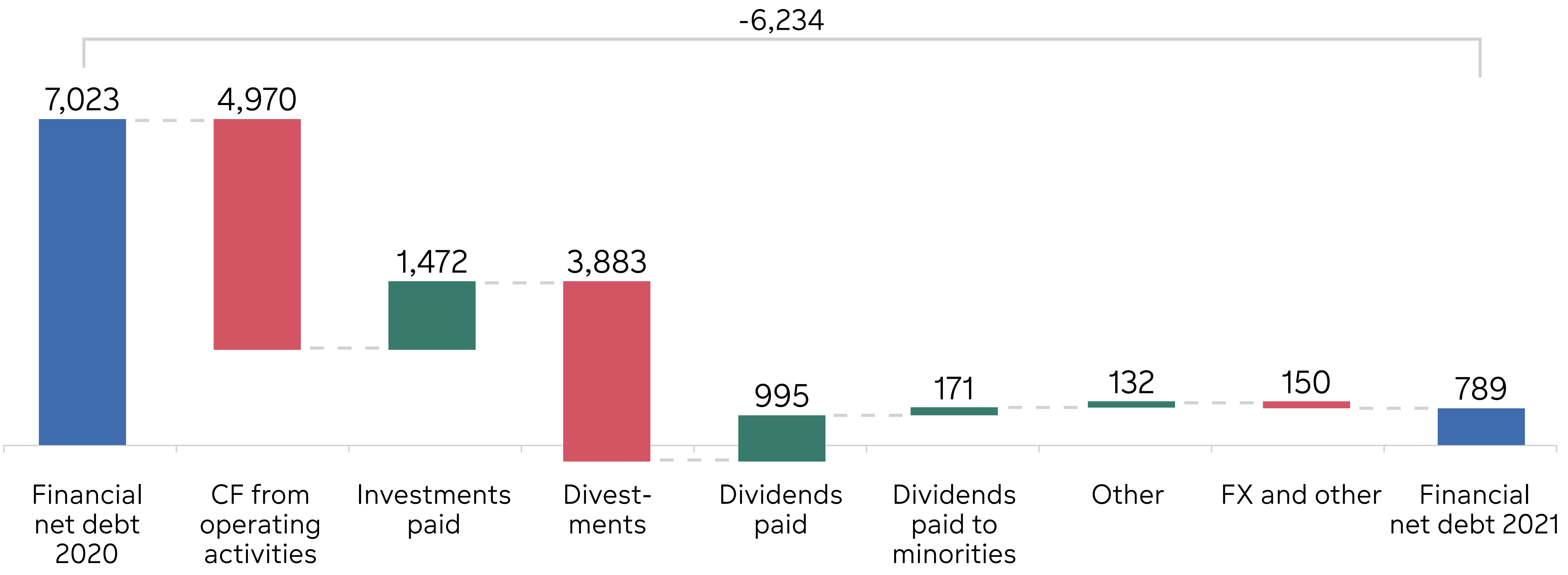
In the fourth quarter of 2021, Fortum's total interest-bearing loans increased by EUR 4,486 million to EUR 16,144 million. Current loans, including the EUR 1,731 million current portion of long-term loans, amounted to EUR 8,389 million. In order to manage the higher margin requirements short-term loans increased by EUR 2,847 million from EUR 3,811 million at the end of September to EUR 6,658 million at the end of the year. These short-term liquidity needs were mainly covered by commercial paper programmes and the use of the revolving credit facilities. The use of commercial papers increased by EUR 895 million from EUR 2,234 million at the end of September to EUR 3,129 million.

In June 2021, Fitch revised its long-term rating for Fortum to BBB, with a stable outlook (previously BBB with a negative outlook). The short-term rating is at the level F2. In July 2021, S&P Global Ratings revised its long-term rating for Fortum to BBB, with a stable outlook (previously BBB with a negative outlook). The short-term rating is at the level A-2.

In September 2021, S&P Global Ratings reaffirmed Uniper's BBB rating and stable outlook. In July 2021, S&P Global Ratings also revised its long-term rating for Uniper to BBB, with a stable outlook (previously BBB with a negative outlook).

In January 2022, S&P Global Ratings affirmed both Fortum's and Uniper's rating of BBB with a stable outlook.

Change in financial net debt during 2021, EUR million



Operating and regulatory environment

European power markets

Year 2021 turned out to be the complete opposite of year 2020, with European gas, carbon and power markets breaking record-high levels in both day-ahead and forward products. A cold winter and spring of 2021, increasing consumption of gas in the power and industrial sectors in Asia, lower pipeline gas flows from Russia to Central Europe, and below normal European wind conditions all contributed to unprecedentedly high gas and, consequently, very high power prices. Towards the end of 2021, high Continental European power prices also increasingly influenced power prices in the Nordics, further supported by continuing low precipitation in the Nordics and new interconnectors from the Nordics to Germany and the UK.

According to preliminary statistics, power consumption in the Nordic countries was 404 (384) TWh in 2021. The higher power demand in the Nordics, was mainly caused by colder weather but also supported by a slight increase in industrial demand.

In central western Europe (Germany, France, Austria, Switzerland, Belgium, and the Netherlands), power consumption in 2021 was 1,359 (1,316) TWh according to preliminary statistics. This is in line with the pre-Covid-19 level of power demand.

In the long term, electricity is expected to continue to gain a significantly higher share of total energy consumption. The electricity demand growth rate will largely be determined by classical drivers, such as macroeconomic and demographic development, but also increasingly by decarbonising the industrial, transport and heating sectors through direct electrification and green hydrogen.

At the beginning of 2021, the Nordic water reservoirs were at 105 TWh, which is 21 TWh above the long-term average. During 2021, the Nordic precipitation and inflow was below normal while hydro power utilization remained high, which decreased the water reservoirs compared to normal. At the end of 2021, the reservoirs were at 73 TWh, which is 11 TWh below the long-term average and 32 TWh lower than one year earlier.

In 2021, the average system spot price in Nord Pool was EUR 62.3 (10.9) per MWh. The average area price in Finland was EUR 72.3 (28.0) per MWh, in the SE3 area in Sweden (Stockholm) EUR 66.0 (21.2) per MWh, and in the SE2 area in Sweden (Sundsvall) EUR 42.6 (14.4) per MWh. In Germany, the average spot price during 2021 was EUR 96.8 (30.5) per MWh.

At the end of February 2022, the Nordic system electricity forward price on Nasdaq Commodities for the remainder of 2022 was around EUR 69 per MWh and for 2023 around EUR 48 per MWh. The Nordic water reservoirs were at 55 TWh, which is about 5 TWh below the long-term average and 14 TWh lower than one year earlier. The German electricity forward price for the remainder of 2022 was around EUR 225 per MWh and for 2023 around EUR 148 per MWh.

European commodity markets

In 2021, gas demand in central western Europe was 2,218 (2,111) TWh. The central western European gas storage levels decreased from 439 TWh at the beginning of the year to 293 TWh at the end of 2021, which is 146 TWh lower than in 2020 and 129 TWh lower than the five-year average (2017–2021).

Tightness in the gas market has lifted European gas prices to unprecedented levels. During 2021 the average gas spot price (TTF) was EUR 47 (9) per MWh. The 2022 forward price increased from EUR 16 per MWh at the beginning of the year to EUR 79 per MWh at the end of 2021.

In 2021, there were also strong gains in the EUA market. The price increased from EUR 34 per tonne at the beginning of the year to EUR 81 per tonne at the end of 2021, which is EUR 56 per tonne higher than the average price in 2020. For the full year of 2021, the average EUA price was EUR 54 per tonne.

In 2021, there was an increase in coal prices. The forward quotation for coal (ICE Rotterdam) for 2022 increased from USD 72 per tonne at the beginning of the year to USD 99 per tonne at the end of 2021, which is USD 37 per tonne above the average price in 2020.

At the end of February 2022, the TTF forward price for gas for the remainder of 2022 was EUR 102 per MWh. The forward quotation for EUA's for 2022 was at the level of EUR 85 per tonne. The forward price for coal (ICE Rotterdam) for the remainder of 2022 was USD 204 per tonne.

Russian power market

Fortum's Russia segment operates thermal power plants mainly in the Tyumen and Khanty-Mansiysk area of western Siberia, where industrial production is dominated by the oil and gas industries, and in the Chelyabinsk area of the Urals, which is dominated by the metal industry. Uniper's Russian subsidiary Unipro PJSC operates in the Smolensk, Moscow, Sverdlovsk, and Krasnoyarsk regions, as well as in the Khanty-Mansiysk Autonomous District.

The Russian market is divided into two price zones; Fortum's Russia division operates in the first price zone (European and Urals part of Russia), while Uniper operates in both the first and second price zones.

According to preliminary statistics, Russian power consumption in 2021 was 1,090 (1,033) TWh. The corresponding figure for the first price zone was 830 (783) TWh and for the second price zone 217 (209) TWh. The increase in consumption resulted from the economic recovery.

In 2021, the average electricity spot price, excluding capacity prices, was RUB 1,405 (1,220) per MWh in the first price zone, RUB 935 (873) in the second price zone, and RUB 1,221 (1,068) per MWh in the Urals hub.

The Russian Government increased the gas price by 3% in July 2021.

In Russia, capacity payments based on Capacity Supply Agreements (CSA) are a key driver for earnings growth, as CSA payments are considerably higher than for capacities selected in Competitive Capacity Selection (CCS) auctions. Currently, Fortum's Russia segment's CSA capacity amounts to 1,926 MW, including 70 MW of solar and wind capacity. These capacities do not include those related to the joint ventures. Correspondingly, Uniper's CSA capacity amounts to 800 MW.

Thermal power plants are entitled to clearly higher CSA payments starting approximately six years after commissioning (see tables below). In 2021, there was an increase in CSA payments for three units of Fortum's Russia segment's generation fleet and for one unit of Fortum's Uniper segment's generation fleet. After the CSA period ends, the units can receive CCS payments from CCS auctions. See the corresponding changes in the table below:

Fortum's Russia segment's units	CSA starts	Higher CSA starts	CSA ends
Tyumen CHP 1, unit 2	1 Feb 2011	1 Oct 2016	31 Dec 2020
Chelyabinsk CHP 3, unit 3	1 Jun 2011	1 Nov 2016	31 Dec 2020
Nyagan, unit 1	1 Apr 2013	1 Jan 2018	31 Dec 2021
Nyagan, unit 2	1 Dec 2013	1 Aug 2018	31 Dec 2022
Nyagan, unit 3	1 Jan 2015	1 Jan 2021	31 Dec 2025
Chelyabinsk CHP 4, unit 1	1 Dec 2015	1 Jan 2021	31 Dec 2024
Chelyabinsk CHP 4, unit 2	1 Mar 2016	1 Jan 2021	31 Dec 2024
Ulyanovsk [1]	1 Jan 2018	n/a	30 Nov 2031
Bugulchansk [2]	Nov 2016 – Mar 2017	n/a	Nov 2030 – Nov 2031
Pleshanovsk [2]	1 Mar 2017	n/a	30 Nov 2031
Grachevsk [2]	1 Mar 2017	n/a	30 Nov 2031

1) Wind CSA.
2) Solar CSA.

Fortum's Uniper segment's units	CSA starts	Higher CSA starts	CSA ends
Surgutskaya-2 GRES-2, unit 7	1 May 2011	1 May 2017	31 Jul 2021
Surgutskaya-2 GRES-2, unit 8	1 Jun 2011	1 Jun 2017	31 Aug 2021
Shaturskaya GRES, unit 7	1 Oct 2010	1 Oct 2016	31 Dec 2020
Yaivinskaya GRES, unit 5	1 Jan 2011	1 Jan 2017	31 Dec 2020
Berezovskaya GRES, unit 3 [1)]	1 Nov 2014	1 Nov 2020	31 Oct 2024
Surgutskaya-2 GRES-2, unit 1 [2)]	Apr 2022	n/a	Feb 2038
Surgutskaya-2 GRES-2, unit 2 [2)]	Dec 2026	n/a	Nov 2042
Surgutskaya-2 GRES-2, unit 3 [2)]	Dec 2027	n/a	Nov 2043
Surgutskaya-2 GRES-2, unit 4 [2)]	Dec 2025	n/a	Nov 2041
Surgutskaya-2 GRES-2, unit 6 [2)]	Sep 2024	n/a	Aug 2040

1) Started receiving CSA payments from 1 May 2021 when returning to the market after repairs.
2) Modernisation CSA 2.

Fortum's Russia segment's generation capacity not receiving CSA payments, a total of 2,697 MW, is allowed to participate in the annual CCS auctions. Uniper's generation capacities allowed to participate in the CCS auction totalled 10,445 MW. The next CCS auction, for the year 2027, is expected to be held in November 2023.

Year	2020	2021	2022	2023	2024	2025	2026
CCS auction price, tRUB/MW/month, first price zone [1)]	115	134	168	171	182	193	195
CCS auction price, tRUB/MW/month, second price zone [1)]	191	225	264	267	279	303	299
Fortum's Russia segment							
Selected in CCS auction, MW, first price zone	2,331	2,848	3,451	3,904	3,904	4,351	4,852
Fortum's Uniper segment							
Selected in CCS auction, MW, first price zone	7,190	8,829	8,035	8,035	7,225	6,427	5,617
Selected in CCS auction, MW, second price zone	1,600	1,600	1,600	1,600	2,400	2,400	2,400

1) Excluding inflation.

In the June 2017 CSA auction, the Fortum-Rusnano wind investment fund won the right to build 1,000 MW of wind capacity. The wind parks were to be commissioned during 2018–2022 and will receive a guaranteed CSA price corresponding to approximately RUB 7,000–9,000 per MWh for a period of 15 years.

In the June 2018 CSA auction, the Fortum-Rusnano wind investment fund won the right to build 823 MW of wind capacity. The wind parks were to be commissioned during 2019–2023 and will receive a guaranteed CSA price corresponding to approximately RUB 7,000–8,000 per MWh for a period of 15 years.

In the June 2018 and 2019 CSA auctions, Fortum won the right to build 110 MW and 6 MW of solar capacity. The power plants will receive a guaranteed CSA price for a period of 15 years, corresponding to approximately RUB 15,000 per MWh and RUB 14,000 per MWh, respectively. In December 2021, 78 MW of the capacity was commissioned, and the remaining part will be commissioned in the second half of 2022.

In September 2021 in the most recent CSA auction, Fortum announced that the Fortum-Rusnano wind investment fund won annual CSA remuneration in the range of RUB 16.9–23.8 billion for new wind power generation. This corresponds to wind capacity of approximately 430–530 MW per annum (a maximum of 1.4 GW); the capacity will be commissioned during the years 2025–2027. The number of gigawatts ultimately to be constructed is subject to separate investment decisions. The projects will be covered by CSAs for a period of 15 years from commissioning. The average nominal price is expected to be in the range of RUB 2,600–4,200 per MWh during the CSA period. The estimated prices are inflation adjusted.

Together with its joint ventures in Russia, Fortum is the largest player on the renewable energy market in Russia with a wind and solar portfolio of approximately 3.4 GW projects. Of the wind and solar power plants and projects in the portfolio, 1.2 GW are operational, 0.3 GW are under construction, and 1.9 GW are under development.

Power consumption

TWh	2021	2020	2019
Nordic countries	404	383	392
Central western Europe [1)]	1,359	1,316	-
Central western Europe gas demand [1)]	2,218	2,111	-
Russia	1,090	1,033	1,059
Tyumen	90	86	94
Chelyabinsk	37	36	35
Russia Urals area	256	246	260
Russia Siberia area	217	209	211

1) Reported from 2020 onwards.

Average prices

	2021	2020	2019
Spot price for power in Nord Pool power exchange, EUR/MWh	62.3	10.9	38.9
Spot price for power in Finland, EUR/MWh	72.3	28.0	44.0
Spot price for power in Sweden, SE3, Stockholm, EUR/MWh	66.0	21.2	38.4
Spot price for power in Sweden, SE2, Sundsvall, EUR/MWh	42.6	14.4	37.9
Spot price for power in the First Price Zone of Russia, RUB/MWh [1]	1,405	1,220	1,289
Spot price for power in the Second Price Zone of Russia, RUB/MWh [1]	935	873	892
Average capacity price for the Russia segment, tRUB/MW/month	584	608	624
Average capacity price for the Uniper segment, tRUB/MW/month	293	261	-
Spot price for power in Germany, EUR/MWh	96.8	30.4	37.7
Average regulated gas price in Urals region, RUB/1,000 m^3	4,077	3,977	3,910
Average capacity price for the Russia segment's CCS, tRUB/MW/month [2] [3]	170	156	154
Average capacity price for the Russia segment's CSA, tRUB/MW/month [3]	1,174	1,058	1,096
Average capacity price for the Uniper segment's CCS, tRUB/MW/month [2] [3]	160	136	-
Average capacity price for the Uniper segment's CSA, tRUB/MW/month [3]	1,488	951	-
Spot price for power (market price), Urals hub, RUB/MWh [1]	1,221	1,068	1,117
CO_2, (ETS EUA), EUR/tonne CO_2	54	25	25
Coal (ICE Rotterdam), USD/tonne	117	50	61
Oil (Brent Crude), USD/bbl	71	43	64
Spot price for gas (TTF), EUR/MWh [4]	47	9	-

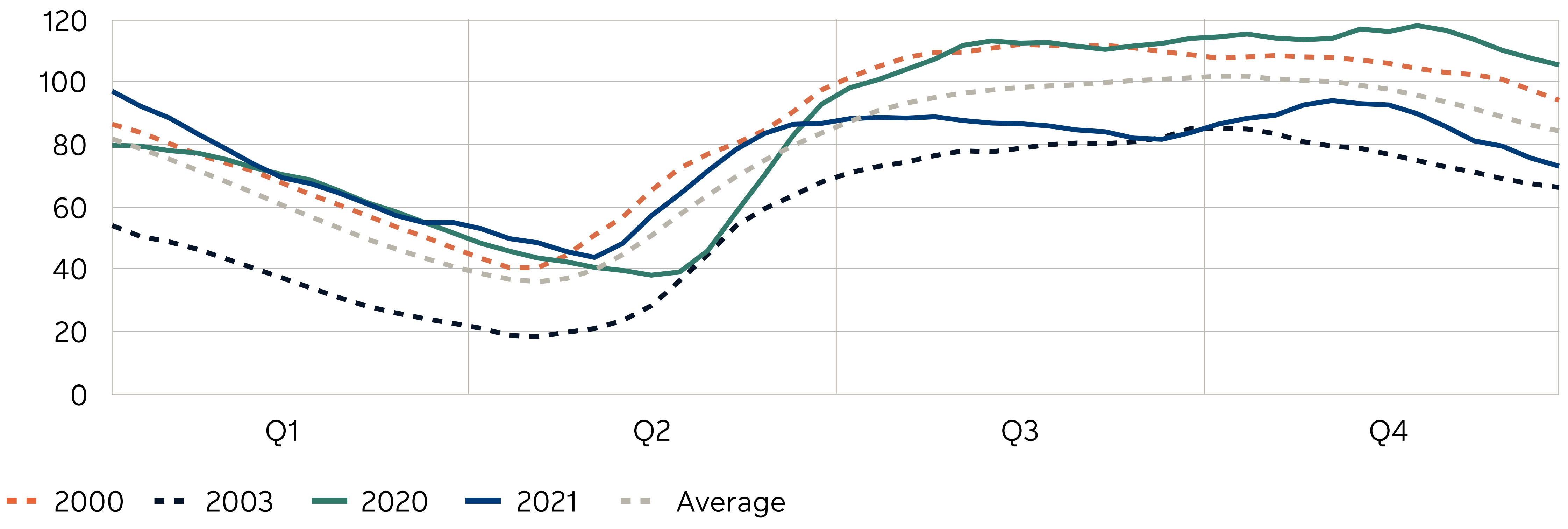
1) Excluding capacity tariff.
2) Including capacity receiving payments under "forced mode status", regulated tariffs, and bilateral agreements.
3) Capacity prices paid for the capacity volumes, excluding unplanned outages, repairs, and own consumption.
4) Reported from 2020 onwards.

Water reservoirs and gas storage levels

TWh	31 Dec 2021	31 Dec 2020	31 Dec 2019
Nordic water reservoirs level	73	105	79
Nordic water reservoirs level, long-term average	84	84	84
Central western European gas storage levels [1]	293	439	-

1) Reported from 2020 onwards.

Nordic water reservoirs, energy content, TWh



Source: Nord Pool

Export/import

TWh (+ = import to, - = export from Nordic area)	2021	2020	2019
Export/import between Nordic area and Continental Europe+Baltics	-29	-24	-8
Export/import between Nordic area and Russia	9	3	8
Export/import Nordic area, total	**-20**	**-21**	**0**

Regulatory environment

EU taxonomy rules on nuclear and gas published

At the beginning of December 2021, the first Climate Delegated Act under the EU taxonomy framework on climate change was officially approved by the Council and the European Parliament. At the end of December 2021, the European Commission issued the long-awaited draft Complementary Delegated Act covering nuclear and gas and the final Act was published in February 2022. In the Act both gas and nuclear energy are classified as transitional activities under strict conditions. The Act is subject to a four-month scrutiny period, extendable by two months, during which the Parliament and the Council can either reject or adopt the Act.

Fortum has consistently advocated for a science-based and technology-neutral taxonomy. In broad terms, we welcome the Complementary Delegated Act, as it recognises the contribution of nuclear energy to drive climate mitigation, but we recognise that it leaves several issues open for interpretation. It is also unfortunate that the majority of existing nuclear is not included, as was recommended by both the Commission's own research centre and the Finnish and Swedish governments. We welcome the recognition of natural gas as a transitional fuel but consider the proposed criteria too restrictive. These criteria will make necessary investments in additional gas-fired power plants more difficult in countries where flexible gas is needed for the security of supply.

EU's gas market package published

In December, the Commission adopted a set of legislative proposals to decarbonise the EU gas market by facilitating the uptake of renewable and low carbon gases, including hydrogen, and to ensure security of energy supply for all citizens in Europe. The proposal largely extends the existing rules that are currently applied to natural gas to cover also hydrogen.

Gas is confirmed to act as a bridging technology and thus the proposal supports the planning and investment security of the respective industries– at least until 2049. Simultaneously, the proposed criteria in the EU taxonomy are highly restrictive for gas. Regarding energy prices, the Commission supports a market-driven approach; however, it suggests member states to, if needed, use voluntary measures based on the Commission's Toolbox Communication (see the next section) in order to keep consumer prices at reasonable level. The proposals support the non-discriminatory treatment of market participants and propose unbundling principles for both gas and hydrogen networks.

However, several ambiguities still need to be addressed, e.g. the clarification of technology neutrality in hydrogen production and the methodology to calculate the greenhouse gas emission reduction of low-carbon gases. Further, clarification is needed regarding the discussed controversial 'additionality principle' related to the Renewable Energy Directive (meaning that the corresponding capacity for renewable generation must be added specifically for each newly installed hydrogen production plant (electrolysis)).

EU not to intervene in the energy market despite the price crisis

Unprecedentedly high energy prices have triggered a debate among the EU institutions. The European Commission published its Toolbox Communication in October with the objective to help member states tackle the high energy prices. This toolbox outlined a number of measures that member states can implement to protect vulnerable consumers and industries within the existing regulatory framework.

Although the energy price crisis was discussed at the EU level on multiple occasions during the fourth quarter of 2021, the Commission, together with a broad coalition of member states, highlighted free/market-driven pricing and competitive markets without any need to intervene in the market. The impact of soaring and persistent high energy prices start to be visible in the real economy, and several small- and medium-sized enterprises, including energy suppliers, have already been significantly affected. The exceptional commodity price situation is also putting a strain on utilities with large trading portfolios (including Uniper), as they face clearly higher collateral requirements and consequently need to secure additional liquidity reserves.

New German government with ambitious climate goals started

"The Traffic Light Coalition", the new German Government formed by Social Democrats, Liberals, and Greens, has officially started under the leadership of Chancellor Olaf Scholz. The coalition agreement sets very ambitious climate targets and requires heavy investments to implement those targets (e.g. a target to reach an 80% share of renewables by 2030). Renewable energies shall be expanded massively while the coal exit is intended to be brought forward, ideally to 2030. The crucial role of natural gas for security of supply is well recognized; at the same time, the Government is under pressure because the goal of climate neutrality must be achieved in 2045. The Government supports the ramp up of the hydrogen economy which is important especially to enable decarbonisation of the industry sector.

Nord Stream 2 halted

Following the invasion of Russia on Ukraine, the German government halted the certification process of Nord Stream 2 on 22 February 2022, and the US has put Nord Stream 2 AG, which is a Swiss subsidiary of Gazprom, and its CEO under sanction on 23 February 2022.

For comments on the geopolitical uncertainty due to Russia's invasion on Ukraine, imposed sanctions and possible future sanctions and counter sanctions and their possible impacts on Fortum Group's Russian business and assets, please see section 'Events after the balance sheet date'.

Proposal for Swedish hydrogen strategy published

In November 2021, the Swedish Energy Agency presented a proposal on a national hydrogen strategy. The strategy focuses on "colour-blind" fossil-free hydrogen with a target to have 5 GW of installed electrolyser capacity by 2030 and an additional 10 GW of capacity by 2045.

According to the proposal, the use of hydrogen should contribute to the transition to a fossil-free economy and at the same time strengthen security of supply in the electricity system. Hydrogen must be used where it is economically efficient and creates the highest system value. Sweden should be an international frontrunner and exporter of climate-friendly products and services based on hydrogen that lower emissions abroad.

The strategy is currently being processed in the Ministry of Infrastructure, but it is still unclear when it will be adopted as the official Swedish hydrogen strategy.

Lack of firm power production in the south of Sweden increases market turmoil

In Sweden, the electricity price differences between the four internal price areas significantly increased in 2021. The increased volatility and lack of balanced and sufficient power supply in southern Sweden has caused many retailers to stop offering fixed price contracts to their customers. It has also triggered the transmission system operator, Svenska Kraftnät, to announce that more firm dispatchable power must be added to the system and that transmission capacity from north to south needs to be increased.

Finnish river basin management plans approved

In December 2021, the Finnish Government approved the river basin management plans that will guide the future licencing and operation of all industrial plants in the neighbourhood of watercourses. The plans are based on the classification of water bodies and propose measures to reach the desired status of water bodies by 2027.

The proposed measures, e.g. minimum flow requirement, may reduce the regulating hydropower capacity provided by hydropower by up to 20%. Therefore, the hydropower generators consider the government's decision to pose a significant risk to the operation of the electricity system.

Fortum is committed to the goals of the plans, including reaching good water status. However, due to severe shortcomings in the classification of water bodies, Fortum has appealed to the Supreme Administrative Court regarding the Oulujoki watercourse and the Klobbfjärden sea area around the Loviisa nuclear power plant. Court processes are expected to take several years.

Government permit granted for the final repository for spent nuclear fuel in Sweden – Posiva applies for operating permit for final disposal in Finland

In August 2021, the Swedish Government decided to extract the interim storage decision from SKB's (Svensk Kärnbränslehantering AB) comprehensive final repository system application. Only the increased storage at the interim storage facility was given the go-ahead at that time. In line with the licensing process, the case is now to be decided by the Swedish Land and Environmental Court, and a building and operation permit on the interim storage facility is expected in June/July 2022. The Government decision made in August 2021 created uncertainty with regard to the process to have a legally enforceable building and operation permit for the interim storage facility in place by the end of 2023, when maximum capacity under the current license will be reached. If a legally enforceable permit is not in place by the end of 2023, nuclear operators will not be able to store more spent fuel, and therefore the risk for electricity supply disruptions in the spring of 2024 still remains. In January 2022, the new Swedish Government made a decision to give the go-ahead to the final repository for spent nuclear fuel in Forsmark in Östhammar Municipality and an encapsulation plant in Oskarshamn.

In Finland, the nuclear waste management organisation Posiva Oy announced the submission of the application for the operating license for the encapsulation and final disposal facility (ONKALO®) to the Finnish Ministry of Economic Affairs and Employment in December 2021. Posiva will dispose of the high-level nuclear waste of its owners, Fortum (share of ownership 40%) and Teollisuuden Voima Oyj (TVO) (share of ownership 60%).

Segment reviews

Business model

Fortum is a European energy company with activities in more than 40 countries. We provide our customers with electricity, gas, heating and cooling as well as smart solutions to improve resource efficiency. Together with our subsidiary Uniper, we are the third largest producer of CO_2-free electricity in Europe. Fortum is the largest electricity retailer in the Nordic countries and one of the leading heat producers globally.

Fortum's organisation consists of four business divisions: Generation, Russia, City Solutions, and Consumer Solutions, and additionally Uniper as a segment. Fortum employs a diverse team of almost 20,000 energy-sector professionals.

Generation

Generation is responsible for Nordic power generation. The division comprises CO_2-free nuclear, hydro, and wind, power generation, as well as power portfolio optimisation, trading, market intelligence, thermal power for the capacity reserve, and global nuclear services. The division does not include the Nordic hydro and nuclear power generation or the trading activities of Uniper. As of 31 March 2020, the division includes Generation's proportionate share of OKG (Note 1).

EUR million	2021	2020	Change 21/20
Reported			
Sales	2,899	2,006	45%
- power sales	2,690	1,878	43%
of which Nordic outright power sales [1]	1,937	1,478	31%
- other sales	209	128	63%
Operating profit	1,054	711	48%
Share of profits of associates and joint ventures [2]	36	29	26%
Capital expenditure and gross investments in shares	175	228	-23%
Number of employees	1,116	1,143	-2%

EUR million	2021	2020	Change 21/20
Comparable			
EBITDA	1,299	886	47%
Operating profit	1,110	722	54%
Share of profits of associates and joint ventures [2] [3]	11	13	-16%
Return on net assets, % [3]	18.0	12.2	48%
Net assets (at period-end)	6,336	6,234	2%

1) The Nordic power sales income and volume includes hydro and nuclear generation, excluding minorities. It does not include thermal generation, minorities, customer business or other purchases.
2) Power plants are often built jointly with other power producers, and owners purchase electricity at cost including interest cost and production taxes. The share of profit/loss is mainly IFRS adjustments (e.g. accounting for nuclear-related assets and liabilities) and depreciations on fair-value adjustments from historical acquisitions (Note 18).
3) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

The Generation segment's total power generation in the Nordic countries increased driven especially by higher nuclear volumes but also by higher hydro volumes, the effect of which was partly offset by the sale of a majority share of Fortum's Nordic wind assets. The availability for nuclear generation was at a good level throughout the year with annual production records in the Loviisa (Finland), Oskarshamn 3 and Forsmark (Sweden) nuclear power plants. The CO_2-free generation accounted for 100% of the total power generation.

The achieved power price in the Generation segment increased by EUR 8 per MWh, up 23%. The achieved power price increased due to the very successful physical optimisation, financial optimisation and higher spot prices. While the spot power price increased by 183% in Generation segment's power generation areas, the positive result effect of the higher achieved power price was dampened by the fairly high hedge levels and a hedge price below the level of the spot price as well as the achieved power price being well above the spot price in comparison period.

Comparable operating profit increased by 54%. The increase was mainly related to the higher achieved power price. Also higher nuclear and hydro volumes contributed to the increase. Comparable operating profit included EUR -13 (15) million from the consolidation of the Generation segment's proportionate share of OKG (Note 6).

Operating profit was affected by EUR -56 (-11) million of items affecting comparability, mainly related to the fair value change of non-hedge-accounted derivatives. It also included the tax-exempt capital gain of EUR 50 million from the divestment of eight small hydropower plants in Sweden (Note 6).

Comparable share of profits of associates and joint ventures totalled EUR 11 (13) million (Note 6 and Note 18).

In January 2021, Fortum announced that it had finished the construction of two new wind parks in the Nordics: Kalax in Finland and Sørfjord in Norway which subsequently started generating CO_2-free energy for the Nordic market. The wind parks are part of the transaction concluded in 2020 with Energy Infrastructure Partners AG (EIP), and Fortum's ownership is 20%.

In March 2021, Fortum announced a substantial investment in dam safety in Sweden for an extensive rebuild of the over 100-year-old Forshuvud hydropower plant. Fortum is investing more than SEK 450 million (approximately EUR 44 million) during 2021–2025. This investment guarantees an extended lifetime for the power plant as a supplier of renewable electricity and balancing power for more weather-dependent types of power.

In April 2021, Fortum announced its second pilot project for the use of batteries as energy storage at hydropower plants in Landaforsen, Sweden. Out-of-service batteries from plug-in hybrid cars and other batteries, a total of 48 batteries with a combined storage capacity of 1 MW and 250 kWh, are installed, extending the lifetime of the hydropower turbines and the batteries.

In September 2021, Fortum and Uniper agreed on long-term external and internal collaboration in nuclear decommissioning services. The objective for the complementary capabilities is to develop a wider customer offering, reach a stronger market position, and ensure excellent performance in the Oskarshamn and Barsebäck decommissioning projects in Sweden.

In September 2021, Fortum submitted its Environmental Impact Assessment (EIA) Report of the Loviisa nuclear power plant in Finland to the Ministry of Economic Affairs and Employment (MEAE). The report contains an assessment of the environmental impacts of the potential lifetime extension of the nuclear power plant or, alternatively, the decommissioning of it, as well as the environmental impacts of Posiva Oy's final disposal facility ONKALO® for low- and intermediate-level waste. In January 2022, MEAE gave its informed conclusion on the Loviisa nuclear power plant's Environmental Impact Assessment report and stated that it meets the requirements of the EIA legislation. The alternatives examined were not found to have such significant adverse environmental impacts that could not be accepted, prevented or mitigated to an acceptable level.

On 16 December 2021, the Radiation and Nuclear Safety Authority in Finland (STUK) granted Teollisuuden Voima Oyj (TVO) permission to make the Olkiluoto 3 EPR (OL3) reactor critical and to conduct low power tests. Consequently, Finland's fifth nuclear reactor was started and it reached first criticality on 21 December 2021. Electricity generation starts in March 2022, and regular electricity generation is expected to start in July 2022 (Note 29).

On 22 December 2021, Fortum announced the first investment by the joint team of Fortum and Uniper for wind and solar businesses in Europe. Fortum decided to construct the 380-MW Pjelax-Böle and Kristinestad Norr wind parks in Närpes and in Kristinestad in Finland in partnership with the Finnish energy company Helen Ltd. Construction started in January 2022 and the wind parks are expected to be fully operational at the latest in the second quarter of 2024. Fortum has a 60% majority and Helen holds a 40% minority ownership in the project. The total capital expenditure of the projects is approximately EUR 360 million, of which Fortum's share is EUR 216 million.

Power generation by source

TWh	2021	2020	Change 21/20
Hydropower, Nordic	23.3	22.4	4%
Nuclear power, Nordic	23.5	21.0	12%
Wind power, Nordic	-	0.4	-100%
Thermal power, Nordic	0.0	0.1	-95%
Total	**46.8**	**43.9**	**7%**

Nordic sales volume

TWh	2021	2020	Change 21/20
Nordic sales volume	54.1	51.4	5%
of which Nordic Power sales volume [1)]	45.3	42.5	7%

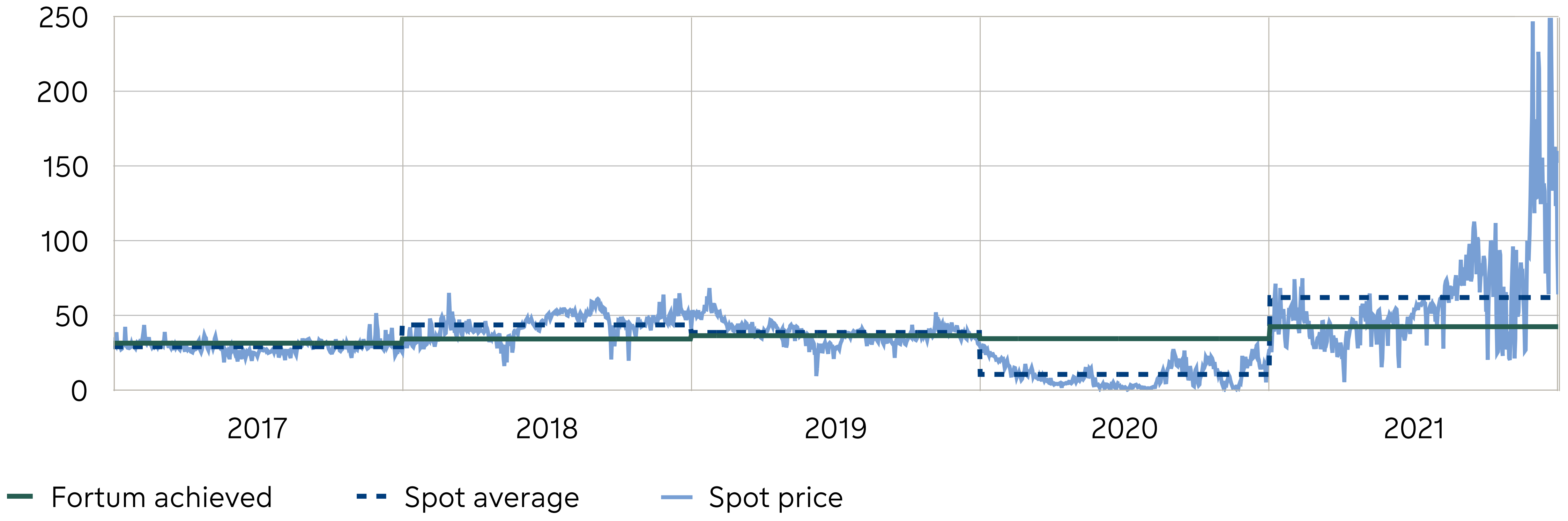
1) The Nordic power sales income and volume includes hydro and nuclear generation, excluding minorities. It does not include thermal generation, minorities, customer business or other purchases.

Sales price

EUR/MWh	2021	2020	Change 21/20
Generation's Nordic achieved power price [1)]	42.8	34.8	23%

1) Generation's Nordic power price includes hydro and nuclear generation, excluding minorities. It does not include thermal generation, minorities, customer business or other purchases.

Nord Pool, power price, 2017–2021, EUR/MWh



The spot price was 310 EUR/MWh on 21 December 2021.
Source: Nord Pool, Fortum

Russia

The Russia segment comprises power and heat generation and sales in Russia. The segment includes Fortum's fully owned power plants and its joint ventures for building and operating approximately 3.4 GW of renewable power generation and for power and heat sales, as well as Fortum's more than 29% holding in TGC-1. These joint ventures and associated company are accounted for using the equity method. The segment does not include Uniper's Russian subsidiary Unipro.

EUR million	2021	2020	Change 21/20
Reported			
Sales	906	929	-2%
- power sales	761	791	-4%
- heat sales	137	134	2%
- other sales	8	4	87%
Operating profit	227	252	-10%
Share of profits of associates and joint ventures	62	47	33%
Capital expenditure and gross investments in shares	83	91	-9%
Number of employees	2,627	2,935	-10%

EUR million	2021	2020	Change 21/20
Comparable			
EBITDA	404	394	2%
Operating profit	261	251	4%
Share of profits of associates and joint ventures	62	47	33%
Return on net assets, %	12.9	11.1	16%
Net assets (at period-end)	2,508	2,431	3%

Power generation volumes increased by 6% due to higher consumption as a result of the economic recovery in 2021. Heat production volumes increased by 4% due to colder weather in the Chelyabinsk and Tyumen areas. This positive effect was partly offset by the Argayash CHP plant divestment in the second quarter.

Sales decreased by 2%, or EUR -23 million, due to the weaker Russian rouble during the first half of 2021. This impact was partly offset by higher power prices and volumes. The effect of the change in the Russian rouble exchange rate was EUR -48 million.

Comparable operating profit increased by 4%, or EUR 10 million. The EUR 17 million positive effect of the sale of the 116-MW CSA-backed solar power project to the Fortum-RDIF joint venture and higher power prices more than offset the effect of the change in the Russian rouble exchange rate of EUR -14 million. The net effect of the changes to CSA payments was slightly negative; the changes derived from three units entering the four-year period of higher CSA payments, the CSA period expiry for two units, as well as corrections to the CSA prices as a result of lower bond yields. The divestment of the Argayash coal-fired CHP plant only had a minor effect on comparable operating profit.

Operating profit was affected by a tax-deductible non-cash impairment of EUR 35 million in connection with the Argayash CHP plant divestment.

Comparable share of profits of associates and joint ventures totalled EUR 62 (47) million, including the share of profits of EUR 33 (24) million from TGC-1, and the share of profits of EUR 23 (18) million from the joint ventures for renewables power generation (Note 6 and Note 18). The share of profits from the joint ventures for renewables power generation in 2021 includes a EUR 11 million gain from the transfer of the Kalmykia wind power park from the Fortum-Rusnano wind investment fund to the Fortum-RDIF joint venture. The share of profits for the joint ventures for renewables power generation in 2020 includes a EUR 9 million gain from the transfer of the Rostov wind power park from the Fortum-Rusnano wind investment fund to the Fortum-RDIF joint venture (Note 3).

In March 2021, Fortum announced its decision to construct the largest solar power plant in Kalmykia in Southern Russia through a joint venture established with RDIF. In December 2021, 78 MW of the capacity was commissioned and the remaining capacity will be commissioned in the second half of 2022. These capacities relate to CSA auctions held in 2018 and 2019.

In March 2021, Fortum sold its 116-MW CSA-backed solar power project to the joint venture with RDIF.

In June 2021, the Fortum-Rusnano wind investment fund sold its 200-MW Kalmykia wind parks to the Fortum-RDIF joint venture.

In July 2021, Fortum signed an agreement to sell its Argayash coal-fired CHP plant to AO JSC Rusatom Smart Utilities. In September 2021, the transaction was concluded. Following the decision earlier in 2021 to transition to gas at Chelyabinsk CHP-2, this transaction will allow Fortum's Russia division to discontinue its use of coal by the end of 2022 and reduce annual CO_2 emissions by approximately 2 million tonnes.

In September 2021, the Fortum-Rusnano wind investment fund (joint venture, Fortum's ownership 50%) began the construction of wind power parks with a total capacity of 237 MW in the Samara region in Russia.

In September 2021, Fortum announced that the Fortum-Rusnano wind investment fund was awarded annual CSA remuneration for 15 years in the range of RUB 16.9–23.8 billion (inflation adjusted) for new wind power generation in a Russian renewables' auction. This corresponds to wind capacity of approximately 430–530 MW per annum (a maximum of 1.4 GW) to be commissioned during years 2025–2027. The average nominal price is expected to be in the range of RUB 2,600–4,200 per MWh (inflation adjusted) during the CSA period.

During 2021, Fortum signed several Memorandums of Understanding (MoU) regarding renewable energy sales in Russia with Novatek, Magnitogorsk Iron and Steel Works, Baker Hughes, and Shell. MoU's were also signed with Electroshield Samara and Sberbank for the supply of wind power in the Samara region and with Mosenergosbyt for the supply of wind power to Sberbank's offices in Nizhny Novgorod. The new agreements support Fortum's strategy to partner with industrial and infrastructure customers to help them reduce their own emissions.

Key electricity, capacity and gas prices for Fortum Russia

	2021	2020	Change 21/20
Electricity spot price (market price), Urals hub, RUB/MWh	1,221	1,068	14%
Average regulated gas price, Urals region, RUB/1,000 m^3	4,077	3,977	3%
Average capacity price for CCS and other, tRUB/MW/month [1] [2]	170	156	9%
Average capacity price for CSA, tRUB/MW/month [2]	1,174	1,058	11%
Average capacity price, tRUB/MW/month	584	608	-4%
Achieved power price for the Russia segment, RUB/MWh	2,018	1,940	4%
Achieved power price for the Russia segment, EUR/MWh [3]	23.2	23.4	-1%

1) Including capacity receiving payments under "forced mode status", regulated tariffs, and bilateral agreements.
2) Capacity prices paid for the capacity volumes, excluding unplanned outages, repairs, and own consumption.
3) Translated using the average exchange rate.

Russian power generation and heat production

TWh	2021	2020	Change 21/20
Russian power generation	28.6	27.1	6%
Russian heat production	17.1	16.4	4%

City Solutions

City Solutions is responsible for sustainable solutions for urban areas. The segment comprises heating, cooling, waste-to-energy, and other circular economy solutions, as well as solar power generation, services, and development of new biomass-based businesses. The business operations are located in the Nordics, Poland, and India. The segment has also included Fortum's 50% holding in Stockholm Exergi Holding AB, which was a joint venture accounted for using the equity method. Stockholm Exergi Holding AB was divested in September 2021. The segment does not include the operations of Fortum's subsidiary Uniper.

EUR million	2021	2020	Change 21/20
Reported			
Sales	1,302	1,075	21%
- heat sales	612	516	19%
- power sales	205	121	70%
- waste treatment sales [1)]	250	252	-1%
- other sales [2)]	236	186	27%
Operating profit	2,671	775	245%
Share of profits of associates and joint ventures	42	57	-26%
Capital expenditure and gross investments in shares	162	333	-51%
Number of employees	1,766	2,093	-16%

EUR million	2021	2020	Change 21/20
Comparable			
EBITDA	317	239	33%
Operating profit	135	47	187%
Share of profits of associates and joint ventures	42	57	-26%
Return on net assets, %	6.1	2.8	118%
Net assets (at period-end)	2,456	3,679	-33%

1) Waste treatment sales comprise gate fees at waste treatment plants and environmental construction services.
2) Other sales comprise mainly operation and maintenance services and fuel sales.

Heat sales volumes increased by 4% as temperatures were colder than usual especially during the first and fourth quarter of the year. This positive effect was partly offset by the divestment of the Baltic district heating business. The power sales volumes increased by 10%, mainly supported by a different production mix in the Finnish heat business and the commissioning of the new 250 MW solar power plant in Rajasthan, India. This positive effect was partly offset by the divestment of the Baltic district heating business.

Comparable operating profit increased by 187% mainly as a result of higher heat sales volumes in all heating areas, higher power prices, and higher Norwegian heat prices due to the price link between heat and power prices. Comparable operating profit increased also due to Solar including the total tax-exempt sales gains from the divestment of the 250-MW Pavagada II solar plant and the 250-MW Rajasthan solar plant in India from which EUR 11 million was recorded in the fourth quarter of 2021 and the rest is expected to be recorded during the first half of 2022. The profits from the Pavagada and Rajasthan solar park divestments are recognised in comparable operating profit. In addition, the result was positively affected by operational improvements in the Recycling and Waste Solutions.

Operating profit was affected by EUR 2,536 (728) million of items affecting comparability, mainly related to the tax-exempt capital gains of EUR 2,350 million from the sale of the 50% ownership in Stockholm Exergi Holding AB, and EUR 254 million from the sale of the district heating business in the Baltics partly offset by the fair value change of non-hedge-accounted derivatives. (Note 6).

Comparable share of profits of associates and joint ventures totalled EUR 42 (57) million, EUR 28 (46) million of which is related to the share of profit of Stockholm Exergi until September 2021. (Note 6 and Note 18)

In March 2021, Fortum announced that it had signed an agreement to sell its district heating business in the Baltics to Partners Group. In July 2021, Fortum concluded the sale. The total consideration of the sale amounted to approximately EUR 710 million.

In June 2021, Fortum made the investment decision to expand its lithium-ion battery recycling capacity by building a new state-of-the-art hydrometallurgical plant in Harjavalta, Finland. The investment of approximately EUR 24 million will increase Fortum's hydrometallurgical recycling capacity and enable the production of sustainable battery chemicals. The new facility will be able to efficiently recover scarce metals from old electric vehicle lithium-ion batteries while also recycling various waste fractions derived throughout the battery supply chain.

In June 2021, Fortum announced that it had signed an agreement to divest the 250-MW Pavagada II and the 250-MW Rajasthan solar power plants in India to Actis. The parties also signed an agreement targeting potential further investments in solar power plants in India. The total consideration for the divestment on a debt- and cash-free basis, including the effect of deconsolidation of the net debt, amounted to approximately EUR 280 million. The sale of the 250-MW Pavagada II solar plant was concluded in October and the first phase of the Rajasthan plant in November.

In September 2021, Fortum concluded the sale of its 50% ownership in the Swedish district heating and cooling company Stockholm Exergi Holding AB to a consortium comprising APG, Alecta, PGGM, Keva, and AXA. The total consideration of the sale amounted to SEK 29.5 billion (approximately EUR 2.9 billion).

Heat sales by country

TWh	2021	2020	Change 21/20
Finland	3.1	2.9	5%
Poland	3.8	3.4	13%
Norway	1.8	1.5	20%
Other countries	1.3	1.9	-32%
Total	**10.0**	**9.6**	**4%**

Power sales by country

TWh	2021	2020	Change 21/20
Finland	1.3	1.0	30%
Poland	0.7	0.6	17%
Other countries	1.3	1.4	-7%
Total	**3.3**	**3.0**	**10%**

Consumer Solutions

Consumer Solutions is responsible for the electricity and gas retail businesses in the Nordics, Poland, and Spain, including the related customer service and invoicing businesses. Fortum is the largest electricity retail business in the Nordics, with approximately 2.2 million customers across different brands in Finland, Sweden, Norway, Poland, and Spain. The business provides electricity, as well as related value-added and digital services, mainly to retail customers.

EUR million	2021	2020	Change 21/20
Reported			
Sales	2,622	1,267	107%
- power sales	2,253	1,057	113%
- gas sales	225	139	61%
- other sales	144	70	106%
Operating profit	495	129	283%
Capital expenditure and gross investments in shares	68	57	19%
Number of employees	1,176	1,048	12%

EUR million	2021	2020	Change 21/20
Comparable			
EBITDA	123	153	-20%
Operating profit	52	90	-42%
Net assets (at period-end)	1,125	565	99%

The electricity sales volumes increased by 8% mainly due to clearly colder weather in the Nordics during the first and the fourth quarter and increased enterprise customer sales. Total sales revenue increased by 107%, driven by increased volumes and clearly higher prices in the Nordics. The gas sales volumes increased by 22%, mainly due to an increase in enterprise customers in Poland. Several new digital services were launched during the year, and new enterprise contracts were signed with customers in the energy, food processing, real estate, and retail industries.

Comparable operating profit decreased by 42%, mainly due to the high electricity purchase costs resulting from the high and volatile electricity market prices in the third and the fourth quarter and a reduction in the number of customers. Required additional electricity volumes were acquired in the spot market at prices that were clearly higher than the agreed customer prices, resulting in higher electricity purchase costs and negative margins. The negative effect was partially offset by increased unit margins resulting from active development and improvement of the service offerings.

Operating profit was affected by EUR 443 (39) million of items affecting comparability, due to the fair value change of non-hedge-accounted derivatives (Note 6).

Sales volumes

TWh	2021	2020	Change 21/20
Electricity	31.5	29.1	8%
Gas [1]	6.0	4.9	22%

1) Not including wholesale volumes.

Number of customers

Thousands [1]	2021	2020	Change 21/20
Electricity	2,120	2,280	-7%
E-mobility [2]	70	60	17%
Gas	50	50	0%
Total	**2,230**	**2,390**	**-7%**

1) Rounded to the nearest 10,000.
2) Measured as quarterly paying customers.

Uniper

*The Uniper segment comprises Fortum's majority ownership in Uniper, a subsidiary of Fortum. Uniper is a leading international energy company with activities in more than 40 countries. Its business is the secure provision of energy and related services. Its main activities include power generation in Europe and Russia as well as global energy trading and optimisation, which Uniper reports in three businesses – European Generation, Global Commodities, and Russian Power Generation – in its financial statements. Approximately 50% of the power generating capacity is gas-based, 25% coal-based, approximately 15% hydro- or nuclear-based, and 10% is other. The segment includes Uniper's proportionate share of OKG (**Note 1**).*

EUR million	2021	2020	Change 21/20
Reported			
Sales	105,992	44,514	138%
- power sales	28,365	16,994	67%
of which Nordic outright power sales 1)	644	373	73%
- heat sales	437	191	129%
- gas sales	59,577	22,176	169%
- other sales	17,612	5,154	242%
Operating profit	-4,901	29	-16,885%
Share of profits of associates and joint ventures	51	54	-5%
Capital expenditure and gross investments in shares	683	639	7%
Number of employees	11,494	11,751	-2%

EUR million	2021	2020	Change 21/20
Comparable			
EBITDA	1,789	856	109%
Operating profit	1,120	363	209%
Share of profits of associates and joint ventures 2)	39	38	2%
Net assets (at period-end)	4,971	7,432	-33%

1) The Nordic power sales income and volume includes hydro and nuclear generation, excluding minorities. It does not include thermal generation, minorities, customer business or other purchases.
2) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from the second quarter of 2020, consolidated Uniper's results into its income statement. In the first quarter of 2020, Uniper was consolidated as an associated company into Fortum's income statement, presented in the Other segment. The main reason for the change in cumulative figures and in comparison to the year 2020 is thus the consolidation of Uniper.

Power generation volumes were supported by better availability of the thermal fleet, the commissioning of Datteln 4 in the second quarter of 2020, and the return to commercial operation of the gas-fired Irsching 4 and 5 generating units. Additionally, nuclear volumes increased due to higher availability.

Comparable operating profit amounted to EUR 1,120 (363) million. Predominantly Uniper's gas business benefitted from the extraordinary market developments with volatile and rising prices, despite additional capital requirements. In the first quarter of 2020, Uniper was consolidated as an associated company.

The result of the European Generation business was driven by the commissioning of the Datteln 4 coal-fired power plant at the end of May 2020 and the return to regular commercial operation of the Irsching 4 and 5 gas-fired power plant units in the fourth quarter of 2020. In addition, higher revenues from the UK capacity market and higher production volumes in the nuclear business, due to higher availability, contributed to the improved result. This positive effect was more than offset by the lower result in the Dutch steam business stemming from outages in the third quarter and higher nuclear provisions in the fourth quarter. In addition, in the fossil business, the exceptionally positive margin contributions from the previous year could not be repeated.

The Global Commodities business benefitted from improved results in the international portfolio, driven by the unusual weather conditions in North America and Asian operations especially in the first quarter. The positive business activity in Asia was partly offset by a negative contribution from the trading of power and carbon and rescheduled LNG deliveries phasing earnings into 2022 and affecting the result of the fourth quarter. Despite the already strong performance in 2020, the result of the gas business further improved benefitting from extraordinary market conditions with volatile and rising gas prices especially during the second half of 2021.

The Russian Power Generation business was at almost the same level as in the previous year. The expiry of CSA payments for four units at the Shaturskaya, Surgutskaya, and Yaivinskaya power plants was more than offset by CSA payments from the commissioning of the Berezovskaya 3 power plant unit in May 2021 as well as by higher prices and volumes on the electricity market.

Operating profit was affected by EUR -6,021 (-333) million of items affecting comparability, mainly related to EUR -5,688 (-706) million of fair value change of non-hedge-accounted derivatives (**Note 6**). The Uniper segment's future cash flows are largely hedged with forward sell contracts; however as hedge accounting is not applied for most of the contracts, unrealised changes in the fair values of these derivative instruments are presented in items affecting comparability.

Comparable share of profits of associates and joint ventures totalled EUR 39 (38) million (**Note 6** and **Note 18**).

In March 2021, amendments to the Russian Strategic Investment Law were approved. Based on the law, Fortum is allowed to own 100% of Uniper, the majority owner of Unipro PJSC. In July 2021, Fortum withdrew its earlier submitted application for merger control approval from the Russian Federal Antimonopoly Service under the Competition Law to further analyse the requirements of the scope and content of the filing process.

In April 2021, the German Federal Network Agency accepted the bid from the 757-MW Wilhelmshaven power plant as part of the second round of auctions for the closure of hard-coal-fired power plants. Power generation at the plant ended in December 2021, one year earlier than previously announced. Uniper plans to establish a German national hub for hydrogen in Wilhelmshaven, including an import terminal for green ammonia ('ammonia cracker') and a 410-MW electrolysis plant in connection with the terminal. Uniper is working on a feasibility study and no final investment decision has been made.

In 2021, Uniper started legal proceedings on the Dutch coal phase-out law for the intended 2030 coal exit, as it does not provide appropriate compensation for investments made. Uniper also has the ambition to convert the Maasvlakte site into an ecosystem for sustainable energy production.

In April 2021, Uniper published a stock exchange release ('ad-hoc') with a positive update of its earnings guidance for 2021.

In July 2021, the German Federal Network Agency confirmed the essential status of the Heyden 4 hard-coal power plant as a reserve power plant until the end of September 2022. Also, in July 2021, the German Federal Network

Agency accepted the bid from the 345-MW Scholven C power plant as part of the third round of auctions for the closure of hard-coal-fired power plants. The commercial power generation at the plant will end as early as the end of October 2022, slightly earlier than previously announced.

In August 2021, the Higher Administrative Court of North Rhine-Westphalia (OVG) declared in three parallel proceedings that the City of Datteln's 2014 development plan for the Datteln 4 hard-coal-fired power plant are invalid at the request of the City of Waltrop, BUND NRW, and four private individuals. Specifically, the OVG held that the City of Datteln's development plan is based on a deficient regional plan. The court did not admit an appeal. Uniper is a joined party to the proceedings as the permit owner and thus has the right to appeal. In October 2021, Uniper filed complaints against the non-admission of the appeal in relation to the judgements. The City of Datteln, as the direct defendant in the proceedings, has also filed non-admission complaints.

In August 2021, Uniper announced the decisions to accelerate the coal phase-out in the UK by closing one 500-MW unit of the Ratcliffe hard coal-fired power plant as early as at the end of September 2022 and the closure of the remaining three units by the end of September 2024 at the latest.

In September 2021, Fortum and Uniper announced cooperation in offering nuclear decommissioning and dismantling services for nuclear companies. See further details in the Generation segment.

In September 2021, Uniper announced that it was exploring the opportunity of restarting the Happurg pumped storage power plant. The plant has an output of 160 MW and can store water with energy for approximately 850 MWh of electricity making it the largest pumped storage power plant in Bavaria. With effect from the end of September, Uniper transferred its shares in the Schkopau power plant near Halle/Saale, the last investment in a lignite-fired power plant in the European portfolio. The sale follows the company's strategic goal of accelerating the phase-out of coal-fired power generation and becoming climate-neutral in Europe by 2035.

In October, after a strategic review, Uniper announced plans to fundamentally restructure its Engineering business, which has a total of 1,100 employees mainly located in Germany and the United Kingdom. Under the plans, the future engineering competencies will be solely focused on operating Uniper's own assets and on the growth priorities of decarbonization and green customer solutions

In October 2021, Uniper published a stock exchange release ('ad-hoc') with a positive update of its earnings guidance for 2021.

In December 2021, Uniper announced that the Staudinger 5 power plant had been awarded the contract by the BNetzA and that commercial electricity generation would therefore be discontinued by the end of May 2023 at the latest and the power plant would be shut down.

In December 2021, Novatek and Uniper announced that they had signed a term-sheet on the long-term supply of low-carbon ammonia. Up to 1.2 million tonnes will be delivered to Uniper customers in Germany and northwest ern Europe in the future.

For further information, see Uniper's year-end 2021 results published on 23 February 2022.

Power generation by source

TWh	2021	2020	Change 21/20
Hydropower, Nordics	8.1	6.8	19%
Nuclear power, Nordics	12.9	7.6	70%
Hydropower, Central Europe	4.9	3.3	48%
Thermal power, Central Europe	40.9	22.1	85%
Thermal power, Russia	43.2	28.5	52%
Total	**110.0**	**68.3**	**61%**

Nordic sales volume

TWh	2021	2020	Change 21/20
Nordic sales volume	21.4	14.6	47%
of which Nordic outright power sales volume [1]	21.0	14.4	46%

1) The Nordic outright power sales volume includes hydro and nuclear generation. It does not include thermal generation, minorities, customer business, or other purchases.

Sales price

EUR/MWh	2021	2020	Change 21/20
Uniper's Nordic achieved power price [1]	30.7	26.0	18%
Average capacity price for Uniper CCS and other, tRUB/MW/month [2] [3]	160	136	18%
Average capacity price for Uniper CSA, tRUB/MW/month [3]	1,488	951	56%
Average capacity price for Uniper, tRUB/MW/month	293	261	12%
Achieved power price for Uniper in Russia, RUB/MWh [4]	1,643	1,554	6%
Achieved power price for Uniper in Russia, EUR/MWh [4] [5]	18.9	18.8	1%

1) Uniper's Nordic achieved power price includes hydro and nuclear generation. It does not include thermal generation, minorities, customer business, or other purchases.
2) Including capacity receiving payments under "forced mode status", regulated tariffs, and bilateral agreements.
3) Capacity prices paid for the capacity volumes, excluding unplanned outages, repairs, and own consumption.
4) Comparable prices changed from previously reported.
5) Translated using the average exchange rate.

Capital expenditures, divestments, and investments in shares

EUR million	2021	2020
Capital expenditure		
Intangible assets	120	124
Property, plant and equipment	997	1,022
Total	**1,116**	**1,146**
Gross investments in shares		
Subsidiaries	210	3,646
Associated companies and joint ventures	44	119
Other investments	36	42
Total	**290**	**3,807**

In 2021, capital expenditures and investments in shares totalled EUR 1,407 (4,941) million. Capital expenditures were EUR 1,116 (1,146) million (Note 3 and Note 6).

Fortum expects to start, or has started, power and heat production capacity of new power plants and expects to upgrade its existing plants as follows:

	Type	Electricity capacity MW	Heat capacity MW	Supply starts/ started
Generation				
Pjelax-Böle and Kristinestad Norr, Finland	Wind	380		Q2/2024
City Solutions				
Suomenoja, Finland	Heat pump		20	June 2021
Rajasthan, India	Solar	250		Q1/2021 and Q2/2021
Uniper				
Irsching 6, Germany	Gas	300		Q4/2022
Scholven, Germany	Gas	137	125	Q4/2022
Killingholme and Grain, UK	Grid stability			Q1/2022 and Q2/2022
Surgutskaya 1, Russia	Gas	20		Q1/2022
Surgutskaya 2, Russia	Gas	20		Q4/2026
Surgutskaya 3, Russia	Gas	20		Q4/2027
Surgutskaya 4, Russia	Gas	20		Q4/2025
Surgutskaya 6, Russia	Gas	20		Q3/2024

Generation

In January 2021, Fortum announced that it had finished the construction of two new wind parks in the Nordics: Kalax in Finland and Sørfjord in Norway which subsequently started generating CO_2-free energy for the Nordic market. The wind parks are part of the transaction concluded in 2020 with Energy Infrastructure Partners AG (EIP), and Fortum's ownership is 20%.

In February 2021, Fortum completed the sale of eight small hydropower plants in Sweden with an average annual power generation of 0.1 TWh to Downing Renewables & Infrastructure Trust plc and recording a tax-exempt capital gain of EUR 50 million.

In March 2021, Fortum announced a substantial investment in dam safety in Sweden for extensive rebuild of the over 100-year-old Forshuvud hydropower plant. Fortum is investing more than SEK 450 million (approximately EUR 44 million) during 2021–2025. This investment guarantees an extended lifetime for the power plant as a supplier of renewable electricity and balancing power for more weather-dependent types of power.

On 22 December 2021, Fortum announced the first investment by the joint team of Fortum and Uniper for wind and solar businesses in Europe. Fortum decided to construct the 380-MW Pjelax-Böle and Kristinestad Norr wind parks in Närpes and in Kristinestad in Finland in partnership with the Finnish energy company Helen Ltd. Construction started in January 2022 and the wind parks are expected to be fully operational at the latest in the second quarter of 2024. Fortum has a 60% majority and Helen holds a 40% minority ownership in the project, and the investment will be consolidated on Fortum's balance sheet. The total capital expenditure of the projects is approximately EUR 360 million, of which Fortum's share is EUR 216 million.

Russia

Together with its joint ventures in Russia, Fortum holds the largest portfolio of wind and solar power parks and projects in Russia, approximately 3.4 GW. Once operational, the wind and solar parks receive a guaranteed CSA price for a period of 15 years.

In 2017 and 2018, the Fortum-Rusnano wind investment fund (joint venture, Fortum's ownership 50%) won the right to build a total of 1,823 MW of wind capacity in CSA auctions. During the second half of 2020, the Fortum-Rusnano wind investment fund sold the 50-MW Ulyanovsk 2 and the 300-MW Rostov wind parks to the Fortum-RDIF joint venture. In June 2021, the Fortum-Rusnano wind investment fund additionally sold the 200-MW Kalmykia wind parks to the Fortum-RDIF joint venture. In December 2021, the Fortum-Rusnano wind investment fund started commercial operation of wind farms with a total capacity of 478 MW in the Astrakhan, Volgograd and Rostov regions.

In 2018 and 2019, Fortum won the right to build a total of 116 MW of solar capacity in CSA auctions. In March 2021, Fortum announced the sale of the solar power project to the Fortum-RDIF joint venture and decided to construct the solar power plant through this joint venture. In December 2021, 78 MW of the capacity was commissioned, and the remaining part will be commissioned in the second half of 2022.

In June 2021, the Fortum-Rusnano wind investment fund made an investment decision on the construction of wind power parks with a total capacity of 237 MW in the Samara region in Russia. The investment decision is based on an agreement with the Government of the Samara Region that envisages construction of wind parks with a total capacity of up to 300 MW in the region in 2022–2023. In September 2021, groundbreaking was done, and commissioning of the wind parks is expected in the fourth quarter of 2022.

In July 2021, Fortum signed an agreement to sell its Argayash coal-fired CHP plant to AO JSC Rusatom Smart Utilities. In September 2021, the transaction was concluded. Following the decision earlier in 2021 to transition to gas at Chelyabinsk CHP-2, this transaction will allow the Russia Division to discontinue its use of coal by the end of 2022 and reduce annual CO_2 emissions by approximately 2 million tonnes.

In September 2021, Fortum announced that the Fortum-Rusnano wind investment fund was awarded annual CSA remuneration in the range of RUB 16.9–23.8 billion (inflation adjusted) for new wind power generation in the latest Russian renewables' auction. This corresponds to wind capacity of approximately 430–530 MW per annum (a maximum of 1.4 GW) to be commissioned during years 2025–2027. The number of gigawatts ultimately to be constructed is subject to separate investment decisions. The average nominal price is expected to be in the range of RUB 2,600–4,200 per MWh (inflation adjusted) during the 15-year CSA period from commissioning.

The investment decisions related to the solar and wind capacities won by Fortum and the Fortum-Rusnano wind investment fund in the Russian CSA auctions in 2017, 2018, 2019, and 2021 are made on a case-by-case basis. Fortum's maximum equity commitment is RUB 15 billion.

City Solutions

In March 2021, Fortum announced that it had signed an agreement to sell its district heating business in the Baltics to Partners Group. In July 2021, Fortum concluded the sale. The total consideration of the sale amounted to approximately EUR 710 million. Fortum recorded a tax-exempt capital gain of EUR 254 million in the City Solutions segment's third-quarter 2021 results.

In March 2021, Fortum commissioned 150 MW of the 250-MW Rajasthan solar park in India. The remaining 100 MW was commissioned in May 2021.

In June 2021, Fortum made the investment decision to expand its lithium-ion battery recycling capacity by building a new state-of-the-art hydrometallurgical plant in Harjavalta, Finland. The investment, estimated at EUR 24 million, will increase Fortum's hydrometallurgical recycling capacity and enable the production of sustainable battery chemicals. The plant is expected to be taken into operation in 2023. In March, Fortum's hydrometallurgical battery recycling operations were shortlisted for the EU's Innovation Fund for low-carbon technologies.

In June 2021, Fortum announced that it had signed an agreement to divest the 250-MW Pavagada II and the 250-MW Rajasthan solar power plants in India to Actis. The parties also signed an agreement targeting potential further investments in solar power plants in India. The total consideration for the divestment on a debt- and cash-free basis, including the effect of deconsolidation of the net debt amounted to approximately EUR 280 million. The sale of the 250-MW Pavagada II solar plant was concluded in October and the first phase of the Rajasthan divestment in November.

In September 2021, Fortum concluded the sale of its 50% ownership in the Swedish district heating and cooling company Stockholm Exergi Holding AB to a consortium comprising APG, Alecta, PGGM, Keva, and AXA. The total consideration of the sale amounted to SEK 29.5 billion (approximately EUR 2.9 billion). Fortum recorded a tax-exempt capital gain of EUR 2,350 million in the City Solutions segment's third-quarter 2021 results.

Uniper

In February 2020, Uniper signed an agreement to sell its 58% stake in Schkopau, a lignite-fired power plant in Saxony-Anhalt in eastern Germany, to Saale Energie GmbH, a subsidiary of the Czech energy producer EPH, which owns 42%. The transfer of ownership took place on 1 October 2021.

Other Operations

In June 2021, Fortum signed an agreement to sell a majority share of its carbon removal startup Puro.earth to Nasdaq, a multinational financial services company. The partnership will create a shared ownership structure designed to accelerate Puro.earth's global growth and long-term market development. Puro.earth is the first marketplace to offer carbon removal from the atmosphere that is verifiable and tradable through an open, online platform.

Research and development

Sustainability is at the core of Fortum's strategy and, alongside Fortum's current businesses, the company is carefully exploring and developing new sources of growth within clean energy solutions.

Fortum's goal is to be at the forefront of energy technology and application development. To accelerate innovation and the commercialization of new offerings, Fortum is strengthening its in-house innovation and digitalization efforts and building partnerships with leading global suppliers, technology and service companies, and research institutions. Fortum makes direct and indirect investments in start-ups that have promising new innovations focused on decarbonization, flexibility, clean gas or accelerate the transition towards a circular economy. Fortum also invests in technologies that support better utilization of the current asset base and that can create new markets and products for Fortum. The company is continuously looking for emerging clean energy solutions and for solutions that increase resource and system efficiency.

The Group reports its R&D expenditure on a yearly basis. In 2021, Fortum's R&D expenditure was EUR 61 (56) million, or 0.1% (0.1%) of sales.

	2021	2020	2019	Change 21/20
R&D expenditure, EUR million	61	56	67	9%
R&D expenditure, % of sales	0.1	0.1	1.2	

Changes in Group management

In February 2021, Bernhard Günther started as Chief Financial Officer (CFO) and member of Fortum's Executive Management.

In March 2021, Klaus-Dieter Maubach, member of Fortum's Board of Directors, announced his resignation from the Board, as he had been elected the CEO of Uniper. Fortum's Shareholders' Nomination Board evaluated the Board of Directors' ability to function and concluded, based on the recommendation of the Board of Directors, that the Board had full capacity to continue in its current composition until the 2021 Annual General Meeting (AGM).

In March 2021, Tiina Tuomela was appointed the new CFO of Uniper and consequently stepped down from her position at Fortum. Simon-Erik Ollus, was appointed Executive Vice President of Fortum's Generation division and member of Fortum's Executive Management with immediate effect.

In March 2021, Nebahat Albayrak was appointed Senior Vice President Corporate Affairs, Safety, and Sustainability and member of Fortum's Executive Management. Ms Albayrak assumed the role on 1 June 2021. She succeeded Arto Räty, who retired at the end of October 2021.

In April 2021, Sirpa-Helena Sormunen was appointed as Uniper's new General Counsel and Chief Compliance Officer and Risto Penttinen was appointed as Uniper's new Executive Vice President, Strategy, Corporate Development and M&A. Nora Steiner-Forsberg was appointed Fortum's General Counsel and member of Fortum's Executive Management, and Eveliina Dahl was appointed Senior Vice President, People and Procurement and member of Fortum's Executive Management, All appointments were effective as of 1 May 2021.

Mr Günther, Mr Ollus, Ms Albayrak, Ms Steiner-Forsberg, and Ms Dahl report to President and CEO Markus Rauramo.

In November 2021, Arun Aggarwal, Senior Vice President, Business Technology left his position at Fortum. He was succeeded by Sanna Pekari, M.Sc. (Civil Eng.), MBA. Sanna Pekari is not a member of the Fortum Management Team but is reporting directly to the President and CEO, Markus Rauramo.

Annual General Meeting 2021

The AGM of Fortum Corporation was held on 28 April 2021. The AGM adopted the Financial Statements and the Consolidated Financial Statements for the financial period 1 January-31 December 2020 and discharged from liability for the year 2020 all persons who acted as members of the Board of Directors and as President and CEO during the year 2020.

The AGM decided that a dividend of EUR 1.12 per share be paid for the financial year that ended on 31 December 2020. The record date was 30 April 2021, and the dividend of EUR 995 million was paid on 7 May 2021.

The AGM supported the Remuneration Report for the company's governing bodies.

The AGM confirmed the remuneration for the Board of Directors for the upcoming term as follows: for the chair EUR 77,200 per year, for the deputy chair EUR 57,500 per year, for a member EUR 40,400 per year, and for the Board member acting as the chair of the Audit and Risk Committee EUR 57,500 per year if he or she is not simultaneously acting as chair or deputy chair of the Board. In addition, a fee of EUR 600 will be paid for each Board meeting and Board Committee meeting. For Board members living outside Finland in Europe, the fee for each meeting will be doubled, and for Board members living outside Europe, the fee for each meeting will be tripled. For Board members living in Finland, the fee for each Board and Board Committee meeting will be doubled for meetings held outside Finland and tripled for meetings held outside Europe. For Board and Committee meetings held as a telephone conference, the fee will be paid as single to all members.

The AGM decided that the Board of Directors will consist of seven members. Mr Veli-Matti Reinikkala was elected as chair, Ms Anja McAlister as deputy chair, and Ms Essimari Kairisto, Mr Teppo Paavola, Mr Philipp Rösler, and Ms Annette Stube were re-elected as members. Ms Luisa Delgado was elected as a new member.

In addition, Deloitte Oy was re-elected as the auditor with Jukka Vattulainen, APA, as the responsible auditor. The auditor's fee is paid pursuant to an invoice approved by the company.

The AGM authorised the Board of Directors to decide on the repurchase and disposal of the company's own shares up to 20,000,000 shares, which corresponds to approximately 2.25 % of all the shares in the company. Only the unrestricted equity of the company can be used to repurchase own shares on the basis of the authorisation. These authorisations cancelled the authorisation resolved by the AGM of 2020 and will be effective until the next AGM and in any event no longer than for a period of 18 months. These authorisations have not been used as per 2 March 2022.

The AGM authorised the Board of Directors to decide on contributions of a maximum of EUR 500,000 for charitable or similar purposes and to decide on the recipients, purposes, and other terms of the contributions. The authorisation will be effective until the next AGM. As per 2 March 2022, a contribution of 300,000 euros of this authorisation has been used.

Board decisions

At the meeting held after the AGM 2021, Fortum's Board of Directors elected to the Nomination and Remuneration Committee: Veli-Matti Reinikkala as chair and Luisa Delgado and Anja McAlister as members.

Furthermore, the Board elected to the Audit and Risk Committee: Essimari Kairisto as chair and Teppo Paavola, Philipp Rösler, and Annette Stube as members.

Shareholders' Nomination Board

On 6 September 2021, Mr Kimmo Viertola, Director General, Prime Minister's Office, Ownership steering department (Chairman), Mr Jouko Pölönen, President and CEO, Ilmarinen Mutual Pension Insurance Company, and Mr Risto Murto, President and CEO, Varma Mutual Pension Insurance Company were appointed to Fortum's Shareholders' Nomination Board. In addition, Veli-Matti Reinikkala, the Chairman of Fortum's Board of Directors is a member of the Shareholders' Nomination Board.

Other major events during the reporting period

On 30 September 2021, Fortum's Board of Directors decided to launch the savings period for year 2022 under its Employee Share Savings (ESS) programme. The ESS programme was established in October 2019; the Board of Directors decides separately on the annual launch of each individual savings period. The total amount of all savings for the 2022 savings period may not exceed EUR 6 million.

On 17 December 2021, Fortum's Board of Directors decided to commence the 2022–2024 long-term incentive (LTI) plan for key employees and executives. The 2022–2024 LTI plan is part of Fortum's ongoing LTI programme and follows the same principles as the previous plan. The performance measures applied to the 2022–2024 LTI plan will be based on the total shareholder return measured relative to the peer group comprising selected European utility and gas companies, as well as a target linked to the reduction of absolute CO_2 emissions based on fossil fleet review addressing the Group's European generation portfolio. The rewards related to the 2022–2024 LTI plan will be paid in the spring 2025, assuming that the performance targets are achieved. The 2022–2024 LTI plan will comprise a maximum amount of approximately 140 participants, including the members of Fortum Executive Management. The Board of Directors also decided to commence the 2022–2024 restricted share (RS) plan as a supplement to the LTI programme and reserve shares that potentially will be delivered in spring 2025. The maximum amount of shares of the plan that may be delivered as a reward is expected to be approximately 620 000 shares for the 2022–2024 LTI plan and 60 000 shares for the 2022–2024 RS plan.

On 20 December 2021, Fortum Group announced to have set a reduction target for Scope 3 indirect greenhouse gas emissions as part of its ambitious decarbonisation agenda. The target is to reduce Scope 3 indirect emissions by 35% by 2035 at the latest, compared to the base year 2021. Fortum and Uniper account resellers in addition to end-users in the Scope 3 indirect emissions. The Scope 3 target confirms the Group-level commitment to achieve carbon neutrality at the latest by 2050 and is in line with the objectives of the Paris Agreement. In December 2020, Fortum Group announced that in European power generation it is committed to reduce CO_2 emissions (Scopes 1 and 2) by at least 50% by 2030 (base year 2019) and to be carbon neutral at the latest by 2035.

Key drivers and risks

For comments on the geopolitical uncertainty due to Russia's invasion on Ukraine, imposed sanctions and possible future sanctions and counter sanctions and their possible impacts on Fortum Group's Russian business and assets, please see section 'Events after the balance sheet date'.

Fortum's financial results are exposed to a number of financial, operational, strategic, and sustainability-related risks. Fortum is exposed to these risks both directly and indirectly through its subsidiaries, associated companies, and joint ventures. The principal associated companies and joint ventures are TVO, Forsmarks Kraftgrupp AB, Kemijoki Oy, and TGC-1. For more information, please see each respective company's annual report.

Fortum is the majority shareholder of Uniper. However, Uniper remains a separate listed company operating under German law and regulations and with its own risk management systems. As per the end of the fourth quarter 2021, credit risk, market risk, legal risk, political and regulatory risk, financial risk, and asset project risk are the major sources of uncertainty for Uniper's financial performance. During the fourth quarter the key commodity prices Uniper is exposed to significantly increased, with the short- to mid-term gas future prices reaching unprecedented levels. Although this development is positive for Uniper's earnings, the cash flow risks have increased as especially the margining requirements from Uniper's hedges have grown, and the risk of further margin calls has increased in light of elevated market volatility. For more information about Uniper's risk management systems and risk exposures, please see Uniper's Annual report for 2021.

The increasing geopolitical tensions pose a risk for the Fortum Group, the impacts of which have been assessed. The increasing geopolitical tensions and further escalation could, for example lead to curtailments of physical gas deliveries to Uniper which may require Uniper to source gas in the market at higher prices. In addition, counterparties of the Fortum Group could become subject to sanctions, which may impact current or future business relations. Fortum is actively monitoring the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws. Moreover, Germany has halted the certification of the Nord Stream 2 gas pipeline for time being. Uniper is currently analysing potential effects of the halted certification process on its financial position, net assets, and operational results. Both Fortum and Uniper are continuing to monitor the situation closely and constantly preparing adapted mitigation measures to minimise the impact of an escalation to Fortum Group.

One of the key factors influencing Fortum's business performance is the Nordic electricity wholesale price. In the Nordics, power prices exhibit significant short- and long-term variations on the back of several factors, including but not limited to weather conditions, outage patterns in production and transmission lines, CO_2 emission allowance prices, fuel prices, and the supply-demand balance. Fortum uses hedging in order to limit the exposure to fluctuations in power prices and reports on the hedging levels quarterly (see 'Outlook').

For Fortum's Russian businesses, the key drivers are economic growth, the rouble exchange rate, and the regulation of the power and heat business. A key profitability driver is the received payments based on the CSA contracts and CCS auctions. The main part of Fortum's generation capacity built after 2007 is entitled to CSA payments for approximately 10 years after commissioning and approximately 15 years for renewable generation. The CSA payments are adjusted for, among other factors, the Government bond yield, the rate of return, the consumer price index (CPI), and earnings from the electricity-only (spot) market (done every three and six years after commissioning of a unit). In addition, thermal power plants are entitled to clearly higher CSA payments starting approximately six years after commissioning.

Fortum is exposed to liquidity and refinancing risks primarily through the need to finance the Group's business operations, including margining and collaterals issued for commercial activities. As a result of the recent volatility increase in commodity prices, the cash flow risk related to margin calls on the Group's hedges has increased. In the fourth quarter, further mitigating actions were taken to increase liquidity and reduce the positions exposed to margin calls.

Fortum has cash flows, assets, and liabilities in currencies other than the euro and is therefore exposed to fluctuations in exchange rates. Currency risk arises mainly from physical and financial trading of commodities, existing and new investments, external financing, as well as internal loans and shareholder loans within the Group. The main currency exposures are toward euro/Swedish krona, euro/Russian rouble, and euro/British pound sterling, arising from Fortum's extensive operations in Sweden, Russia, and the United Kingdom.

Fortum's business activities include energy generation, storage, distribution, and control of operations, as well as the construction, modernisation, maintenance, and decommissioning of power plants or other energy industry facilities. Any unwanted operational event (which could be caused by e.g. technical failure, human or process error, natural disasters, sabotage, failure of key suppliers, or terrorist attack) can endanger personal safety or lead to environmental or physical damage, business interruptions, project delays, and possible third-party liability. The associated costs can be high, especially in the Group's largest units and projects.

During 2020 and 2021, the Covid-19 pandemic resulted in new and partly unexpected risks as societies and governments across the world implemented drastic measures to contain the spread of the disease. Although the impacts for Fortum have so far been limited, and the situation compared to the end of 2020 has improved, the risks related to a prolonged pandemic cannot be ruled out. The main risk factors include lower commodity prices, decreased demand, increased risk of credit defaults and delayed payments, project delays, and increased risk of operational incidents or prolonged maintenance as a result of travel restrictions, absence of key personnel, as well as difficulties in obtaining key materials and spare parts. Fortum is closely monitoring the development of the pandemic and its potential impacts.

For further information about Fortum's risks and risk management systems, see the ▸ **Risk management** section of the Operating and financial review and ▸ **Note 4**.

Outlook

Hedging

At the end of 2021, approximately 75% of the Generation segment's estimated Nordic power sales volume was hedged at EUR 34 per MWh for 2022 (at the end of the third quarter of 2021: 65% at EUR 32 per MWh) and approximately 50% at EUR 31 per MWh for 2023 (at the end of the third quarter of 2021: 40% at EUR 31 per MWh).

At the end of 2021, approximately 80% of the Uniper segment's estimated Nordic power sales volume was hedged at EUR 18 per MWh for 2022 (at the end of the third quarter of 2021: 85% at EUR 22 per MWh), approximately 60% at EUR 18 per MWh for 2023 (at the end of the third quarter of 2021: 55% at EUR 21 per MWh) and approximately 20% at EUR 30 per MWh for 2024.

The reported hedge ratios are based on the hedges and power generation forecasts of the Generation segment and the forecasts of the Uniper segment's Nordic generation. The underlying generation assets and definition of hedges differ to some extent and thus are not fully comparable.

The reported hedge ratios may vary significantly, depending on Fortum's and Uniper's actions on the electricity derivatives markets. Hedges are mainly financial contracts, most of them electricity derivatives quoted on Nasdaq Commodities.

Capital expenditure

Fortum estimates its capital expenditure, including maintenance but excluding acquisitions, to be approximately EUR 1,500 million in 2022, of which the share of maintenance capital expenditure is estimated to be approximately EUR 800 million, well below the level of depreciation.

Generation

The Generation segment's achieved Nordic power price typically depends on factors such as hedge ratios, hedge prices, spot prices, availability and utilisation of Fortum's flexible generation portfolio, as well as currency fluctuations. Excluding the potential effects from changes in the power generation mix (currently approximately 45 TWh), a EUR 1 per MWh change in the Generation segment's achieved Nordic power price will result in an approximately EUR 45 million change in the segment's annual comparable operating profit. The achieved power price also includes the results of optimisation of Fortum's hydro and nuclear generation, as well as operations in the physical and financial commodity markets.

Russia

In the Russia segment, the financial effect of the CSAs is expected to be negative in 2022, due to the impact of the expiry of the CSA period of one generation unit, partly offset by a higher bond yield.

For comments on the geopolitical uncertainty due to Russia's invasion on Ukraine, imposed sanctions and possible future sanctions and counter sanctions and their possible impacts on Fortum Group's Russian business and assets, please see section 'Events after the balance sheet date'.

Uniper

Excluding the potential effects from changes in the power generation mix, a EUR 1 per MWh change in the Uniper segment's power sales price for outright generation (hydro and nuclear, currently approximately 25 TWh) will result in an approximately EUR 25 million change in the segment's annual comparable operating profit. Uniper also has generation other than hydro and nuclear power, and the sensitivity for that generation is different and is not included in the previously mentioned sensitivity.

With regard to Uniper, reference is made to the guidance that the company publishes quarterly.

Income taxation

In 2022, the comparable effective income tax rate (excluding items affecting comparability) for Fortum is estimated to be in the range of 22-25%. Following the consolidation of Uniper, the weight of the profit in different jurisdictions has resulted in an upward trend in the lower end of the range of the tax rate guidance currently driven by the higher nominal tax rates in the Group's major operating countries.

Possible impacts, if any, of a global minimum tax as stated in the proposed EU directive from 20 December 2021, are not taken into account in this guidance.

Events after the balance sheet date

On 24 February 2022, Russia started a widespread invasion into Ukraine. As a consequence, the US, the EU and the UK amongst others have imposed sanctions targeting Russia's ability to access capital and financial markets, sanctioning numerous individuals and banks; as well as trading in general. These sanctions and possible counter sanctions as well as further reactions by the US, the EU and the UK could impact Fortum's operations in Russia.

Meanwhile, uninterrupted gas supply from Russia to Europe has continued. Fortum's Russian operations are also running normally.

Given the uncertainty and risks arising from the geopolitical situation, including imposed sanctions and possible future sanctions and counter sanctions and their consequences, there may be significant impact to the fair values and economic lives of assets; as well as on the commodity prices and related margining requirements in Europe. The book value of Fortum's Russian assets, including the exposure in the Nord Stream 2 pipeline project, was approximately EUR 5.5 billion as of 31 December 2021. Fortum is currently assessing the impact of recent developments and mitigating measures, and specifically the following:

- Germany has halted the certification of the gas pipeline Nord Stream 2, while the US has sanctioned Nord Stream 2 AG, its subsidiaries and the CEO. Fortum has, within its Uniper segment, a financial receivable of approximately EUR 1 billion related to the Nord Stream 2 pipeline project.
- The Russian rouble (RUB) has depreciated significantly from the closing rate as of 31 December 2021. If this prevails, it has a negative translation impact on Fortum Group's earnings, assets and liabilities denominated in RUB.
- The above-mentioned events have led to an increase in European commodity prices and corresponding margining outflows for the Fortum Group. Due to the de-risking and financing measures taken, this has not materially deteriorated Fortum's overall liquidity situation.

Fortum actively monitors the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws.

See the Risk management section in the Operating and financial review.

On 18 January 2022, Fortum announced that 1.3 GW portfolio of wind projects is being transferred from the Fortum-Rusnano wind investment fund (50/50 joint venture) to a joint venture recently established with Bank GPB. Upon the transfer, the joint venture of Fortum-Rusnano wind investment fund will be dissolved.

Sustainability

Sustainability at Fortum

Introduction

This section covers Fortum's non-financial reporting in accordance with the Finnish Accounting Act 1336/1997, Securities Market Act 746/2012 and Limited Liability Companies Act 624/2006. It also includes disclosures prepared in accordance with the EU Taxonomy Regulation Delegated Act of 6 July 2021. The reporting scope includes Uniper, which Fortum has consolidated as a subsidiary as of 31 March 2020.

In this report, selected sustainability key performance indicators that include Uniper are disclosed. Indicators following the same calculation principles have been consolidated and are disclosed as one figure. In cases where the definitions currently differ, only one figure for Fortum, excluding Uniper, is presented. No historical figures have been restated.

Fortum Group's business model is described in Note 6.

Uniper is a listed company in Germany and has its own sustainability processes, approach, and standalone interim and annual sustainability reporting. Uniper also prepares and publishes a Combined Separate Non-Financial Report in accordance with §315c in conjunction with §289c to §289e of the German Commercial Code. Uniper stand-alone disclosures prepared in accordance with the EU Taxonomy Regulation Delegated Act of 6 July 2021 are included in Uniper's Combined Separate Non-Financial Report.

Material non-financial aspects

Fortum's non-financial reporting includes information on the four mandatory aspects defined in the Finnish Accounting Act. These are: environmental matters, social and personnel matters, respect for human rights, and prevention of corruption and bribery.

Fortum reassessed its material topics in 2021. The materiality analysis was based on internal and external stakeholder surveys, including some 800 respondents, and an extensive desktop review of potential business impact with regard to regulation and expectations of capital markets. The desktop review also included an assessment of peers' material sustainability aspects and media analysis as well as an analysis of the correlation between the topics and the UN sustainable development goals (SDGs).

Based on the materiality analysis, Fortum's updated sustainability priority areas are:

Climate and resources	Personnel and society	Governance
Climate change and GHG emissions	Health, safety, and wellbeing	Business ethics and compliance
Emissions to air, land, and water	Diversity, equity, and inclusion	Corporate governance
Energy efficiency	Fair and attractive employer	Innovation and digitalisation
Circular economy and waste management	Human rights	Shared value creation
Biodiversity	Stakeholder engagement	Customer rights and satisfaction
Secure and affordable energy supply	Just transition	
Water use and optimisation	Corporate citizenship	

Fortum's sustainability performance is monitored and disclosed in interim and annual reporting. Fortum publishes an annual Sustainability Report with more extensive information on Fortum's sustainability performance.

Sustainability targets

Fortum updated its climate targets aligned with the goals of the Paris Agreement in December 2020 and is committed to carbon neutrality by 2050 at the latest. The target covers direct CO_2 emissions (Scope 1) and indirect CO_2 emissions (Scope 2 and 3). Fortum's roadmap to reduce emissions in Europe has also been defined. Fortum is committed to at least a 50% reduction in CO_2 emissions (Scope 1 and 2) in its European generation by 2030 (compared to base-year 2019) and to be carbon neutral (Scope 1 and 2) by 2035 at the latest.

Scope 3 emissions play a significant role in Fortum's total emissions. In December 2021, Fortum committed to reduce Scope 3 greenhouse gas emissions by 35% by 2035 at the latest (compared to base-year 2021).

Fortum had a target for biodiversity to conduct a minimum of 12 major voluntary measures that improve the living conditions of species and strengthen populations, covering all countries where Fortum has hydropower production, for 2021. The projects focus on threatened species or habitats, in particular, and in 2021 included restoring aquatic and terrestrial habitats, improving fish migration and migratory fish populations, and combating invasive species.

For Fortum, excellence in safety and caring about both its own employees and contractors is the foundation of the company's business and an absolute prerequisite for efficient and interruption-free production. Fortum's safety target is measured as Total Recordable Injury Frequency (TRIF), for own personnel and contractors, and the ambitious goal is <1.0 by the end of 2025. Fortum also had a target for Lost Time Injury Frequency (LTIF), for own personnel and contractors: ≤1.2 in 2021.

Both Fortum and Uniper are supporters of the Task Force on Climate-related Financial Disclosures (TCFD). Fortum has a long-standing focus on mitigating climate change and adopted the reporting recommendations of the TCFD starting from the financial year 2019. Uniper disclosed its first TCFD report for 2021 as part of its non-financial reporting.

Fortum executed a review of its lobbying activities and practices during 2021. The review was published in December 2021 and is publicly disclosed on Fortum's website. The summary of the review will also be published as a part of Fortum's Sustainability Report in 2022 and thereafter on a yearly basis.

Group sustainability performance

	2021	2020
Climate and resources		
Total CO_2 emissions [1], million tonnes	68.7	48.7
Specific CO_2 emissions from total energy production [1], gCO_2/kWh	312	287
Asset availability of power generation plants [2], %	80.8	-
Major voluntary measures enhancing biodiversity, no.	13	-
Personnel and society		
Total Recordable Injury Frequency (TRIF), own personnel and contractors [1]	2.2	2.3
Lost Time Injury Frequency (LTIF), own personnel and contractors [1]	1.5	1.3
Severe occupational accidents [1], no.	3	1
Sickness-related absences, %	3.6	2.9 *

Fortum consolidated Uniper as a subsidiary into its income statement from the second quarter of 2020. The figures for 2020 do not include Uniper for the first-quarter 2020.

1) 2020 figures include Uniper from the second-quarter 2020.
2) The calculation principle changed due to alignment with Uniper. Therefore, the figure for 2020 is not available. The 2021 figure includes power generation from gas- and coal-fired power plants.
* The figure does not include Uniper.

Fortum's goal is to achieve excellent financial performance in strategically selected core areas through strong competence and responsible ways of operating. The financial targets include a target for capital structure (financial net debt/comparable EBITDA below 2x) and two different hurdle rates for new investments (WACC +100 BPS for green investments and WACC +200 BPS for other investments). Accordingly, Fortum aims to provide good returns for its owners, and its dividend policy stipulates to pay a stable, sustainable, and over time increasing dividend.

Fortum is a significant economic actor in its operating countries. The most significant direct monetary flows of Fortum's operations come from revenue from customers, procurements of goods and services from suppliers, compensation to lenders, dividends to shareholders, growth and maintenance investments, employee wages and salaries, and taxes paid.

Fortum supports social development and wellbeing in its operating countries by, e.g., paying taxes. The tax benefits Fortum produces to society include not only corporate income taxes, but also several other taxes. Fortum's, excluding Uniper, approach to taxation and the principles that steer the tax management are presented in Fortum's Tax Principles disclosed on Fortum's website. Fortum publishes its tax footprint annually, and Uniper published its first tax footprint in spring 2021.

Fortum is included in several sustainability indices and has been assessed by many sustainability ratings. The list is published on Fortum's website. Fortum's sustainability reporting covers functions under Fortum's operational control, including subsidiaries in all its operating countries, unless otherwise stated.

Sustainability risks and opportunities

Fortum's operations are exposed to risks, which, if materialised, can have adverse effects on the environment and on the safety and security of employees, contractors, and neighbouring societies. Key sustainability risks, including climate-related risks, are reported to Fortum Executive Management and the Audit and Risk Committee as part of the annual review of material risks and uncertainties for Fortum. Fortum's risks are presented in the Risk management section in the Operating and financial review.

As a separate listed company, Uniper applies its own processes aligned with its enterprise risk management to systematically identify, assess, and manage Environmental, Social and Governance (ESG) risks. Uniper's ESG risk processes includes assessing external and internal ESG risks, including climate-related risks. In 2021, Uniper had no reportable ESG risks pursuant to Section 289c of the German Commercial Code. The impact of its net risks was below the reporting threshold.

Climate change and the need for decarbonisation and resource efficiency are changing the energy industry in a profound way, and these changes also create new business opportunities for Fortum. Fortum has transformed itself, having invested significantly over the years to become Europe's third largest CO_2-free power generator and a large player in gas. As such, Fortum is now well positioned to capture opportunities resulting from the energy transition, aimed at curbing climate change. To be successful, the energy transition must balance sustainability, affordability, and security of supply. It requires not only renewables, but also increasingly clean gas (e.g. hydrogen), energy storage, and other flexible solutions to provide security of supply and to decarbonise industry, transportation, heating, and cooling.

Fortum's strategic priorities address and provide solutions for these very areas: Fortum aims to decarbonise its own operations and to strengthen and grow in CO_2-free power generation while leveraging its strong position in gas to enable the energy transition. At the same time, Fortum aims to provide industrial and infrastructure customers with decarbonisation and environmental solutions, such as grid stability, waste-to-energy, and low-carbon industrial solutions, and to capture the opportunities in hydrogen as they become commercially viable.

Sustainability governance and policies

As sustainability is an integral part of Fortum's strategy, the highest decision making on sustainability and climate-related matters falls within the duties of the members of the Board of Directors, who share joint responsibility in these matters.

Fortum Executive Management decides on the sustainability approach and Group-level sustainability targets that guide annual planning. The Group's performance targets, including sustainability and climate-related targets, are approved by Fortum's Board of Directors. Fortum's line management is responsible for the implementation of Fortum's policies and instructions and for day-to-day sustainability management and improvement plans.

The Uniper SE Management Board bears the overall responsibility for the adoption and implementation of Uniper's sustainability measures. Uniper's Chief Sustainability Officer (CSO) reports periodically to the Supervisory Board on strategic sustainability activities. The Supervisory Board, which is Uniper's highest governance board, also monitors the fulfilment of Uniper's sustainability obligations. Four of Fortum's Executive Managers, including the President and CEO of Fortum, are members of Uniper's Supervisory Board.

Realisation of the safety target (LTIF, own employees and contractors combined) was a part of Fortum's short-term incentive (STI) programme in 2021. In the 2022 STI programme, the safety target contains the severity rate per Total Recordable Injuries (TRI) of own employees and contractors combined and the execution rate of safety leadership training.

Fortum's long-term incentive (LTI) programme includes a climate-related metric. In the 2021–2023 LTI plan, the target is linked to the reduction of coal-fired power generation capacity in line with Fortum's coal-exit path. In the 2022–2024 LTI plan, the target is related to the reduction of absolute CO_2 emissions in the European fossil fleet, based on a fossil fleet review addressing the Group's European generation portfolio and a pathway developed to reach Fortum Group's 2030 and 2035 climate targets. Uniper continues to follow its own STI and LTI plans. However, the safety metric (severity rate per TRI) in the STI 2022 programme and the climate-related metric in the 2022–2024 LTI plan are applicable to both companies. Scaling of STI and LTI metrics are company-specific.

Sustainability management at Fortum is strategy-driven and based on its Values, Code of Conduct, Supplier Code of Conduct, sustainability-related policies, and other Group policies and their specifying instructions. Uniper continues to have its own separate Code of Conduct and Supplier Code of Conduct. Both companies' Codes of Conduct are based on similar fundaments and they establish the basic principles of conduct that everyone must follow. They define how we treat each other, do business, and engage with the world. The companies' Supplier Codes of Conduct, both based on the ten principles of the UN Global Compact, outline the requirements for Fortum's and Uniper's suppliers and business partners.

Fortum follows and respects the International Bill of Human Rights, the United Nations Convention on the Rights of the Child, and the core conventions of the International Labour Organisation (ILO). Fortum also recognises in its operations the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises, the International Chamber of Commerce's anti-bribery and anti-corruption guidelines, and the Bettercoal initiative's Code on responsible coal mining. Fortum is a participant of the UN Global Compact initiative and the UN Caring for Climate initiative. Uniper also follows the ten principles of the UN Global Compact, but is not a formal participant.

Business ethics

Zero tolerance for corruption and bribery is highlighted in both Fortum's and Uniper's Codes of Conduct and Supplier Codes of Conduct. In addition, separate instructions and guidelines have been created to address various topics, including but not limited to anti-bribery, compliance management, safeguarding company assets, conflict of interest, anti-money laundering, and competition law.

Fortum's Board of Directors has approved the company's Code of Conduct and Supplier Code of Conduct. Uniper's Code of Conduct and Supplier Code of Conduct have been approved by the Uniper Management Board.

The Codes of Conduct are regularly reviewed in order to ensure compliance with evolving company and regulatory requirements. Fortum's updated Code of Conduct and Supplier Code of Conduct were published in early 2021 and training on the updated Codes was organised during the year. The Code of Conduct online training, launched in November 2021, is mandatory for all employees. Uniper's updated Code of Conduct was published in early 2020, and a new compliance eLearning module was introduced for all Uniper employees in 2021. In addition, relevant individuals are regularly trained in policies and systems that help to prevent corruption.

Internal and external reporting channels are offered for reporting suspicions of misconduct. The channels are described in the Codes of Conduct and accessible on the companies' internal and external webpages. Suspected misconduct and measures related to ethical business practices and compliance with regulations are regularly monitored and assessed by Fortum's Audit and Risk Committee. Uniper's Compliance Management System includes quarterly compliance reports to the Uniper Management Board. Uniper's Audit and Risk Committee monitors compliance issues on a regular basis. Uniper Management Board's Compliance Commitment is published annually on the company's webpage in accordance with the German Governance Code.

During 2021, two new cases of corruption or bribery were confirmed in Fortum's operations and one was closed as unfounded.

Climate and resources

Fortum's key performance indicators for climate and resources are related to CO_2 emissions, security of supply, biodiversity, and major Environmental, Health and Safety (EHS) incidents.

Fortum's Sustainability Policy together with the Minimum Requirements for EHS Management steer environmental management. Uniper has an HSSE & Sustainability Policy Statement and a HSSE and Sustainability Improvement Plan. Operational-level activities follow the requirements set forth in the ISO 14001 environmental management standard, and 100% of Fortum's power and heat production worldwide has ISO 14001 certification.

Energy

Fortum Group's power generation is mainly based on natural gas-fired generation and on carbon dioxide-free hydro and nuclear power. Fortum targets to rapidly reduce the share of coal in power generation. A minor share of Fortum's power generation is currently based on solar and wind, but Fortum targets significant growth in this area over the next five years.

Fortum is also a large district heat producer. Heat is mainly produced at natural gas-fired and energy-efficient combined heat and power (CHP) plants. In addition, Uniper operates a large commodities trading business and has natural gas storage sites, which play an important role in ensuring a secure and flexible gas supply.

Fortum wants to enable the energy transition by providing a reliable and affordable supply of low-carbon energy. In the future, the energy system – and Fortum's asset portfolio – will be based on renewable energy, increasingly clean gas (e.g. hydrogen), and nuclear power. In addition, Fortum will continue to offer industrial and infrastructure solutions, e.g., waste-to-energy, grid stability services, as well as energy sales and storage.

In 2021, Fortum's power generation was 188.1 (142.1) TWh and heat and steam production 33.4 (29.6) TWh. 40% of Fortum's total power generation was CO_2-free. In Europe, 64% of the power generation was CO_2-free. The figures for power and heat generation and capacities also include figures from Fortum's share in associated companies and joint ventures that sell their production to the owners at cost.

Fortum uses various fuels, such as natural gas, uranium, coal, lignite, waste-derived fuels, and biomass fuels, to produce electricity, heat, and steam. The most significant fuel used in 2021 was natural gas.

An uninterrupted and reliable energy supply is critical for society to function. With planned preventive maintenance and condition monitoring, Fortum ensures that the power plants operate reliably to produce the electricity and heat customers need. The exceptional conditions caused by the Covid-19 pandemic continued in 2021. During these challenging times Fortum's top priorities were to ensure the health and safety of its employees and contractors and to maintain business continuity. During the year, there were no interruptions in Fortum's energy production due to the pandemic. Maintenance outages were, in general, also implemented as scheduled with careful planning and special measures to protect the health of own and contractors' employees. In some cases, the duration of maintenance periods was extended to reduce the number of workers on site at the same time.

In 2021, the asset availability of Fortum's gas- and coal-fired power plants was, on average, 80.8%. The asset availability of Fortum's power generation includes planned outages in addition to unplanned technical unavailability.

Climate and greenhouse gas emissions

Fortum Group has committed to carbon neutrality by 2050 at the latest, in line with the goals of the Paris Agreement. Fortum's priority is to transform its own operations to carbon neutral by continuously strengthening and growing in CO_2-free power generation and by decarbonising its carbon-emitting energy production fleet.

In 2021, Fortum's direct CO_2 emissions were 68.7 (48.7) Mt. 57% of CO_2 emissions originated from Russian power and heat production. Of the total CO_2 emissions, 28.9 (17.5) Mt were within the EU and UK emissions trading system (ETS). The estimate for Fortum's free emission allowances in 2021 is approximately 0.4 (0.9) Mt.

Fortum's total CO_2 emissions [1)] (million tonnes, Mt)	2021	2020	2019
Total emissions	68.7	48.7	19.1
Emissions subject to ETS	28.9	17.5	2.1
Free emission allowances	0.4	0.9	0.7
Emissions not subject to ETS in Europe	0.7	0.7	0.7
Emissions in Russia	39.0	30.5	16.3

1) Fortum consolidated Uniper as a subsidiary into its income statement from the second quarter of 2020. The figures for 2020 do not include Uniper for the first-quarter 2020. The figures for full year 2019 do not include Uniper.

Fortum's greenhouse gas emissions are defined and reported according to the Greenhouse Gas (GHG) Protocol guidelines. In 2021, Fortum's direct Scope 1 GHG emissions were 69.0 (49.0) million $CO_{2\text{-eq}}$ tonnes, indirect market-based Scope 2 GHG emissions 0.8 (0.8) million $CO_{2\text{-eq}}$ tonnes, and indirect location-based Scope 2 GHG emissions 0.7 (0.6) million $CO_{2\text{-eq}}$ tonnes.

During 2021, Fortum together with Uniper conducted an in-depth review of the Scope 3 GHG emissions inventory. Where possible, also the accounting methodologies of indirect Scope 3 GHG emissions were aligned with Fortum. As part of the review, and to offer a full transparency of the emissions, Scope 3 category 11 was expanded to include not only emissions from the use of fossil fuels sold to end-users, but also sold to resellers. This expansion of the accounting scope resulted in a significant increase of Scope 3 category 11 emissions.

In 2021, Scope 3 GHG emissions were estimated to be about 120 million $CO_{2\text{-eq}}$ tonnes. Fortum's non-financial reporting does not include Scope 3 categories 5 and 10 in the calculation of total greenhouse gas emissions. These Scope 3 categories are disclosed in Fortum's Sustainability Report. The majority of Fortum's Scope 3 GHG emissions are caused by the use of fossil fuels sold both to end-users and resellers (2021: 79 million $CO_{2\text{-eq}}$ tonnes). In addition, the Group's Scope 3 emissions originate from the procurement of fuels, transportation and distribution, electricity retail to customers, purchased goods and services, and from capital goods, i.e., investments.

Fortum's Scope 1 GHG emissions accounted for about 36% of total GHG emissions, Scope 2 GHG emissions accounted for less than 1%, and Scope 3 GHG emissions accounted for about 63%.

In 2021, Fortum's specific CO_2 emissions from total energy production were 312 (287) gCO_2/kWh.

In 2021, Fortum, excluding Uniper, achieved annual energy-efficiency improvements of 179 GWh/a.

EHS incidents

Major EHS incidents are monitored, reported, and investigated, and corrective actions are implemented. In 2021, there were eight (16) major EHS incidents in Fortum's operations, excluding Uniper. The major EHS incidents consisted of two (6) fires, one (0) explosion, three (8) leaks or spills, one (1) environmental non-compliance, and one (1) INES (International Nuclear Event Scale) level 1 incident. The major EHS incidents did not have significant environmental impacts. As Uniper's definitions of major EHS incidents vary from the rest of the Fortum Group, Uniper's EHS incidents are currently not included in the reporting.

Water and biodiversity

Fortum uses large volumes of water at various types of power plants and in district heating networks. The majority of water is used for cooling. In most cases, power plants do not consume water – the water is discharged back to the same water system from where it was withdrawn.

In 2021, Fortum achieved its biodiversity target of conducting a minimum of 12 major voluntary measures enhancing biodiversity. A total of 13 major measures were implemented. Fortum's operations, for example in hydropower generation, can impact local biodiversity. Fuel procurement and flue-gas emissions may also have a negative impact on biodiversity. On the other hand, increasing CO_2-free production mitigates the biodiversity loss caused by climate change, which is globally one of the greatest threats to biodiversity. Fortum has a Biodiversity Manual and a Biodiversity Action Plan in place to define the company's approach to biodiversity management. The Biodiversity Action Plan was revised in 2021 and now also includes Uniper's biodiversity actions. The Biodiversity Manual, however, only guides Fortum's, excluding Uniper, approach to biodiversity. During 2022, Fortum's target is to develop a science-based strategy to measure and enhance the biodiversity impacts of the Group's operations and the new developments.

Personnel and society

Fortum's key performance indicators for personnel and society are related to operational and occupational safety and to employee health and wellbeing. In addition Fortum, excluding Uniper, annually measures its reputation and customer satisfaction with the One Fortum Survey.

Personnel

Fortum places a significant emphasis on an open and trusting corporate culture and highlights systematic two-way feedback on employees' performance and engagement. Diversity and equal opportunity are seen to contribute to competitiveness and innovation.

Fortum and Uniper Values and Codes of Conduct form the foundation for all daily work. For Fortum, the People Policy and Leadership Principles guide personnel-related matters, excluding Uniper. For Uniper, the Uniper Way describes the core elements and guiding statements for leadership, teamwork and individual contribution and thus forms the basis for the corporate culture. In 2021, Fortum and Uniper started together analysing their existing cultures, related strengths and improvement potential, as well as identifying potential roadblocks impacting further cooperation. The analysis investigates the companies' values, what kinds of principles guide their work, and what the companies have in common.

Fortum's operations are mainly based in the Nordic countries, Central Europe, the UK, Russia, and Poland. The total number of employees at the end of 2021 was 19,140.

Group personnel statistics	2021	2020 1)	2019
Number of employees, 31 December	19,140	19,933	8,191
Average number of employees	19,796	17,304 4)	8,248
Total amount of employee benefits, EUR million	1,561	1,195	480
Departure turnover, % (of permanent employees)	11.2	7.4	11.2
Permanent employees, %	93.0	94.8	96.8
Full-time employees, %	96.5	98.2	97.7 2)
Female employees, %	28	27	32
Females in management, %	27	27 3)	30

1) Fortum consolidated Uniper as a subsidiary into its income statement from the second quarter of 2020.
2) Figure includes only permanent, not temporary, employees.
3) Calculation principle changed due to alignment with Uniper.
4) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31, 2020.

Occupational safety

For Fortum, excellence in safety is the foundation of the company's business and an absolute prerequisite for efficient and interruption-free production. Fortum strives to be a safe workplace for the employees, contractors, and service providers who work for the company. For Fortum, the Sustainability Policy, the Minimum Requirements for EHS Management, and more detailed EHS manuals steer the work. For Uniper, the most important tools guiding safety efforts are the HSSE & Sustainability Policy Statement and the HSSE and Sustainability Improvement Plan. A certified ISO 45001 safety management system covers 99.3% of Fortum's power and heat production worldwide.

In 2021, Fortum launched new Safety Ground Rules to help keep safety on everyone's agenda at all times and to support the improvement of Fortum's safety performance. Fortum's divisions have also started work on roadmaps towards safety excellence during 2021–2025 and will continue to plan their activities in line with the new Safety Ground Rules and targets.

In 2021, Fortum together with Uniper focused on initiating the alignment of several key safety processes. These included, e.g., key safety performance indicators, contractor EHS management, and sharing of information on injury-related investigations and learnings. Uniper was also included in the Group's incident notification system. The alignment of processes and the implementation of a joint safety culture will continue in 2022. This is supported by the joint Executive Safety Leadership trainings and safety eLearning applicable for all of the Group's employees.

In 2021, Fortum's TRIF for own personnel and contractors was 2.2 (2.3), and the LTIF for own personnel and contractors was 1.5 (1.3). Thus, Fortum did not meet the set target for LTIF (≤1.2). Fortum strives for zero severe occupational accidents. In 2021, there were three (1) severe occupational accidents in the operations, one resulting in a fatality. The fatally injured person was working for a contractor company to reconstruct a guardhouse at Unipro's power plant site in Russia. A safe and healthy working environment is a priority for Fortum, and the Group will continue to do its utmost to improve safety performance.

Personnel wellbeing

Fortum's goal regarding workplace wellbeing activities is to promote the health and occupational safety of employees and the functionality of the work community. Employees have access to a wide range of services, from medical check-ups to exercise and coaching programmes that also address stress management and mental wellbeing.

In 2021, the company's efforts concentrated on safeguarding personnel from the Covid-19 pandemic and supporting their physical and mental wellbeing in the exceptional conditions. The wellbeing programmes highlighted topics related to mental energy, resilience, and physical health. Managers were supported in leading employees' wellbeing during the challenging period. Coordination teams established at the beginning of the pandemic at both Fortum and Uniper and consisting of senior management continued to closely monitor the development of the pandemic and its effects on the companies' operations and personnel, and to agree on related actions.

Examples of measures to combat the Covid-19 pandemic include remote working in those positions in which a physical presence is not required and a hybrid work model, in which the work week is divided between office and remote work days and practiced during such periods when the pandemic situation allows this. On-site work is conducted with special arrangements, such as staggered arrival, breaks and lunch, maintaining physical distance, use of face masks, and enhanced cleaning.

Fortum, excluding Uniper, deployed a strategic initiative, Workforce 2.0, covering both long-term changes and short-term adaptations and actions related to the company's ways of working. Managers and employees were trained in the Hybrid Work Model principles, including the expected changes in managers' leadership style. The initiative launch continued throughout 2021 and collaborated partly with Uniper's equivalent initiative called NeNo – New Normal.

Travel restrictions set at the start of the pandemic were eased for a short period in the autumn but were taken back into use when the pandemic situation worsened towards the end of the year. Several measures have continued and were improved to support employees working remotely; examples include cloud-based IT solutions and HR processes that support flexible, mobile work arrangements. Also virtual wellbeing services and events have been offered to employees. According to an employee survey, 94% of respondents feel that they are managing the mental demands of their own work role.

In 2021, Fortum's percentage of sickness-related absences was 3.6.

Society

Reputation and customer satisfaction

Fortum's performance regarding reputation and customer satisfaction, excluding Uniper, is monitored annually through the One Fortum Survey. In 2021, the combined reputation index of all stakeholder groups based on the One Fortum Survey decreased slightly to 70.5 (72.5) points, on a scale of 0–100. Fortum's overall reputation decreased slightly among most of the stakeholder groups. Among NGOs the result remained stable. The customer satisfaction index (CSI) varied depending on the business area between 58 and 83 points (61–81), on a scale of 0–100.

Interruption-free customer service during the Covid-19 pandemic was ensured by enabling employees in call centres to work remotely. To support this, modern IT solutions were used successfully, and the company was able to maintain good quality services for customers.

Supply chain

Fortum and Uniper expect their business partners to act responsibly and to comply with the requirements set forth in their respective Codes of Conduct and Supplier Codes of Conduct. Fortum assesses the performance of its business partners with supplier qualification and supplier audits. In 2021, Fortum, excluding Uniper, conducted four on-site supplier audits in China and in India. Due to the Covid-19 pandemic and travel restrictions, the possibilities to conduct on-site supplier audits have been very limited. Uniper applies its own processes for ESG Due Diligence and Know Your Counterparty. Both companies are members of the Bettercoal initiative and use the Bettercoal tools to improve sustainability in the coal supply chain.

Human rights

Fortum follows and respects internationally recognised human rights, which are included in the key human rights treaties. Respect for human rights is expressed in both Fortum's and Uniper's Codes of Conduct and Supplier Codes of Conduct. The UN Guiding Principles on Business and Human Rights are taken into account in own operations and in supply chain management.

Fortum, excluding Uniper, conducts a human rights assessment for investment projects – especially in new operating areas – and also for new countries where Fortum plans to expand the sales of products and services. In 2021, two new country assessments were made.

Uniper annually performs a worldwide assessment, which is based on a combination of economic and social indexes, to map key potential country-specific issues that may directly affect the company. The assessment findings contribute to the implementation of modified due diligence requirements and mitigation measures, such as the inclusion of specific contract clauses.

Corporate citizenship

Fortum, excluding Uniper, continued to steer its support to society and cooperation with local communities through its Corporate Social Responsibility (CSR) programme. The programme's focus areas, aligned with the company's strategic targets, are Climate, People, and Material Revolution. Steering of CSR activities is concentrated to a Fortum-wide Steering Group.

In 2021, Fortum continued to support charity organisations in order to help its local communities during the Covid-19 pandemic. In addition, Fortum engages in collaboration with universities through different research and development projects. In 2021, Fortum's, excluding Uniper, support for activities promoting the common good totalled approximately EUR 1.8 (2.5) million. In addition, the grants awarded by Fortum and Neste Foundation (earlier Fortum Foundation), not part of Fortum Group, totalled EUR 701,250 (612,500).

EU taxonomy

Introduction

The EU Taxonomy Regulation is a classification system for defining economic activities that can be considered environmentally sustainable. The regulation provides specific key performance indicators (KPIs) that entities are required to report for their environmentally sustainable economic activities. The regulation is being implemented with a phased entry into force with simplified reporting requirements.

The EU Taxonomy Regulation establishes six environmental objectives, two of which, the climate change mitigation and adaptation criteria, were published on 4 June 2021 in the Climate Delegated Act. The Complementary Climate Delegated Act on certain nuclear energy and gas activities was published on 2 February 2022. The Delegated Act for the remaining four environmental objectives will be published in 2022.

Fortum's disclosure has been prepared in accordance with the EU Taxonomy Regulation Delegated Act of 6 July 2021. For the financial year ending on 31 December 2021, Fortum reports the proportion of Taxonomy eligible activities and Taxonomy non-eligible activities in relation to the three KPIs (Sales, Operating expenses and Capital expenditure). Reporting on Taxonomy alignment will be done for the financial year ending on 31 December 2022. The reporting scope includes Fortum's subsidiaries consolidated to the Group as of 31 December 2021.

Economic activities

In 2021, Fortum classified its economic activities to eligible and non-eligible corresponding to economic activities described in the Climate Delegated Act. Fortum's business operations were evaluated according to the descriptions of economic activities listed in Annex I (climate change mitigation) and Annex II (climate change adaptation) and the related NACE codes provided in these descriptions. The review was done at power plant or individual business activity level. Fortum assessed climate change mitigation to be the most relevant objective against which the eligibility of economic activities was reviewed.

Eligible economic activities

Eligible economic activity is an activity that is described in the Climate Delegated Act, Annex I. Fortum's most relevant eligible activities are:

- Electricity generation from hydropower
- Storage of electricity
- District heating/cooling distribution
- Material recovery from non-hazardous waste
- Production of heat/cool from bioenergy
- Production of heat/cool using waste heat
- Electricity generation from wind power

Non-eligible economic activities

Non-eligible economic activity does not correspond to any activity description provided in the Climate Delegated Act.

Fortum's non-eligible activities include electricity and commodities trading, fossil-based power and heat generation, engineering services related to non-renewable assets, as well as administrative overheads.

In addition, Fortum has economic activities that are not currently covered by the EU Taxonomy, such as nuclear energy and natural gas, as well as waste-to-energy and circular economy activities.

Investments in renewable energy through partnerships

Fortum's investments in renewables, such as wind and solar power, are mainly done through partnerships. This enables Fortum to efficiently utilise its key competences to develop, construct and operate power plants, whilst releasing capital to new renewables investments by either partially or fully divesting completed power plants to partnerships (e.g. joint ventures and associates) or other forms of cooperation. This means that wind and solar power are mainly included in the capital expenditure KPI during the construction phase, but not in the sales and operating expenses KPIs during operation.

KPIs for climate change mitigation

Below are the proportions of eligible and non-eligible activities of the Sales, Operating expenses, and Capital expenditure for Fortum Group for the financial year ending 31 December 2021.

	Total	Eligible	Non-eligible*
	EUR million	%	%
Sales	112,400	2	98
Operating expenses	1,809	11	89
Capital expenditure	1,391	23	77

*) Includes non-eligible activities, activities currently not covered by the taxonomy, as well as the impact from divestments made during 2021.

The most significant eligible economic activity in Fortum Group is electricity generation from hydropower with an installed capacity of 8.4 GW (18% of total capacity) in the Nordics and Germany. While the construction of new hydropower plants is not currently planned, several maintenance and modernisation projects for the existing portfolio are expected in the future.

Definitions of the KPIs

Sales is based on the sales reported on Fortum's consolidated income statement (Note 6). Fortum has significant trading-related (non-eligible) sales, which explains the considerably low proportion of eligible sales.

Capital expenditure consists of additions to property, plant and equipment, intangible assets, right-of-use assets, as well as additions through business combinations. See Note 3, Note 16, Note 17, and Note 34.

Operating expenses consist of direct non-capitalised costs that are necessary to ensure the continued and effective functioning of property, plant and equipment. These expenses include repairs and maintenance, building servicing, short-term rentals and similar costs, as well as other direct expenditures relating to the day-to-day servicing of these assets.

Methodology for calculating KPIs

The financial data used for calculating the EU taxonomy KPIs has been retrieved from Fortum's financial systems and is based on the same data and Group accounting principles (see Notes to the consolidated financial statements for details) as Fortum's consolidated financial statements for the year ending 31 December 2021. Appropriate controls have been implemented to eliminate the risk of double counting.

Financial data has been allocated to eligible economic activities as follows:

- Majority of electricity sales has been allocated to eligible activities based on production volume.
- Other sales and operating expenses data is available in the source systems at the cost centre-level corresponding to individual sites. These cost centres have been allocated to eligible economic activities.
- Each significant capital expenditure investment project has been allocated to eligible economic activities.

Risk management

Risk management framework and objectives

The Group Risk Policy provides a risk management framework for Fortum, the purpose of which is to support business in managing risks effectively and to ensure compliance with relevant regulations. The Group Risk Policy includes an overview of Fortum's risk management systems consisting of the general principles of risk management, the main features of the risk management process and responsibilities for managing and controlling risks within the Group.

The risk management systems have been designed to support Fortum's Board of Directors, Audit and Risk Committee, Fortum's Executive Management as well as the operative business in fulfilling their duties in relation to risk management. The objectives of the risk management systems are to:

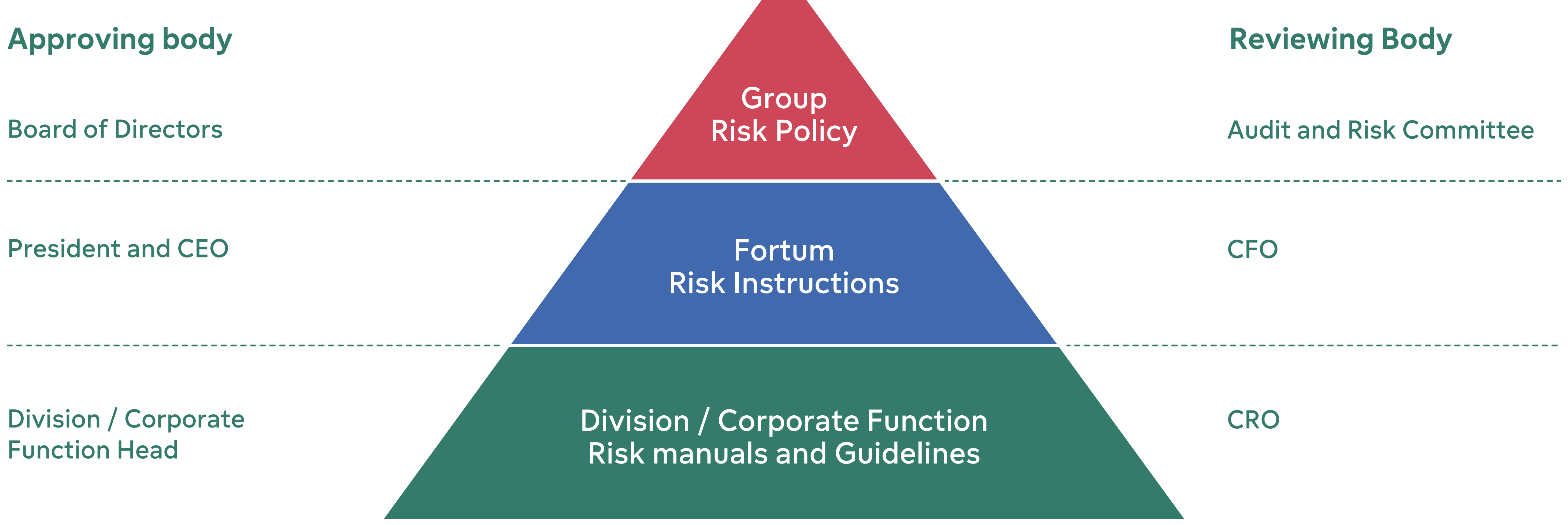
- support Fortum's business divisions and corporate functions (Fortum) in managing risks effectively and to ensure compliance with relevant regulations
- support business divisions in strategy execution,
- support business divisions in achieving agreed targets within acceptable risk levels so that the Group's ability to meet financial commitments is not compromised,
- ensure the understanding of the Group's material risks and uncertainties, and
- support the prevention of accidents that can have a severe effect on the health and safety of employees or third parties, and incidents that can have a material impact on Fortum's assets, reputation or the environment.

Risk management organisation

Fortum's Board of Directors approves the Group Risk Policy, and the President and CEO approves Fortum, excluding Uniper, risk management instructions covering commodity market risks, counterparty credit risks, and operational risks, as well as instructions for compliance management, EHS management, treasury and the governance framework for cyber and information security risks; all of which are aligned with the Group Risk Policy. Fortum's Divisions and Corporate Functions issue risk manuals and guidelines, as needed, which detail how the Group Risk Policy and relevant risk management instructions are implemented within their organisations.

Uniper is a separate listed company operating under German law and regulations with its own risk management systems, including risk policies which define the risk management organisation principles, processes and responsibilities. Uniper does therefore not directly apply the risk management systems applicable to Fortum's other Divisions and Corporate Functions. The risk management systems of Uniper, including the key risk management principles and processes, are materially in line with those of the rest of Fortum Group. The target is to further align the risk management systems in the future. For more information about Uniper's risk management systems, please see Uniper's annual report.

Corporate Risk Policy Structure



Risk Governance

The main principle is that risks are managed at source, meaning that each Division and Corporate Function Head, as well as Uniper's Management Board, is responsible for managing risks that arise within their business operations.

Fortum's Audit and Risk Committee (ARC) is responsible for monitoring the efficiency of the company's risk management systems, and for annually reviewing the Group Risk Policy and the Group's material risks and uncertainties. Corporate Risk Management, a function headed by the Chief Risk Officer (CRO), provides instructions, methods and tools which support the Divisions and Corporate Functions, excluding Uniper, in running an efficient risk management process. Corporate Risk Management is responsible for assessing and reporting on the maturity of risk management in Divisions and Corporate Functions and for providing independent monitoring and reporting of the Group's material risk exposures to Fortum Executive Management (FEM), the ARC and the Board of Directors. Risk control functions and controllers in the business monitor and report risks to the CRO.

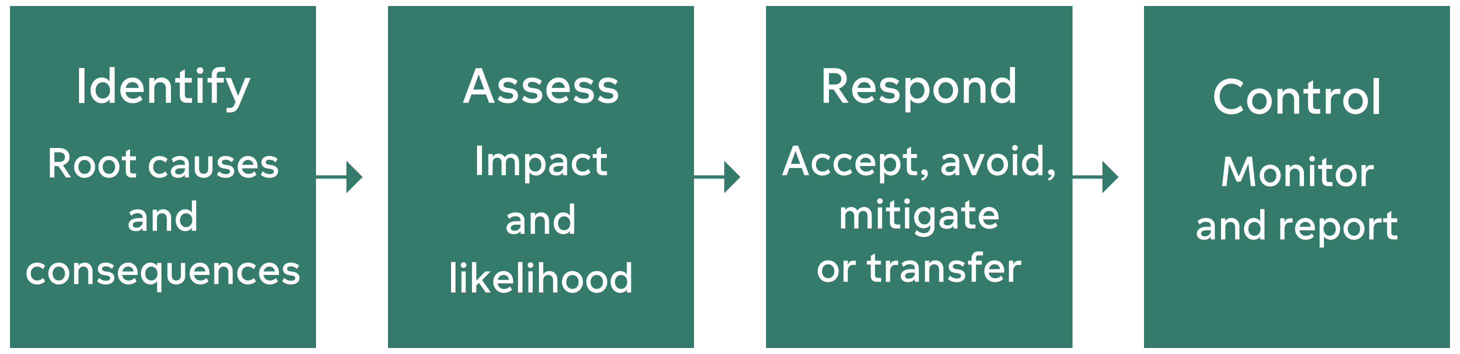
Uniper, a separate listed company operating under German law and regulations, is consolidated to Fortum's balance sheet and income statement, and reported as a separate segment. Four out of the six shareholder representatives on the Supervisory Board are from Fortum. Fortum also has a representative in Uniper's Audit and Risk Committee. Any changes to the risk management systems, which are considered to be material within the governance framework of Uniper, are reviewed by the Audit and Risk Committee of Uniper and informed to the Supervisory Board of Uniper.

Principle of continuous improvement

Risk management is developed in accordance with the principle of continuous improvement, aiming at an optimised and continuously developing risk management process. The maturity level of the risk management process is annually assessed with a self-assessment procedure, and Corporate Risk Management determines goals for the development of risk management based on the results of the assessment.

In accordance with Fortum's values, the importance of risk management is raised by increasing the personnel's risk awareness and highlighting the positive features of risk-aware decision-making. Risk management at Fortum is continuously supporting and improving the application of Fortum's values in decision-making.

Risk management process

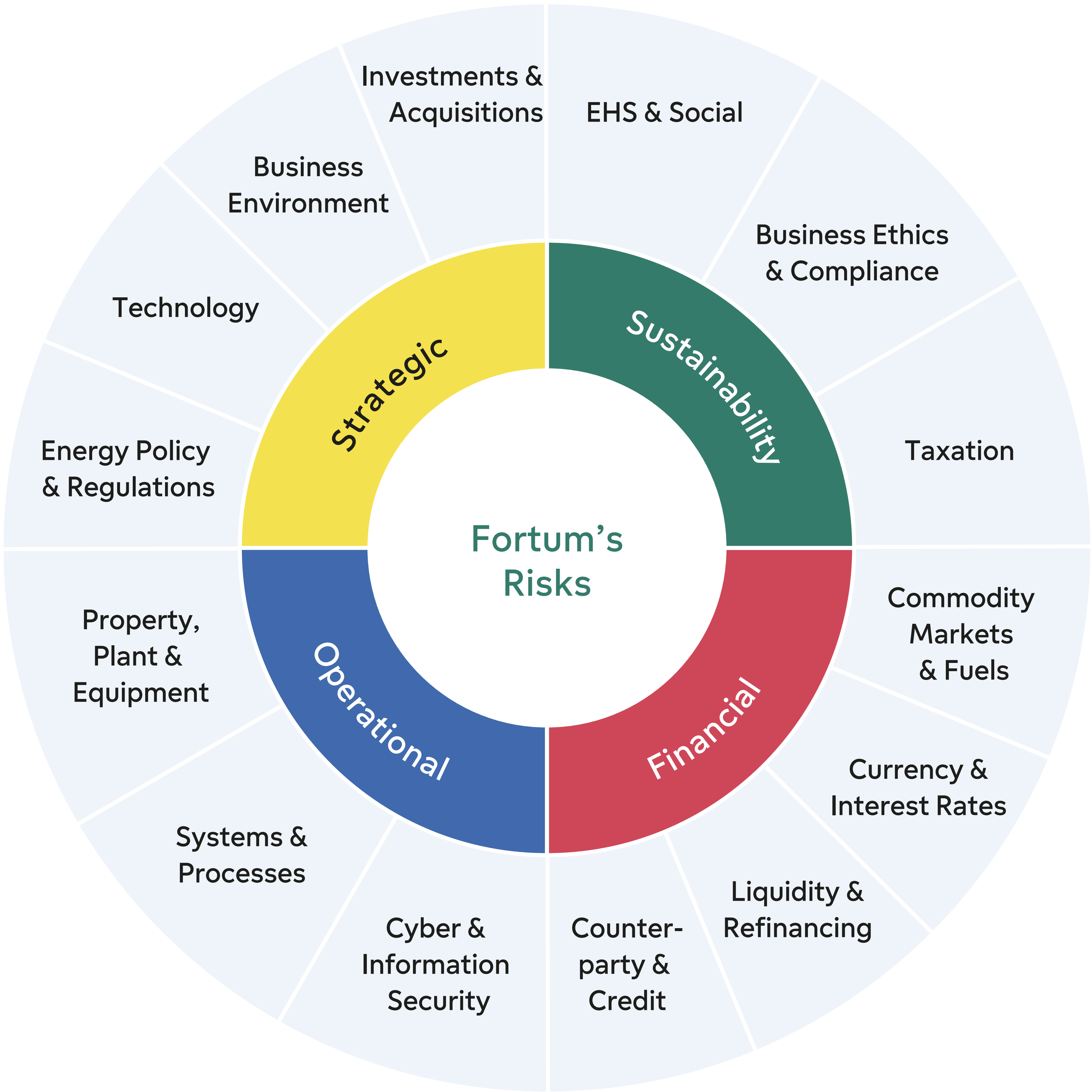


The risk management process consists of risk identification, risk assessment, response, and control processes and procedures. Uniper operates a separate risk management process from the rest of Fortum but is materially in line with Fortum's process and follows similar principles.

Both risk management processes are designed to support effective risk management and to ensure that risks are regularly monitored and followed-up. Identification is regularly carried out according to a structured process which includes analysis of root causes of the risk and consequences, if the risk materialises. Risks are assessed in terms of impact and likelihood or probability of the realisation of the risk. Impact is primarily assessed in monetary terms in relation to forecasted earnings and / or cash flows, but also in terms of health and safety, environment and reputation, where relevant. Identified risks have a risk owner responsible for responding to the risk. Risk responses can be to accept, avoid, mitigate or transfer the risk. Risk control processes and procedures, which include validating, monitoring, aggregating and reporting risks, are designed to ensure compliance with relevant external regulations and recommendations, as well as with internal policies, instructions, manuals and guidelines. This includes controls to ensure that risk exposures remain within approved limits and mandates related to, for example, credit and market risks.

Risk factors

Fortum is exposed to a number of financial, operational, strategic, and sustainability-related risks both directly and indirectly through its subsidiaries, associated companies, and joint ventures. The associated companies and joint ventures have their own risk management systems. The principal associated companies and joint ventures are TVO, Forsmarks Kraftgrupp AB, Kemijoki Oy and TGC-1. For more information about these indirect risk exposures, please see each respective company's annual report.



Strategic risks

The main strategic risks are that energy policy, regulation, technology or the business environment develop in ways that have not been foreseen and prepared for. Future energy market and regulation scenarios, including the impact of these to Fortum's business, are continuously analysed.

Risks which could hinder Fortum in executing its strategy are continuously assessed, monitored and reported as part of the strategy work.

Business Environment

Fortum operates in a global business environment and is therefore exposed to political and other risks which affect the macroeconomic development and consumer behaviour in the markets where Fortum operates. The current trend of nationalistic policies and protectionism may lead to trade restrictions or imposed sanctions which in turn could affect demand for Fortum's products and services, asset values and financing. Fortum continuously monitors how the business environment develops in its operating countries in order to be able to react quickly to market shifts and changes in consumer behaviour.

Investment and acquisition risks

Fortum is the majority shareholder of Uniper, a separate listed company operating under German regulation, with an ownership of 78.0% as per 31 December 2021. The companies have initiated strategic alignment and agreed to co-operate in a number of areas including physical trading and optimisation of Nordic hydro operations, jointly developing a portfolio of solar and wind projects in Europe, and a joint growth strategy in hydrogen. Positive annual cash impact on a consolidated group basis is estimated to be approximately EUR 100 million. More than EUR 50 million of these annual benefits are gradually materialising by the end of 2023, reaching full annual impact in 2025. The ability of Fortum to deliver on its strategic targets and achieve the expected benefits depends on successful strategy execution and co-operation between the two companies.

Uniper is continuing as a separate listed company operating under German regulation and if that would change and if it would lead to a potential full merger of the companies, it may entail both increased risks and opportunities. The risks and opportunities related to the potential integration of business operations could include creating a common culture, realising cost and revenue synergy benefits, combining operating models of the two companies, and motivating and keeping key personnel during the integration phase.

Fortum is continuously assessing its' business portfolio and evaluates opportunities for acquisitions, investments and divestments primarily in the Nordic, EU and Russian markets. As part of the updated strategy, Fortum has announced several of growth areas for future investments including a sizeable renewables portfolio. Even if Fortum is able to identify candidates for acquisition or investment, it may be difficult to complete transactions. Competition for acquisitions or greenfield investments could limit Fortum's ability to grow, or could raise the prices and make them less attractive to Fortum. Furthermore, Fortum has concluded the strategic review of the heating and cooling businesses in the Baltics and its 50% stake in Stockholm Exergi by selling these assets. The ongoing Covid-19 pandemic and especially energy market volatility have led to increased uncertainty about macroeconomic development and possible impact on future regulation. As a result, there may currently be less potential investors, which could lead to planned divestments being postponed, or not being carried out as planned.

Risks related to acquisitions, divestments and investments are managed as part of the investment process. The Investment Manual includes requirements for risk identification, assessment and action plans for mitigating identified risks before investment decisions are made. It also sets requirements to follow-up risks in projects and acquisitions. Risks in large projects are mitigated through contract structures and insurance coverage. Partner risk assessments are performed before entering into joint ventures or other material partnership agreements. There is also a country entry process which includes a country risk assessment before decisions to enter a new market can be made.

Energy policy and regulation risks

The energy sectors are heavily influenced by national and EU-level energy policies and regulations. Fortum's strategy has been developed based on scenarios of the future development of the regulatory environment in both existing and potential new businesses and market areas. The overall complexity and possible regulatory changes in the various operating countries pose a risk if Fortum is not able to identify, anticipate and manage those changes efficiently.

Fortum maintains an active dialogue with different bodies and stakeholders involved in the development of laws, policies and regulations in order to manage these risks and to proactively contribute to the development of the energy and climate policy and regulatory framework in line with Fortum Group's strategic objectives.

EU, Nordics and UK

Fortum has to manage risks related to both EU regulation, and national regulation in the countries where we operate. Key risks related to the future development of energy and climate policies and circular economy-related policy and regulatory framework development are listed below.

- Reaching the established (EU and national) decarbonisation targets requires that all CO_2 free energy production technologies are treated equally in legislation, and that there is political acceptance for them. There is a risk that some technologies are preferred for reasons other than their CO_2 footprint, leading to uneven situation between different production forms.
- Growing acceptability issues relating to various energy forms and energy technologies create uncertainty and risks for planned investments. Increasing sustainability requirements, e.g. in the context of the EU Sustainable Finance taxonomy could lead to a situation where a big part of Fortum's CO_2 free or low carbon energy production is classified as non-sustainable and excluded from the EU and national financing schemes, which might lead to higher capital costs for new investments.
- National climate policies or steering mechanisms that exceed, or are overlapping the EU climate targets risk diluting the EU emissions trading system (ETS) and creating inefficiencies based on uncoordinated national non-market-based carbon reduction mechanisms. In addition, lower carbon price may lead to decreased profitability of carbon-free assets.
- In the context of national climate strategies, several countries have decided to phase-out certain energy production technologies, such as coal and nuclear. In case such political decisions are done without offering sufficient compensation to investors/asset owners, there is a risk of lost earnings, as well as dismantling costs. Following the coal exit law in Germany that came into effect in August 2020, the coal exit paths, and conditions, have been now largely determined in most European countries where Fortum operates coal plants. Consequently, the financial uncertainty which existed for Uniper around such exits was reduced significantly; but following the adoption of the more ambitious 2030 national climate target, further changes in the German coal phase out legislation can be expected. For example, the new German government may decide to shorten the runtime of Datteln 4, including the associated financial conditions. In the Netherlands, the Dutch government has approved additional measures for coal-fired plants as a result of the Urgenda Verdict to achieve the greenhouse gas reduction targets. These measures for coal-fired power production restrictions affect the Maasvlakte 3 plant for the years 2022 to 2024 but entitle Uniper for compensation by the Dutch government.
- National investment schemes and selective support systems for new renewable energy production, such as the already implemented offshore wind support system in Sweden, may lower the profitability of incumbent electricity production and lead to market distortions because of increased grid costs since producers pay a large part of total grid costs. Fortum may suffer also from lower electricity prices since, all else equal, production that otherwise would not be profitable will come online.
- Tightening emission standards, restrictions, or taxation of waste incineration; and increasing tax burden on heating fuels can also negatively impact Fortum's targeted earnings in the future.

The inter-linkage of these issues create uncertainty as changes in policies in one area could undermine the effects of policy changes in other areas.

Russia

Fortum's business in Russia is exposed to political, economic and social uncertainties and risks resulting from changes in regulation, legislation, economic and social upheaval and other similar factors. Among the more significant risks are those arising from the establishment or enforcement of foreign exchange restrictions, which could effectively prevent Fortum from repatriating profits or liquidating assets, and changes in tax regulations or enforcement mechanisms, which could substantially reduce or eliminate any revenues derived from operations, and reduce significantly the value of assets related to such operations.

The ongoing political tensions between the EU, US and Russia, and the unpredictable nature of the threat of sanctions pose a risk for Fortum. Transactions from Russian units, Uniper's global trading business, as well as Uniper's financing of the Nord Stream 2 project; as well as gas supply from Russia, are the main sources of potential sanctions risk. The imposition of any further sanctions may have a direct and indirect impact on the business environment and may negatively affect the operations and value of certain investments in Russia. Fortum actively monitors the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws.

The main energy policy-related risks in Russia are linked to the development of the whole energy sector which to a large extent is regulated. Regulated sectors are inherently exposed to a risk of regulatory changes which could affect Fortum's operations.

For comments on the geopolitical uncertainty due to Russia's invasion on Ukraine, imposed sanctions and possible future sanctions and counter sanctions and their possible impacts on Fortum Group's Russian business and assets, please see Note 39.

Technology risks

Fortum's strategy includes investing in new or not yet commercially viable technologies, such as hydrogen production, which will support the transition towards a future low-carbon economy; as well as developing circular economy solutions, other renewable energy concepts and innovative solutions for its customers. There are risks inherent in investing in new technologies including if and when these will become economically viable, and protecting intellectual property rights. Technology risks are managed by assessing and monitoring the viability of new technology throughout its development cycle, and selectively developing and investing in a diversified portfolio of projects consisting of different technologies.

Sustainability risks

Corporate social responsibility and sustainable development are integral parts of Fortum's strategy. Fortum gives balanced consideration to economic, environmental and social responsibility aspects. Changes in laws, regulations and the business environment, including the views of our main stakeholder, can pose a risk if not identified and managed effectively. In order to identify and manage these risks, Fortum endorses a number of international voluntary charters, standards and guidelines in the area of sustainability, conducts stakeholder surveys annually in order to identify the most material issues for our stakeholders, engages with non-governmental organisations, and has defined internal policies and instructions on how to conduct business.

Environmental, health and safety and social risks

Operating power and heat generation plants, gas transmission and storage facilities, and circular economy services, involves the usage, storage and transportation of fuels and materials, including hazardous waste, that can have adverse effects on the environment, and expose personnel, contractors and third parties to safety risks. Assessment of environmental risks and preparedness to operate in exceptional and emergency situations follows legislative requirements as well as the requirements in the environmental management standard (ISO 14001). The same approach, based on the requirements in the operational health and safety standard (OHSAS 18001 or ISO 45001), applies to risks related to occupational health and safety, and how to operate in emergency situations.

Environmental, health and safety (EHS) risks as well as social risks related to the supply chain are evaluated through counterparty risk assessment, country risk assessment, supplier qualification as well as internal and external audits. Corrective and preventive actions are implemented when necessary. EHS and social risks are evaluated for all investments. Environmental risks and liabilities in relation to past actions have been assessed and, where necessary, provisions have been made for future remedial costs. Mitigating climate change, adapting to it and driving the transition to a lower-carbon economy is an integral part of Fortum's strategy. Management of climate-related transition and physical risks are discussed in detail under the heading Climate-related risks. As a separate listed company, Uniper applies its own processes aligned with its enterprise risk management to systematically identify, assess and manage Environmental, Social and or Governance (ESG) risks.

Tax risk

Tax risk refers to the risk associated with unclarities, errors, failure in controls or disagreements in the interpretation of applicable tax laws and tax authority guidance, changes in operations, long-term profitability or changes in tax laws or fiscal policies in one or multiple countries which could result in increased charges or financial loss. Fortum operates in a number of countries and is therefore exposed to these events in multiple countries. These risks may materialise through a tax authority-initiated process followed by a legal process in one or multiple jurisdictions with a court confirming valid interpretation of local or EU law or tax treaties. In case multiple countries are involved, it may result in a mutual agreement process defining the final stand in the case. A legal process may result in a tax assessment of deductibility, income recognition or applicable tax rate on withholding in a business transaction. Risk may materialise also by a revaluation of tax-related assets, so called deferred tax assets, and liabilities due to changes in operations or tax law.

Fortum manages tax-related uncertainties by systematic planning and risk mitigating targeting tax predictability for the business operations in all our operating countries. In order to do so, Fortum has specific tax principles approved by the Board of Directors and tax governance guidance setting the frame for tax management. As concrete risk mitigation actions, we have identified simplifying legal structures, moving towards digital solutions in data management and compliance, seeking strategic clearance from tax authorities, improving transparency towards stakeholders, improving resources and clarifying accountabilities and responsibilities.

Business ethics and compliance risks

Fortum's operations are subject to laws, rules and regulations set forth by the relevant authorities, exchanges, and other regulatory bodies in all markets in which Fortum operates. Fortum aims to comply with all relevant laws, rules and regulations, but the ability to operate in certain countries may be affected by future changes to local laws and regulations.

Since Fortum trades financial instruments, it is exposed to risks arising from the implementation and amendment of financial market regulations and directives, such as the European Market Infrastructure Regulation (EMIR), the Regulation on Energy Market Integrity and Transparency (REMIT) and the Markets in Financial Instruments Directive (MiFiD II). Potential changes to existing financial market regulation could significantly increase administrative burdens and result in the need for additional liquidity.

Fortum's operations in a variety of jurisdictions expose Fortum to various legal risks. These mainly comprise risks arising from threatened or pending legal proceedings regarding contract and price adjustments in connection with long-term supply or sales contracts, licensing matters, liabilities arising from acquired companies, as well as supplier disputes or disputes related to investment agreements.

Fortum systematically identifies, assesses, mitigates and reports compliance risks, including risks related to business ethics, as part of the compliance management and risk management processes. Effective internal controls are a key mitigating activity and have been implemented to prevent the possibilities of unauthorised activities or non-compliance with relevant policies and instructions. Furthermore, continuous training and communication play a key role in increasing the awareness and ensuring the understanding of the importance of business ethics and compliance in the organisation. Regular trainings include mandatory e-learnings to ensure coverage throughout the organisation.

Uniper has a separate Code of Conduct and Supplier Code of Conduct from the rest of the Fortum Group, both of which stress the importance of business ethics for all employees, contractors and partners. Zero tolerance for corruption and bribery is highlighted in the Codes of Conduct and Supplier Codes of Conduct. In addition, separate instructions and guidelines have been created to address e.g., anti-bribery, compliance management, safeguarding company assets, conflict of interest, anti-money laundering and competition law. Fortum and Uniper have agreed joint compliance priorities. Both companies have procedures for anti-corruption including prevention, oversight, reporting and enforcement based on the requirements prescribed in international legislation. The Supplier Codes of Conduct, which are based on the ten principles of the United Nations Global Compact, set of sustainability requirements for suppliers of goods and services.

Financial risks

Commodity market and fuel risks

Fortum's business is exposed to fluctuations in prices and availability of commodities used in the production, transmission and sale of energy products. The main exposure is toward electricity and gas prices and volumes, prices and volumes of emission allowances, and prices and availability of fuels. Fortum hedges its exposure to commodity market risks in order to reduce volatility in cash flow, and to increase the predictability of future results. For further information on hedge ratios, sensitivities and outstanding derivatives contracts, see Note 4.

Electricity price and volume risks

Fortum is exposed to electricity market price movements and volume changes mainly through its power and heat generation.

In the Nordics and central European countries, market prices and, consequently, the amount of profitable production exhibit significant variation, for instance due to weather conditions, outage patterns in production and transmission lines, CO_2 allowance prices, fuel prices, as well as the amount of electricity demand. Electricity price risks in the Nordics and central European markets are mainly hedged by entering electricity derivatives contracts on exchanges such as the Nasdaq Commodities or the European Energy Exchange, as well as directly with counterparties active in the energy markets. The ability to efficiently implement hedging strategies is dependent on a well-functioning and liquid derivatives market. There is a risk of decreasing liquidity of especially Nordic electricity derivatives on the Nasdaq Commodities, and decreasing the price variance and difference in the liquidity in various price areas. Alternatives, including the use of OTC derivative contracts and correlated products traded on other exchanges, are used to mitigate this risk. The Generation segment and the Uniper segment have separate hedging strategies covering several years in the short- to medium-term. Hedging strategies are continuously evaluated as electricity and other commodity market prices, the hydrological balance and other relevant parameters change. Hedging of the Generation segment's power sales is performed in EUR on a Nordic level, covering both Finland and Sweden; and the currency component of these hedges in the Swedish entity is currently not hedged. Uniper segment's Nordic power hedging is performed only in Sweden, and the currency component of these hedges in the Swedish entity is hedged.

In Russia, electricity and capacity prices are the main source of market risk. Capacity from newer units is sold under capacity supply agreements where the price is set by the Russian Federation to ensure the return on investments. Capacity from old units has been sold until 2025 via capacity supply auctions which have already been conducted.

Electricity price exposure is partly mitigated through regulated fixed-price bilateral agreements, but the majority of electricity sales is exposed to spot price risk. In the short-term, electricity prices and volumes are mainly impacted by changes in industrial demand, gas prices and weather-driven demand changes.

Emission and environmental value risks

The EU and the United Kingdom have emissions trading schemes to reduce the amount of CO_2 emissions. In addition to the emissions trading schemes, there are other trading schemes in environmental values in place in Sweden, Norway and Poland. Part of Fortum's power and heat generation is subject to requirements of these schemes. There is currently no trading scheme in Russia for emissions or other environmental values. However, Russia has announced intentions to comply with the Paris Agreement, but there is uncertainty related to how and when a possible carbon market could be implemented.

The main factors influencing the prices of CO_2 emission allowances and other environmental values are political decisions, and the supply and demand balance. Fortum hedges its exposure to these prices and volumes through the use of CO_2 derivatives and environmental certificates.

Fuel and gas prices and volume risks

Power and heat generation requires use of fuels that are purchased on global or local markets. The main fuels used by Fortum are natural gas, uranium, coal, various biomass-based fuels and waste. The main risk factor for fuels that are traded on global markets, such as coal and natural gas, is the uncertainty in price. Prices are largely affected by demand and supply imbalances that can be caused by, e.g., increased demand growth in developing countries, natural disasters or supply constraints in countries experiencing political or social unrest. For fuels that are sourced on local or regional markets, such as biofuels, the volume risk in terms of availability of the raw material of appropriate quality is more significant as there may be a limited number of suppliers. Due to the current sanctions, there are also risks related to imported fuels from Russia. The increasing geopolitical tensions and further escalation could, e.g., lead to curtailments of physical gas deliveries to Uniper, which may require Uniper to source gas in the market at higher prices. Both Fortum and Uniper continue to monitor the situation closely and prepare constantly adapted mitigation measures to minimise the impact of an escalation to Fortum Group.

The exposure to fuel price risk is mitigated through fixed-price physical delivery contracts, or derivative contracts. The main fuel source for heat and power generation in Russia is natural gas, which is partially regulated, limiting the price risk exposure. Long-term gas supply contracts are concluded with gas suppliers to ensure gas availability for power plants.

Long-term gas supply contracts of Uniper generally include the possibility for the customer and the supplier to adapt contractual terms to changed market conditions. This entails the major risk for Uniper that suppliers will impose conditions that are detrimental. In order to limit the risk, negotiations are conducted by the most experienced employees utilising all available internal and external expertise.

A deterioration in the economic situation or upheavals in the market for LNG could lead to a lower than planned utilisation of the long-term capacity booked in the regasification plants in Uniper's LNG business, and make it necessary to set up provisions for onerous contracts over the entire remaining booking period. Uniper strives to further increase the utilisation of this booked capacity, and thus improve the revenue situation.

Liquidity and refinancing risks

Fortum's business is exposed to liquidity and refinancing risks primarily through the need to finance the Group's business operations, including margining and collaterals issued for trading and hedging activities. Higher commodity prices increase the net margining payments which are mainly settled in cash. Fortum maintains a diversified financing structure in terms of debt maturity profile, debt instruments and geographical markets. Liquidity and refinancing risks are managed through a combination of cash positions and committed credit facility agreements. The credit risk of cash positions has been mitigated by diversifying the deposits to high-credit quality financial institutions and issuers of corporate debt.

Fortum Corporation is currently rated BBB with a stable outlook by both Fitch and S&P Global Ratings rating agencies. The key risk factors which could lead to a weakening credit metrics and potentially trigger rating downgrade include a persistent decline in European and Russian power prices, lower-than-expected amounts received from planned divestments, increase in leverage, deterioration of the geopolitical situation or high market volatility. A lowering of credit ratings, in particular to below investment grade level (BB+ or below) could affect access to the capital markets and increase the cost of new financing.

Uniper, a separate listed company operating under German laws and regulations, is currently also rated BBB with a stable outlook by S&P Global Ratings. The stable outlook on Uniper's rating reflects the outlook on the BBB rating of Fortum, which serves as a cap for Uniper's rating. A downgrade of Fortum's rating could lead to a corresponding downgrade of Uniper's rating. A downgrade from the current BBB investment grade rating to BBB- or below could negatively affect Uniper's liquidity as it would trigger counterparties', particularly in the trading business, right to demand additional collateral which would need to be provided via liquid assets or bank guarantees. The related risk is measured, monitored and managed against a given limit.

Fortum is targeting to maintain at least its current rating, and to strengthen its financial profile and to improve its business risk profile. Fortum and Uniper maintain an active dialogue with credit rating agencies to ensure understanding of Fortum and Uniper's aligned strategy and planned measures which target to achieve a financial and business profile that supports the current rating.

Currency and interest rate risks

Fortum's debt portfolio consists of interest-bearing liabilities and derivatives on a fixed- and floating-rate basis with differing maturity profiles. Fortum is exposed to cash flow risk from changes in interest rates mainly from interest-bearing liabilities and derivatives on a fixed- and floating rate basis. Additionally changes in general interest rate levels may have an impact on discount rates of various provisions like pension provisions and asset retirement obligations causing changes in the amount of interest-bearing debt and financial costs, but without a cash flow impact. Fortum manages the interest rate exposure through a duration mandate of the loan portfolio excluding leasing liabilities and provisions, and cash flow at risk limit. Fortum uses different types of financing contracts and interest rate derivative contracts to manage the interest rate exposure and evaluates and develops the strategies in order to find an optimal balance between risk and financing cost.

Fortum has cash flows, assets and liabilities in currencies other than EUR and is therefore exposed to fluctuations in exchange rates. Currency exposures are divided into transaction exposures (foreign exchange exposures relating to contracted cash flows and balance sheet items where changes in exchange rates will have an impact on earnings and cash flows) and translation exposure (foreign exchange exposure that arises when profits and balance sheets in foreign entities are consolidated at the Group level).

The main translation exposure is toward EUR/Russian Rouble (RUB), EUR/Swedish Krona (SEK) and EUR/British Pound Sterling (GBP), arising from Fortum's extensive operations in Russia, Sweden and the United Kingdom. Fluctuations of the RUB, SEK and the GBP against the EUR could have an adverse effect on future results and equity when consolidating and translating results and net assets in Russian, Swedish and UK affiliates into euros. Translation exposures in the Fortum Group are generally not hedged as the majority of these assets are considered to be long-term strategic holdings.

Transaction exposure arises mainly from physical and financial trading of commodities, existing and new investments, external and internal financing and shareholder loans within the Group. Fortum hedges major transaction exposures on a local level in the reporting currency of each legal entity in order to avoid exchange differences in the profit and loss statement. An exception is the Generation segment's hedging of power sales in Sweden where the currency component is currently not hedged.

Centralised treasury functions in Uniper and the Fortum Corporation separately coordinate currency risk management and execute external hedges consisting of currency derivative contracts, which are matched against the underlying future cash flow according to maturity. Derivatives are used exclusively to hedge existing foreign exchange risks, not for proprietary trading.

Counterparty and credit risks

Fortum is exposed to counterparty risk whenever there is a contractual arrangement with an external counterparty including customers, suppliers, partners, banks, clearing houses and trading counterparties. Following increasing geopolitical tensions, counterparties of the Fortum Group could become subject to sanctions, which may impact current or future business relations. Fortum actively monitors the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws.

Credit risk exposures-related hedging and trading arise through the use of physical delivery contracts, and to financial derivative instruments. The credit risk exposures are volatile and include both the replacement risk and the settlement risk. Exchange-traded derivatives are cleared through central clearing parties (CCPs) or through clearing banks, while OTC derivative contracts are concluded directly with a number of different counterparties, including energy wholesalers and retailers, utilities, trading companies, industrial end-users and financial institutions active in the financial and energy markets.

Due to the financing needs and management of liquidity, Fortum has counterparty credit exposure toward a number of banks and financial institutions. The majority of the exposure is toward Fortum's key relationship banks, which are highly creditworthy institutions. Fortum also has exposure to the Russian financial sector in terms of deposits with financial institutions as well as to banks that provide guarantees for suppliers and contracting parties. Deposits in Russia have been concentrated to the most creditworthy state-owned or controlled banks as well as affiliates of the key relationship banks.

Credit risk exposures relating to customers and suppliers are spread across a wide range of industrial counterparties, energy companies, government and municipal entities, utilities, small businesses, housing associations and private individuals over a range of geographic regions. The risk of credit losses in the electricity and heat sales business in Russia is deemed higher than in Fortum's other operating countries.

Fortum has routines and processes to identify, assess and control exposure. Credit checks are performed before entering or renewing commercial obligations and exposure limits are set for larger individual counterparties as well as for counterparty groups. Creditworthiness is monitored through the use of internal and external sources so that mitigating actions can be taken when needed. Mitigating actions include demanding collateral, such as guarantees, managing contract terms and contract length, and the use of netting agreements.

Operational risks

Operational risks are unexpected events which can lead to negative monetary, safety, environmental or reputational impacts as a result of inadequate or failed internal processes, systems or equipment, or from external events.

People and Process Risks

People risks include an inability to attract and retain the right competences, risks due to the loss of special skills and risks due to errors on the part of employees who have not been sufficiently trained, or who are not sufficiently qualified. Specifically, in its commodity trading business, Uniper has particular expertise and key persons which, in case they were to leave, could have a tangible impact on Uniper Global Commodities earnings potential, business continuation, innovation and development. In order to reduce people risks, Fortum invests in the development and distribution of skills and succession planning. In addition, the existing compensation system for employees is regularly reviewed and adjusted.

Process risks are mainly caused by design failures or human errors. Mitigation includes process automation, testing and education. Process-related risks are assessed and controls for the most relevant risks are defined and implemented as part of the internal controls' framework. IT-system risk management is based on an IT Service Lifecycle Model, and related processes and practices which has been developed using reference frameworks such as COBIT and ITIL. Business continuity plans are in place for business-critical processes.

Property, plant and equipment

Operational events at power and heat generation, gas storage and distribution, fuel handling and recycling and waste facilities can lead to environmental and physical damages, business interruption, clean-up costs and third-party liabilities. Property, plant and equipment risks are primarily managed through condition monitoring and maintenance planning. In addition, Fortum's industrial assets are covered by insurance policies for property damage and business interruption risks which mitigates the impact of internal and external events, should they occur.

Hydro power

Fortum has a large number of hydro power plants and dams in the Nordics and Germany. A dam breach is a serious accident with the threat of possible significant damage downstream. A long-term programme is in place for improving the surveillance of the condition of dams, and for securing the discharge capacity in extreme flood situations. Third-party liabilities from dam failures are strictly the plant owner's responsibility. Together with other hydro power producers, Fortum has a shared dam liability insurance programme in place that covers Finnish and Swedish dam failure liabilities up to SEK 10,000 million (approximately EUR 1 billion).

Nuclear power

Fortum owns and operates the Loviisa nuclear power plant and is the owner of OKG AB which owns three nuclear power reactors in Sweden, of which one is in operation. Additionally, Fortum has minority interests in two Finnish and two Swedish nuclear power companies. Any severe accident or nuclear release in nuclear power plants could lead to high costs, environmental damages and third-party liabilities. Both in Finland and Sweden, the assessment and improvement of nuclear safety is a continuous process performed under the supervision of the Radiation and Nuclear Safety Authority of Finland (STUK) and the Swedish Radiation Safety Authority (SSM) in Sweden.

Owners of nuclear facilities in Finland and Sweden have statutory liabilities for damages resulting from accidents occurring in those nuclear facilities, and for accidents involving any radioactive substance connected to the operation of those facilities. Third-party liability related to nuclear accidents is strictly under the plant operator's responsibility and must be covered by insurance, or other financial cover. In Finland, as the operator of the Loviisa power plant, Fortum has a statutory liability insurance policy of SDR 600 million (Special Drawing Right) equivalent to approximately EUR 700 million. In Sweden, legislation requires that operators of nuclear power plants have a liability insurance or other financial cover in the amount equivalent to EUR 1.2 billion per incident. As the renewed Nuclear liability law has come into effect at the beginning of the year 2022, both in Finland and Sweden, legislation requires that operators of nuclear power plants need to have a liability insurance or other financial cover in the amount equivalent to EUR 1.2 billion per incident.

In both Finland and Sweden, the future costs of the final disposal of spent fuel, the management of low and intermediate-level radioactive waste and the decommissioning of the radioactive part of the nuclear power plant are provided for by a state-established fund to which nuclear power plant operators finance. Contributions to these funds should be sufficient to fully cover expected costs for handling all the produced radioactive waste, but the possibility exists that future costs could exceed currently estimated fund provisions. If this were to occur, Fortum, would be responsible for any such excess costs in relation to its share of operations and assets.

Asset project risks

Fortum's business activities involve construction, modernisation, maintenance and decommissioning of power plants or other energy industry facilities. There is a risk that construction costs exceed planned costs or that construction delays occur as a result of regulatory or permit issues, failure of key suppliers, being unable to obtain permits, or as a result of Covid-19 discontinuing the project. Asset projects also face environmental, health and safety risks. Asset project risks may realise both for Fortum's own assets projects, or projects carried out through joint ventures or associated companies.

Managing asset project risk is an integral part of every project. Project managers are responsible for ensuring that project-related risks which may lead to delays, increased costs, negative impacts to the environment or which could jeopardise the health and safety of personnel and contractors are identified and assessed, and that actions are taken to minimise such risks. The most significant asset projects are listed below.

Datteln 4: Permitting risk

Since 30 May 2020, the coal-fired power plant Datteln 4 with an installed capacity of approximately 1,055 MW is in commercial operation. Construction and operation are based on the currently granted emission control permit from the district government of Munster and the project-based development plan No. 105a by the city of Datteln. However, the project continues to be the subject of several administrative lawsuits. In August 2021, the Higher Administrative Court of North Rhine-Westphalia declared the development plan No. 105-Kraftwerk – by the city of Datteln as invalid and did not allow for an appeal. The court decision is not yet legally binding. Uniper and the city of Datteln submitted a non-admission complaint to obtain the right to appeal. If, as a result of the pending legal proceedings, the permit is revoked, or the development plan is declared ineffective, there is the risk that planned earnings cannot be realised. The coal exit law which entered into force in August 2020 has also not changed the potential for this permitting risk.

Nord Stream 2: Project Failure Risk

Uniper is involved in financing the Nord Stream 2 project. As part of this financing, there is a default risk for receivables from Nord Stream 2 AG, particularly in the event the project cannot be completed successfully. The main risks for the completion of the project are actual and potential United States sanctions. So far US sanctions have been issued against Russian-related entities involved in the project without impacting the completion of the pipeline construction. In July 2021 the US and Germany have come to an agreement on Nord Stream 2, Ukraine and climate protection. The construction of both pipelines is completed, they are filled with gas and the regulated part of the pipelines is waiting certification. Stream 2 AG has confirmed that they are working on to obtain the Independent Transmission system Operator certification from Bundesnetzagentur and complete the project. Due to increased geopolitical tensions on the Russian and Ukrainian border and after Russia recognising of the Luhansk and Donetsk, Germany has halted the certification of the gas pipeline Nord Stream 2 for time being. Uniper is currently analysing potential effects of the halted certification process on its financial position, net assets and results of operation.

For comments on the geopolitical uncertainty due to Russia's invasion on Ukraine, imposed sanctions and possible future sanctions and counter sanctions and their possible impacts on Fortum Group's Russian business and assets, please see Note 39.

Olkiluoto 3 project delay risk

In Finland, Fortum is participating in the country's fifth nuclear power plant unit, Olkiluoto 3 (OL3), through the shareholding in Teollisuuden Voima Oyj (TVO) with an approximately 25% share representing some 400 MW in capacity. Olkiluoto 3 EPR (OL3 EPR), currently under test production phase, was procured as a fixed-price turnkey project from a consortium formed by Areva GmbH, Areva NP SAS and Siemens AG. As stipulated in the plant contract, the consortium companies have joint and several liability for the contractual obligations. According to the latest schedule regular electricity production starts in July 2022.

The risk related to the planned completion refers to a situation in which commercial use cannot be launched as planned, which leads to additional costs of electricity for Fortum. During 2020, several risk management measures related to the OL3 EPR project have been executed to improve TVO's readiness to commission the OL3 EPR plant. For more information about these measures, please see TVO's annual report.

Cyber and information security risks

Fortum's business operations and customer-related services are dependent on well-functioning IT, communications and information management systems and processes. Due to the nature of the business, large amounts of data are processed, often in real-time, and used for operating critical infrastructure, including power stations and gas storage facilities, trading and hedging decisions, serving customers and in internal and external communication and reporting. Like all operators of critical infrastructure, Fortum is increasingly exposed to cyber security risks, including risks related to information and operational technology systems, digitalisation and privacy. Also, physical attacks against issuer's assets are possible and can have material impacts. Therefore, crisis management rehearsals have been kept to improve business resilience. The ongoing political tensions between the EU, United States and Russia, the overall probability of cyber risks has been increased.

Cyber and physical security risks, including risks related to information, operation technology (OT) and digitalisation, are managed in collaboration with corporate security, business divisions and other support functions. Focus area has been OT cyber security capabilities to be able to improve resilience of the operations and production. There are cyber security instructions and procedures in place which set requirements for managing and mitigating cyber security risks. Security-related regulation is increasing and is therefore being monitored by a special program.

Business divisions are responsible for business continuity planning and IT functions are responsible for IT service continuity.

Climate-related risks

Mitigating climate change, adapting to it and driving the transition to a lower-carbon economy is an integral part of Fortum's strategy.

As a result, Fortum has committed to ambitious climate targets and to be carbon neutral as a Group by 2050 at the latest in line with the goals of the Paris Agreement.

Management of climate-related risks is integrated into Fortum's and Uniper's respective risk management frameworks and follows the same governance and processes as for other material risk and uncertainties. Risks are regularly identified and assessed through a structured process. Risk owners are assigned for managing the risks and they are regularly reported and followed-up in various management teams and expert forums. In Fortum, excluding Uniper, there is a specific review of the key climate-related risks by a group of experts from selected functions. These risks are reported to Fortum Executive Management team and the Audit and Risk Committee as part of the annual review of material risks and uncertainties for the Fortum Group.

Climate-related risks are divided into two categories in accordance with the TCFD recommendations: transition risks and physical risks. The identified physical risks are generally found in the operational risk category, whereas transition risks are generally part of the strategic risk category. As Uniper currently does not apply the same approach to climate-related risks, the transition risks and physical risks described below have been assessed for Fortum, excluding Uniper.

See Note 2 on how climate-related matters are reflected in Fortum's consolidated financial statements.

Transition risks

Fortum's strategy is to a large extent built on taking advantage of the opportunities associated with the transition to a low-carbon economy and successfully mitigating the risks. The transition to a low-carbon economy poses a number of strategic and operative risks related to changes in energy and climate policy and regulation, technology development and the business environment in which Fortum operates. Climate change may impact to external market conditions, which can impact Fortum's financial and operative performance. Supply and demand, and the prices achieved for Fortum's products can be affected by a wide range of factors including political developments and consumer preferences for low-carbon energy. Additionally, Fortum's brand and reputation can be negatively impacted by changes in stakeholder perception about Fortum's ability to deliver on its strategy.

The key risks related to climate policy and regulation include national climate policies or steering mechanisms that exceed EU targets for greenhouse gas reduction, renewable energy production and energy efficiency. This can lead to overlapping or inefficient mechanisms, such as diluting the EU emissions trading system (ETS), tighter restrictions on incineration and burning of various fuels, and a more regulated electricity market. In the context of national climate strategies, several countries have decided to phase out certain energy production technologies, such as coal and nuclear. In case such political decisions are done without offering sufficient compensation, there is a risk of write-offs, impairments or early retirement of existing assets, as well as social and dismantling costs. Furthermore, the energy transition may curtail the expected useful lives of assets thereby accelerating depreciation charges. Fortum favours a market-based approach to decarbonisation with CO_2 pricing as a key tool, and clear criteria for capacity remuneration in case such mechanisms are implemented. Additionally, increased demand flexibility is needed to cope with the expected increase in intermittent renewable production.

The transition to a low-carbon economy also poses risks if there emerge new, disruptive technologies that create cheap sources of flexibility or storage in the energy market. Additionally, if there is an accelerated decline in the cost of renewable energy, it could decrease the value of existing conventional power and heat generation assets. Fortum continuously monitors technology developments and selectively invests in innovative technologies. Fortum aims to grow a sizeable renewables portfolio, focusing on wind and solar primarily in Europe, and therefore, monitors the price development of renewables and evaluates both divestment and investment opportunities to optimise the portfolio with the aim of lower carbon emissions. As part of the updated strategy, Fortum is targeting to invest in hydrogen and clean gas solutions. Technological challenges, as well as pending regulation on hydrogen economy, could prevent or slow-down the growth of hydrogen, negatively impacting any such investments and delaying the decarbonisation of natural gas and industrial sectors.

Increasing and broadening sustainability requirements, e.g., in the context of the EU Sustainable Finance taxonomy, could lead to a situation where a part of Fortum's CO_2 free or low carbon energy production is classified as non-sustainable, which might lead to higher capital costs for new investments. Additionally, there is a risk of increasing activity by NGOs which could affect key stakeholder perception. Fortum's exposure to these risks is increasing as a result of the consolidation of Uniper as a subsidiary with coal and gas-fired power generation assets. In order to mitigate these risks, Fortum focuses on the sustainability impacts of strategy and business decisions, communicating transparently about strategy implementation to key stakeholders, ensuring a broad base of investors and flexibility in financing. The aligned strategy for the Fortum Group includes a commitment to reduce its' coal exposure and reach a carbon neutral European generation by 2035 at the latest and reducing CO_2 emissions in European generation with at least 50% by 2030.

Physical risks

Fortum's operations and assets are exposed to external events, the frequency and magnitude of which may increase as a result of climate change. Changes in precipitation, inflows and temperatures and extreme weather events may affect power production as well as bioenergy supply and availability. Intense storms with, e.g., flash floods could increase the risk of dam breaches as well as causing local damages and production outages. Warmer weather may also lead to a need for new cooling or process water sources, and extreme warm and dry summer periods could result in forest fires which potentially damage assets or lead to grid outages restricting power supply. Fortum adapts its operations to the changing climate and takes it into consideration in production and maintenance planning, and in evaluating growth and investment projects. Climate change scenarios are considered in long-term dam safety investments so that extreme flooding situations can be managed.

Climate-change may affect the demand and supply of energy products due to changing weather patterns. This could lead to, e.g., lower and more volatile electricity and gas prices which negatively affect the revenues of power generation assets. Warmer weather may also impact the demand for heating to a larger extent than currently expected.

Covid-19 Risks

Fortum has considered the potential impact of the Covid-19 pandemic on its business operations and concluded the overall effect in the consolidated financial statements not to be significant.

During 2020 and 2021, the Covid-19 pandemic resulted in new and partly unexpected risks as societies and governments across the world implemented drastic measures to contain the spread of the disease. The impacts for Fortum have so far been limited, and the situation compared to the end of 2020 has improved. Fortum is closely monitoring the development of the pandemic and its potential impacts.

Fortum has assessed whether there are any indications for impairment based on internal and external sources of information, such as the effects of the Covid-19. Based on the current pandemic situation and experiences Fortum does not currently foresee that Covid-19 would have such long-term effects that it would impact the overall values of its non-current assets, such as property, plant and equipment and intangible assets.

Fortum share and shareholders

Fortum Corporation's shares have been listed on Nasdaq Helsinki since 18 December 1998. The trading code is FORTUM. Fortum Corporation's shares are in the Finnish book entry system maintained by Euroclear Finland Ltd which also maintains the official share register of Fortum Corporation.

Share key figures

EUR	2021	2020	2019
Earnings per share	0.83	2.05	1.67
Cash flow per share	5.60	2.88	2.27
Equity per share	13.66	14.58	14.61
Dividend per share	1.14[1)]	1.12	1.10
Payout ratio, %	137.3[1)]	54.6	65.9
Dividend yield, %	4.2[1)]	5.7	5.0

1) Board of Directors' proposal for the planned Annual General Meeting 28 March 2022.

For full set of share key figures, see the section Key figures in the Financial Statements.

Shareholders value, share price performance and volumes

Fortum's mission is to deliver excellent value to its shareholders. Fortum's share price has appreciated approximately 117% during the last five years, while Dow Jones European Utility Index has increased 47%. During the same period Nasdaq Helsinki Cap index has increased 52%. During 2021 Fortum's share price appreciated approximately 37%, while Dow Jones European Utility index increased approximately 5% and Nasdaq Helsinki Cap index increased approximately 21%.

In 2021, a total of 351.5 million (2020: 647.9) Fortum Corporation shares, totalling EUR 8,315 million, were traded on Nasdaq Helsinki. The highest quotation of Fortum Corporation shares during 2021 was EUR 27.96, the lowest EUR 19.72, and the volume-weighted average EUR 23.65. The closing quotation on the last trading day of the year 2021 was EUR 26.99 (2020: 19.70). Fortum's market capitalisation, calculated using the closing quotation of the last trading day of the year, was EUR 23,975 million (2020: 17,499).

In addition to the Nasdaq Helsinki, Fortum shares were traded on several alternative market places, for example at Cboe and Turquoise, and on the OTC market. During 2021, approximately 70% (2020: 68%) of Fortum's shares were traded on markets other than the Nasdaq Helsinki Ltd.

Share capital

Fortum Corporation has one class of shares. By the end of 2021, a total of 888,294,465 shares (2020: 888,294,465) had been issued. Each share entitles the holder to one vote at the Annual General Meeting. All shares entitle holders to an equal dividend. At the end of 2021 Fortum Corporation's share capital, paid in its entirety and entered in the trade register, was EUR 3,046,185,953.00.

Shareholders

At the end of 2021 the Finnish State owned 50.76% of the company's shares. The Finnish Parliament has authorised the Government to reduce the Finnish State's holding in Fortum Corporation to no less than 50.1% of the share capital and voting rights.

The proportion of nominee registrations and direct foreign shareholders was 25.8% (2020: 24.2%).

Shareholders, 31 December 2021

Shareholders	No. of shares	Holding %
Finnish State	450,932,988	50.76
Varma Mutual Pension Insurance Company	14,950,407	1.68
Ilmarinen Mutual Pension Insurance Company	14,163,000	1.59
The Finnish Social Insurance Institution	6,430,896	0.72
Kurikan Kaupunki	6,203,500	0.70
Elo Mutual Pension Insurance Company	6,033,485	0.68
The State Pension Fund	2,700,000	0.30
OP-Finland	1,703,775	0.19
Mandatum Life Insurance Company Ltd.	1,441,154	0.16
OP-Henkivakuutus Ltd.	1,366,948	0.15
Danske Invest Finnish Equity Fund	1,295,000	0.15
Nordea Pro Finland Fund	1,089,032	0.12
Seligson & Co OMX Helsinki 25 Exchange Traded Fund (ETF)	1,047,600	0.12
Sigrid Jusélius Foundation	1,039,340	0.12
Nominee registrations and direct foreign ownership	228,795,571	25.76
Other	149,101,769	16.79
Total	**888,294,465**	**100.00**

By shareholder category	% of total amount of shares
Finnish shareholders	
Corporations	1.93
Financial and insurance institutions	1.73
General government	56.72
Non-profit organisations	1.44
Households	12.42
Non-Finnish shareholders	25.76
Total	**100.00**

Breakdown of share ownership, 31 December 2021

Number of shares owned	No. of shareholders	% of shareholders	No. of shares	% of total amount of shares
1-100	85,049	41.91	3,787,899	0.43
101-500	70,069	34.53	17,947,234	2.02
501-1,000	22,827	11.25	16,841,266	1.90
1,001-10,000	23,621	11.64	61,470,562	6.92
10,001-100,000	1,285	0.63	28,745,272	3.24
100,001-1,000,000	84	0.04	21,726,468	2.45
1,000,001-10,000,000	11	0.01	30,350,730	3.42
over 10,000,000	3	0.00	480,046,395	54.04
	202,949	**100.00**	**660,915,826**	**74.40**
In the joint book-entry account and in special accounts on 31 December			596	0.00
Nominee registrations			227,378,043	25.60
Total			**888,294,465**	**100.00**

Management shareholding 31 December 2021

At the end of 2021, the President and CEO and other members of the Fortum Executive Management owned 224,369 shares (2020: 281,308) representing approximately 0.03% (2020: 0.03%) of the total shares in the company.

A full description of the shareholdings and interests in long-term incentive schemes of the President and CEO and other members of the Fortum Executive Management is shown in Note 10.

Authorisations from the Annual General Meeting 2021

In 2021, the Annual General Meeting decided to authorise the Board of Directors to decide on the repurchase and disposal of the company's own shares up to a maximum number of 20,000,000 shares, which corresponds to approximately 2.25% of all the shares in the company. These authorisations are effective until the next Annual General Meeting and, in any event, for a period no longer than 18 months. These authorisations had not been used as per 2 March 2022.

Dividend policy

The dividend policy ensures that shareholders receive a fair remuneration for their entrusted capital, supported by the company's long-term strategy that aims at increasing earnings and cash flow and thereby the dividend. When proposing the dividend, the Board of Directors looks at a range of factors, including the macro environment, balance sheet strength as well as future investment plans. Fortum Corporation's dividend policy is to pay a stable, sustainable and over time increasing dividend.

Dividend distribution proposal

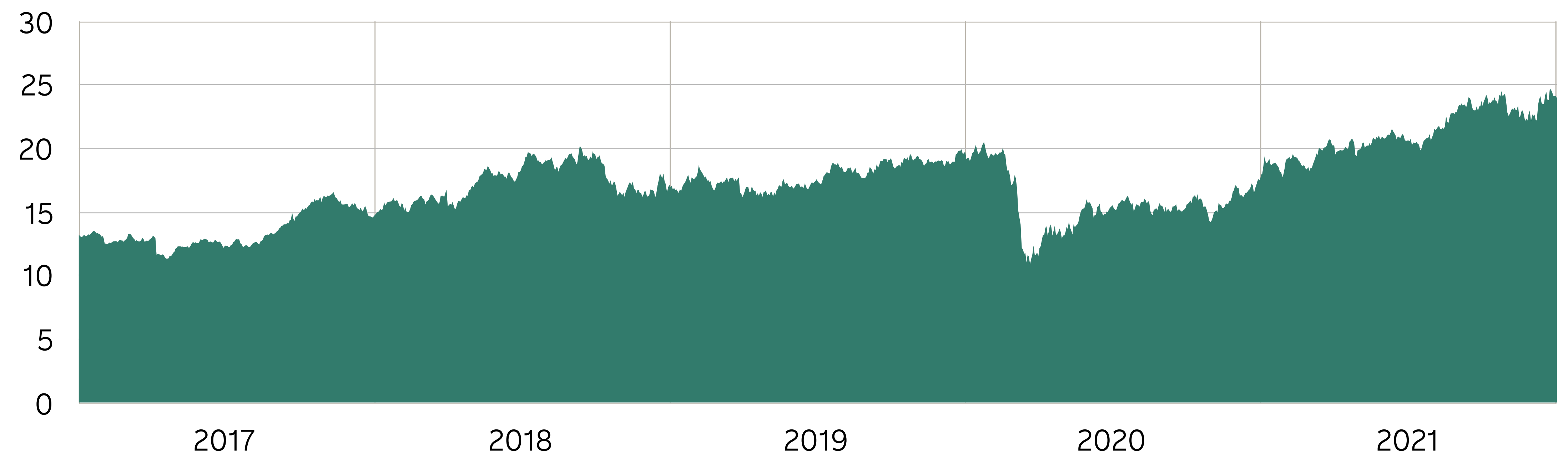
The distributable funds of Fortum Corporation as at 31 December 2021 amounted to EUR 5,747,917,222 including the profit of the financial period 2021 of EUR 1,816,026,744. The company's liquidity is good and the dividend proposed by the Board of Directors will not compromise the company's liquidity.

The Board of Directors proposes to the Annual General Meeting that a dividend of EUR 1.14 per share be paid for 2021.

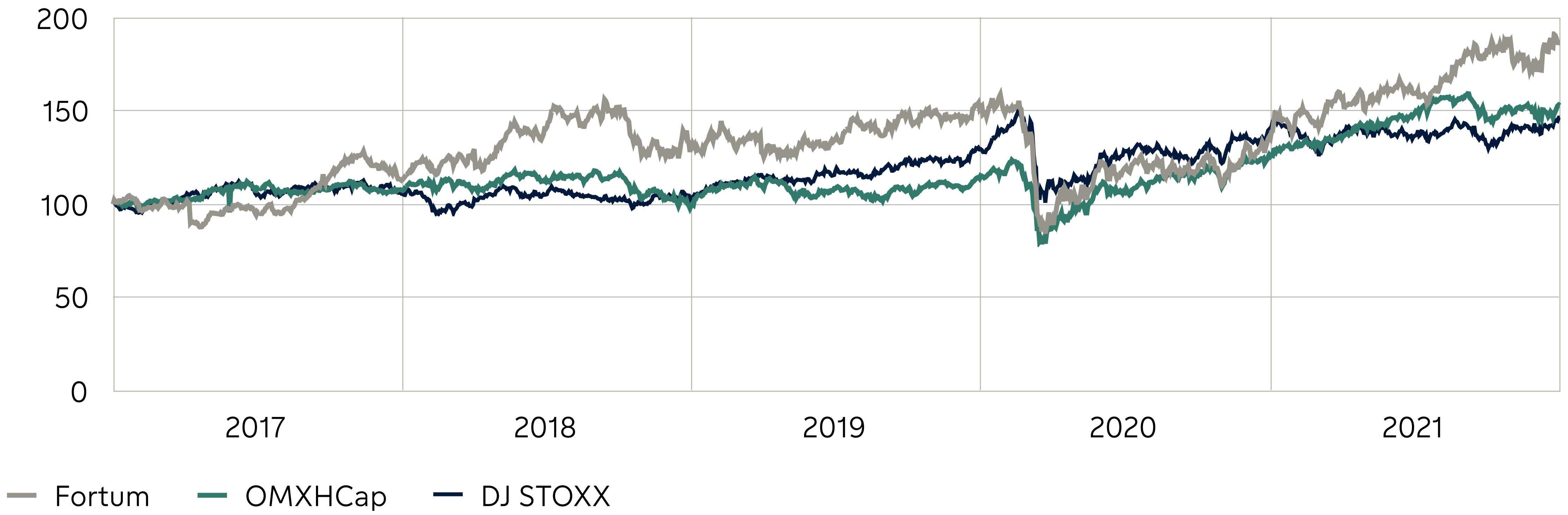
Based on the number of registered shares as at 2 March 2022 the total amount of dividend would be EUR 1,012,655,690. The Board of Directors proposes, that the remaining part of the distributable funds be retained in the shareholders' equity.

The Annual General Meeting is planned to take place on 28 March 2022 at 14:00 EEST.

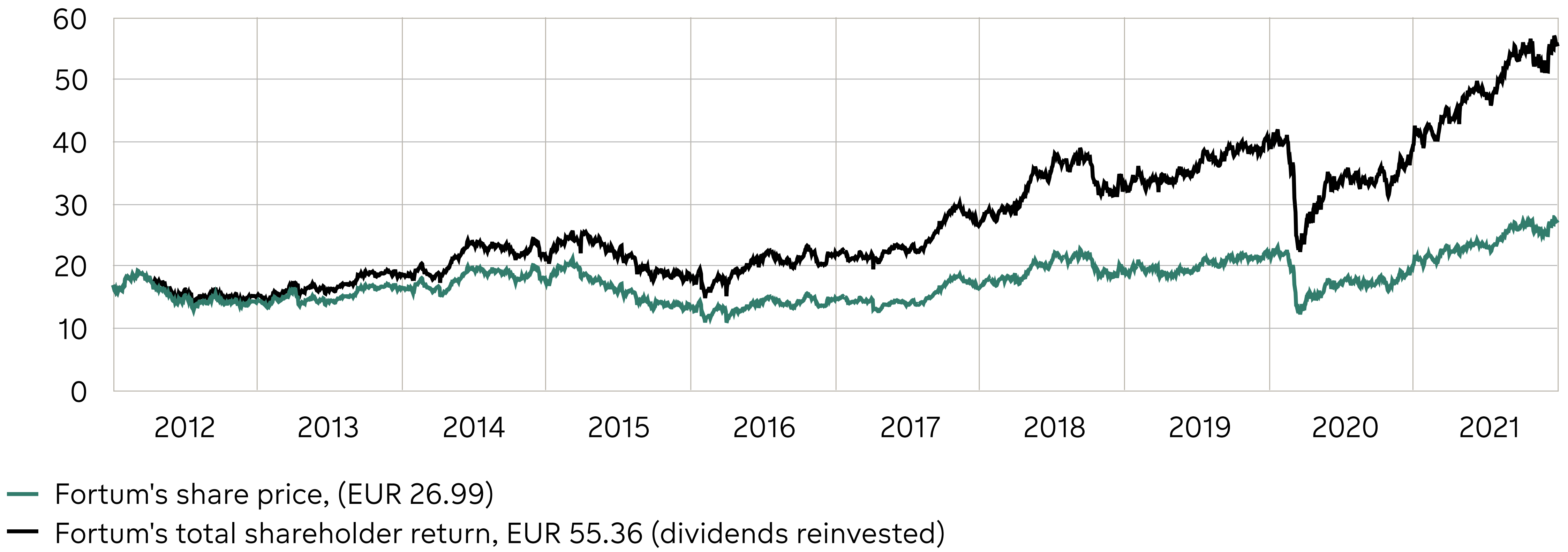
Market capitalisation, EUR billion



Share quotations, index 100 = quote on 2 January 2017



Total shareholder return, EUR



Consolidated income statement

EUR million	Note	2021	2020
Sales	6	112,400	49,015
Other income	8	12,380	4,802
Materials and services	9	-105,170	-44,298
Employee benefits	10	-1,561	-1,195
Depreciation and amortisation	6, 16, 17	-1,281	-1,090
Other expenses	8	-14,232	-5,890
Comparable operating profit	6	**2,536**	**1,344**
Items affecting comparability	6, 7	-3,124	255
Operating profit	6	**-588**	**1,599**
Share of profit of associates and joint ventures	6, 18	192	656
Interest expense		-202	-170
Interest income		156	111
Other financial items - net		154	3
Finance costs - net	11	107	-56
Profit before income tax		**-289**	**2,199**
Income tax expense	12	175	-344
Net profit for the year		**-114**	**1,855**
Attributable to:			
Owners of the parent		739	1,823
Non-controlling interests		-852	32
		-114	**1,855**
Earnings per share for profit attributable to the equity owners of the company (EUR per share)	13		
Basic		0.83	2.05

As Fortum currently has no dilutive instruments outstanding, diluted earnings per share is the same as basic earnings per share.

EUR million	Note	2021	2020
Comparable operating profit		**2,536**	**1,344**
Impairment charges and reversals		-83	2
Capital gains and other related items		2,681	765
Impact from acquisition accounting		-	-222
Changes in fair values of derivatives hedging future cash flow		-5,424	-675
Other		-299	386
Items affecting comparability	6, 7	-3,124	255
Operating profit		**-588**	**1,599**

See **Definitions and reconciliations of key figures**

Consolidated statement of comprehensive income

EUR million	Note	2021	2020
Net profit for the year		**-114**	**1,855**
Other comprehensive income			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges			
Fair value gains/losses		-1,365	-155
Transfers to income statement		117	45
Transfers to inventory/property, plant and equipment		1	2
Deferred taxes		265	21
Net investment hedges			
Fair value gains/losses		-15	48
Deferred taxes		1	-8
Exchange differences on translating foreign operations	4.3	322	-524
Share of other comprehensive income of associates and joint ventures	18	8	-250
Transfer to income statement due to impact from acquisition accounting		-	222
Other changes		20	-70
		-646	**-667**
Items that will not be reclassified to profit or loss in subsequent periods:			
Remeasurement of investments		-6	-28
Actuarial gains/losses on defined benefit plans	31	226	-244
Actuarial gains/losses on defined benefit plans in associates and joint ventures		29	67
		250	**-205**
Other comprehensive income/expense for the year, net of deferred taxes		**-397**	**-873**
Total comprehensive income for the year		**-510**	**982**
Total comprehensive income attributable to:			
Owners of the parent		185	1,052
Non-controlling interests		-695	-70
		-510	**982**

Other comprehensive income (OCI) includes items of income and expense that are recognised in equity and not recognised in the consolidated income statement. They include unrealised items, such as fair value gains and losses on financial instruments hedging future cash flows. These items will be realised in the Consolidated income statement when the underlying hedged items are recognised. OCI also includes gains and losses on fair valuation of other investments, actuarial gains and losses from defined benefit plans, items on comprehensive income in associated companies and translation differences.

Fair valuation of cash flow hedges mainly relates to fair valuation of derivatives, such as futures and forwards, hedging commodity sales price for future transactions, where hedge accounting is applied. When commodity market price is higher (lower) than the hedging price, the impact on equity is negative (positive).

Translation differences from translation of foreign entities, mainly RUB and SEK.

Consolidated balance sheet

EUR million	Note	31 Dec 2021	31 Dec 2020
ASSETS			
Non-current assets			
Intangible assets [1)]	16	2,167	2,268
Property, plant and equipment and right-of-use assets	17	19,049	19,367
Participations in associates and joint ventures	18	2,461	2,912
Shares in Nuclear Waste Funds	29	3,515	3,445
Other non-current assets	20	570	479
Deferred tax assets	28	2,149	1,089
Derivative financial instruments	14, 15	17,096	2,946
Long-term interest-bearing receivables	21	2,392	2,402
Total non-current assets [1)]		**49,399**	**34,908**
Current assets			
Inventories [1)]	22	2,275	1,936
Derivative financial instruments	14, 15	65,392	7,531
Short-term interest-bearing receivables	21	715	598
Income tax receivables	28	161	156
Margin receivables	27	9,163	1,132
Trade and other receivables	23	14,856	8,906
Liquid funds	24	7,592	2,308
Total current assets [1)]		**100,155**	**22,567**
Assets held for sale	3	**108**	**335**
Total assets		**149,661**	**57,810**

EUR million	Note	31 Dec 2021	31 Dec 2020
EQUITY			
Equity attributable to owners of the parent			
Share capital	25	3,046	3,046
Share premium		73	73
Retained earnings		10,062	10,149
Other equity components		-1,050	-316
Total		**12,131**	**12,953**
Non-controlling interests	26	1,534	2,624
Total equity		**13,665**	**15,577**
LIABILITIES			
Non-current liabilities			
Interest-bearing liabilities	27	8,701	8,785
Derivative financial instruments	14, 15	16,657	2,657
Deferred tax liabilities	28	827	952
Nuclear provisions	29	3,891	3,866
Other provisions	30	4,108	3,452
Pension obligations, net	31	1,190	1,520
Other non-current liabilities	32	397	344
Total non-current liabilities		**35,771**	**21,576**
Current liabilities			
Interest-bearing liabilities	27	8,519	1,877
Derivative financial instruments	14, 15	71,947	7,937
Other provisions	30	2,299	780
Margin liabilities	27	985	331
Trade and other payables	33	16,477	9,525
Total current liabilities		**100,226**	**20,451**
Liabilities related to assets held for sale	3	**-**	**206**
Total liabilities		**135,997**	**42,233**
Total equity and liabilities		**149,661**	**57,810**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. Comparatives have been reclassified accordingly. See Note 22 Inventories.

Consolidated statement of changes in total equity

		Share capital	Share premium	Retained earnings		Other equity components			Owners of the parent	Non-controlling interests	Total equity
EUR million	**Note**			**Retained earnings**	**Translation of foreign operations**	**Cash flow hedges**	**Other OCI items**	**OCI items associates and joint ventures**			
Total equity 1 January 2021		**3,046**	**73**	**13,097**	**-2,948**	**-158**	**-175**	**18**	**12,953**	**2,624**	**15,577**
IS Net profit for the year				739					739	-852	-114
Translation differences					180	2	2		184	137	322
Other comprehensive income						-982	207	37	-738	20	-718
Total comprehensive income for the year				739	180	-980	209	37	185	-695	-510
Cash dividend	13			-995					-995	-171	-1,166
Transactions with non-controlling interests				-15					-15	-221	-236
Other				3					3	-3	0
BS Total equity 31 December 2021		**3,046**	**73**	**12,830**	**-2,768**	**-1,138**	**34**	**54**	**12,131**	**1,534**	**13,665**
Total equity 1 January 2020		**3,046**	**73**	**12,441**	**-2,459**	**-70**	**60**	**-108**	**12,982**	**252**	**13,235**
IS Net profit for the year				1,823					1,823	32	1,855
Translation differences					-490	-1	-3	2	-492	-32	-524
Other comprehensive income						-87	-231	40	-279	-70	-349
Total comprehensive income for the year				1,823	-490	-88	-235	42	1,052	-70	982
Cash dividend	13			-977					-977	-160	-1,137
Changes due to business combinations	3								-	2,847	2,847
Impact from acquisition accounting	7			-84				84	0	-	0
Transactions with non-controlling interests				-107					-107	-247	-354
Other				2					2	1	4
BS Total equity 31 December 2020		**3,046**	**73**	**13,097**	**-2,948**	**-158**	**-175**	**18**	**12,953**	**2,624**	**15,577**

Translation differences

Translation of financial information from subsidiaries in foreign currency is done using the average rate for the income statement and the end rate for the balance sheet. The exchange rate differences arising from translation (mainly related to RUB and SEK) to EUR are recognised in equity.

For information regarding exchange rates used, see Note 1 Significant accounting policies. For information about translation exposure see Note 4.3 Interest rate risk and currency risk.

Impact from acquisition accounting

Consolidation of an associated company results includes recording a share of the associated company's other comprehensive income (OCI). If an associated company is either divested or becomes a subsidiary, IFRS requires that these previously recorded OCI items are reclassified inside equity either via the consolidated income statement or directly to retained earnings, depending on the nature of the OCI item. Reclassification does not have an impact on total equity. The above resulted in EUR -84 million being reclassified in 2020 from OCI to retained earnings. See Note 7 Comparable operating profit and comparable net profit.

Cash flow hedges

The impact on equity attributable to owners of the parent from fair valuation of cash flow hedges mainly relates to fair valuation of commodity derivatives, such as futures and forwards, hedging commodity sales price of future transactions, where hedge accounting is applied. When commodity market price is higher (lower) than the hedging price, the impact on equity is negative (positive).

Cash dividends

A dividend for 2020 of EUR 1.12 per share, amounting to a total of EUR 995 million, was decided in the Annual General Meeting on 28 April 2021. The dividend was paid on 7 May 2021. See Note 13 Earnings and dividend per share.

Consolidated cash flow statement

EUR million	Note	2021	2020
Cash flow from operating activities			
Profit for the year		-114	1,855
Adjustments:			
Income tax expense		-175	344
Finance costs - net		-107	56
Share of profit/loss of associates and joint ventures		-192	-656
Depreciation and amortisation		1,281	1,090
Operating profit before depreciations (EBITDA)		**693**	**2,688**
Items affecting comparability		3,124	-255
Comparable EBITDA		**3,817**	**2,434**
Non-cash and other items [1]		1,506	394
Interest received		75	46
Interest paid		-202	-208
Dividends received		124	121
Income taxes paid		-493	-267
Funds from operations [1]		**4,827**	**2,520**
Change in working capital [1]		144	35
Net cash from operating activities		**4,970**	**2,555**
Cash flow from investing activities			
Capital expenditures	16, 17	-1,178	-1,101
Acquisitions of shares	6	-294	-1,801
Proceeds from sales of property, plant and equipment		20	16
Divestments of shares and capital returns		3,863	1,244
Shareholder loans to associated companies and joint ventures		-8	-44
Change in margin receivables		-7,964	-552
Change in other interest-bearing receivables		-166	98
Net cash from/used in investing activities		**-5,727**	**-2,140**

EUR million	Note	2021	2020
Cash flow before financing activities		**-756**	**415**
Cash flow from financing activities			
Proceeds from long-term liabilities		3,439	2,569
Payments of long-term liabilities		-2,315	-507
Change in short-term liabilities		5,364	207
Dividends paid to the owners of the parent	13	-995	-977
Dividends paid to non-controlling interests		-171	-160
Change in margin liabilities		649	-623
Other financing items		43	-3
Net cash from/used in financing activities		**6,013**	**505**
Net increase(+)/decrease(-) in liquid funds		**5,256**	**920**
Liquid funds 1 January		**2,308**	**1,435**
Foreign exchange differences in liquid funds		29	-45
Liquid funds 31 December	23	**7,592**	**2,308**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. The change is also reflected in change in working capital and 'Non-cash and other items' in the cash flow. Comparatives have been reclassified accordingly. See Note 22 Inventories. The change in liabilities to return emission rights continues to be reported in non-cash and other items. See Note 33 Trade and other payables.

Capital expenditures in cash flow do not include not yet paid investments. Capitalised borrowing costs are presented in interest paid.

Change in financial net debt

EUR million	Note	2021	2020
Financial net debt 1 January		**7,023**	**4,833**
Comparable EBITDA		3,817	2,434
Non-cash and other items [1)]		1,506	394
Paid net financial costs and dividends received		-3	-40
Income taxes paid		-493	-267
Change in working capital [1)]		144	35
Capital expenditures		-1,178	-1,101
Acquisitions		-294	-1,801
Divestments and proceeds from sale of property, plant and equipment		3,883	1,260
Change in interest-bearing receivables		-174	54
Dividends to the owners of the parent		-995	-977
Dividends to non-controlling interests		-171	-160
Other financing activities		43	-3
Net cash flow ('-' increase in financial net debt)		6,084	-173
Acquired financial debt		-	2,010
Foreign exchange rate differences and other changes		-150	6
Financial net debt 31 December	27	**789**	**7,023**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. The change is also reflected in change in working capital and 'Non-cash and other items' in the cash flow. Comparatives have been reclassified accordingly. See Note 22 Inventories. The change in liabilities to return emission rights continues to be reported in non-cash and other items. See Note 33 Trade and other payables.

Excludes financial net debt relating to assets held for sale. See Note 3 Acquisitions, disposals and assets held for sale.

Additional cash flow information

Change in working capital

EUR million	2021	2020
Change in interest-free receivables, decrease(+)/increase(-)	-5,892	-1,106
Change in inventories, decrease(+)/increase(-) [1)]	-192	306
Change in interest-free liabilities, decrease(-)/increase(+)	6,227	835
CF **Total** [1)]	**144**	**35**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. The change is also reflected in change in working capital and 'Non-cash and other items' in the cash flow. Comparatives have been reclassified accordingly. See Note 22 Inventories. The change in liabilities to return emission rights continues to be reported in non-cash and other items. See Note 33 Trade and other payables.

Capital expenditure in cash flow

EUR million	Note	2021	2020
Capital expenditure [1)]	16, 17	1,116	1,146
Change in not yet paid investments, decrease(+)/increase(-)		78	-6
Capitalised borrowing costs [1)]		-16	-39
CF **Total**		**1,178**	**1,101**

1) 2020 comparatives have been revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.

Acquisition of shares in cash flow

Acquisition of shares, net of cash acquired, amounted to EUR 294 million during 2021 (2020: 1,801). Acquisition of shares mainly relates to the acquisition of Uniper shares. For further information see Note 3 Acquisitions, disposals and assets held for sale.

Divestment of shares in cash flow

EUR million	Note	2021	2020
Proceeds from sales of subsidiaries, net of cash disposed	3	932	1,156
Proceeds from sales and capital returns of associates and joint ventures	3, 18	2,903	49
Proceeds from sales of other investments	3	28	40
CF **Total**		**3,863**	**1,244**

During 2021 Fortum completed the divestment of the 50% stake in the Swedish district heating and cooling company Stockholm Exergi, district heating business in the Baltics, the Pavagada II and the Rajasthan solar power plants in India, 80% stake in the Sørfjord wind park in Norway and eight small hydropower plants in Sweden. During 2020 Fortum completed the divestment of the district heating business in Järvenpää and Joensuu, Finland, the 80% stake in the Nordic wind portfolio and the 60% stake in the public charging point operator for electrical vehicles in the Nordics. For further information, see Note 3 Acquisitions and disposals and assets held for sale.

1 Significant accounting policies

1.1 Basic information

Fortum Corporation (the company) is a Finnish public limited liability company domiciled in Espoo, Finland. Fortum's shares are traded on Nasdaq Helsinki. Fortum is a European energy company with activities in more than 40 countries. We provide our customers with electricity, gas, heating and cooling as well as smart solutions to improve resource efficiency.

These financial statements were approved by the Board of Directors on 2 March 2022. The Financial Statements are also published in accordance with the European Single Electronic Format (ESEF) reporting requirement. The audit firm, Deloitte Oy, has provided an independent auditor's reasonable assurance report on Fortum's ESEF Financial Statements in accordance with ISAE 3000 (Revised). The ESEF report is available at https://www.fortum.com/about-us/investors/reports-and-presentations.

1.2 Basis of preparation

The consolidated financial statements of Fortum Group for the year ended 31 December 2021 have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRIC Interpretations as adopted by the European Union. The notes to the consolidated financial statements also comply with the supplementing requirements of the Finnish accounting and company legislation.

The consolidated financial statements have been prepared under the historical cost convention, except for financial assets and financial liabilities (including derivative instruments) that are valued at fair value through profit and loss or other comprehensive income.

The figures in the consolidated financial statements have been rounded and consequently the sum of individual figures may deviate from the sum presented. Key figures have been calculated using exact figures. Unless otherwise indicated, all amounts are presented in millions of euro (EUR million).

1.3 Principles for consolidation

These consolidated financial statements comprise of the parent company, subsidiaries, joint ventures and associated companies.

Fortum Group was formed in 1998 by using the pooling-of-interests method for consolidating Fortum Power and Heat Oy and Fortum Oil and Gas Oy (the latter demerged to Fortum Oil Oy and Fortum Heat and Gas Oy 1 May 2004). In 2005 Fortum Oil Oy (current Neste Oyj) was separated from Fortum by distributing 85% of its shares to Fortum's shareholders and by selling the remaining 15%. This means that the acquisition cost of Fortum Power and Heat Oy and Fortum Heat and Gas Oy has been eliminated against the share capital of the companies. The difference has been entered as a decrease in shareholders' equity.

1.3.1 Subsidiaries

Subsidiaries are defined as companies over which Fortum has control. Control exists when Fortum is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. See Note 3 Acquisitions, disposals and assets held for sale.

Intercompany transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred.

Where necessary, subsidiaries' accounting policies have been changed to ensure consistency with the policies the Group has adopted.

Certain subsidiaries and associated companies are not included in the consolidated financial statements on materiality grounds. These companies are accounted for outside the scope of IFRS 9 and measured at cost, with adjustments for any loss allowance.

Fortum Group subsidiaries are disclosed in Note 40 Group companies by segment. Group holding % for companies owned via subsidiaries is based on the Fortum Corporation ownership % in the direct subsidiary times the ownership % of the direct subsidiary in the indirect subsidiary / associate / joint venture.

1.3.2 Associates

Associated companies are entities over which the Group has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights. The Group's interests in associated companies are accounted for using the equity method of accounting. See Note 18 Participations in associated companies and joint ventures.

1.3.3 Joint ventures

Joint ventures are arrangements in which the Group has joint control. Joint ventures are accounted for using the equity method of accounting. See Note 18 Participations in associated companies and joint ventures.

1.3.4 Non-controlling interests

Non-controlling interests in subsidiaries are identified separately from the equity of the owners of the parent company. Non-controlling interests are generally initially measured at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. Changes in non-controlling interest due to changes in ownership interest of a subsidiary are accounted for as equity transactions. Subsequent to acquisition, the carrying amount of non-controlling interests is the amount of those interests at initial recognition plus the non-controlling interests' share of subsequent changes in equity. See Note 26 Non-controlling interests.

1.4 Measures for performance

According to the ESMA Guidelines on Alternative Performance Measures, an Alternative Performance Measure (APM) is understood as a financial measure of historical or future financial performance, financial position, or cash flows, other than a financial measure defined or specified in the applicable financial reporting framework.

Fortum uses APMs, such as Comparable operating profit and Comparable EBITDA in the financial target setting and forecasting, management's follow-up of financial performance of segments and the Group, as well as for the allocation of resources in the Group's performance management process. Items affecting comparability are excluded from Comparable operating profit and Comparable EBITDA and disclosed separately in Fortum's consolidated income statement to support the transparency of underlying business performance when comparing results between periods.

Items classified as Items affecting comparability include accounting effects from valuation according to IFRS not arising from the performance of business operations. Such items include fair value changes of financial derivatives hedging future cash flows where hedge accounting is not applied and fair value changes of physical contracts accounted for as derivatives according to IFRS 9, Financial Instruments.

Further, business performance of operations cannot be compared from one period to another without adjusting for one-time items relating to capital gains and other related items, such as transaction costs arising from acquisitions;

impacts from acquisition accounting; significant impairments and reversals of impairments as well as other miscellaneous non-operating items, such as restructuring and cost management expenses. Such items are also treated as Items affecting comparability.

According to IFRS 3, Business Combinations, transaction costs related to the acquisitions of subsidiary shares are recognised in the consolidated income statement. Such costs are presented in Capital gains and other within Items affecting comparability.

In 2021, Fortum introduced two new APMs to provide additional financial performance indicators to support meaningful comparison of underlying net profitability between periods.

- Comparable net profit is calculated as comparable operating profit +/- comparable share of profit/loss from associates and joint ventures +/- comparable finance costs – net +/- comparable income tax expense +/- comparable non-controlling interests
- Comparable earnings per share is calculated as comparable net profit divided by average number of shares during the period

See Note 7 Comparable operating profit and comparable net profit. Definitions are presented in the section Definitions and reconciliations of key figures.

Fortum's long-term financial target for capital structure is Financial net debt / comparable EBITDA below 2x. See Note 5 Capital risk management.

1.5 Foreign currency transactions and translation

1.5.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in euros, which is the company's functional and presentation currency.

1.5.2 Transactions and balances

Transactions denominated in foreign currencies are translated using the exchange rate at the date of transaction. Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date are translated using the balance sheet date exchange rate. Exchange rate differences are recognised in the consolidated income statement. Net exchange differences relating to financing components are recognised in the income consolidated statement, except when deferred to equity as qualifying cash flow hedges. Translation differences on financial assets through other comprehensive income are included in Other equity components in equity.

1.5.3 Group companies

Income statement and cash flow statement of subsidiaries, whose functional currencies are not euro, are translated into euro using the average exchange rates; whereas the balance sheets of such subsidiaries are translated into euro using the closing exchange rates on the balance sheet date. On consolidation, exchange rate differences arising from the translation of net investment in foreign entities, as well as borrowings and other currency instruments designated as hedges for such investments, are taken to equity. When a foreign operation is sold, such exchange differences are recognised in the consolidated income statement as part of the gain or loss on sale. Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at closing rate.

The balance sheet date rate is based on the exchange rate published by the European Central Bank for the closing date. The average exchange rate is calculated as an average of daily closing rates from the European Central Bank.

Key exchange rates used in consolidated financial statements

	Average rate		Balance sheet date rate	
	2021	**2020**	**31 Dec 2021**	**31 Dec 2020**
United Kingdom (GBP)	0.8596	0.8897	0.8403	0.8990
Norway (NOK)	10.1633	10.7228	9.9888	10.4703
Poland (PLN)	4.5652	4.4430	4.5969	4.5597
Russia (RUB)	87.1527	82.7248	85.3004	91.4671
Sweden (SEK)	10.1465	10.4848	10.2503	10.0343
United States (USD)	1.1827	1.1422	1.1326	1.2271

1.5.4 Associates and joint ventures

Associates and joint ventures, whose measurement and reporting currencies are not euro, are translated into the Group reporting currency using the same principles as for subsidiaries.

1.6 Other significant accounting policies

Fortum describes other significant accounting policies in conjunction with the relevant disclosure information. The table below lists significant accounting policies and the financial statement note where they are presented, as well as the relevant IFRS standard.

Accounting policy	Note	IFRS standard
Subsidiaries	3 Acquisitions, disposals and assets held for sale	IFRS 3, IFRS 10
Assets held for sale	3 Acquisitions, disposals and assets held for sale	IFRS 5
Financial instruments	4 Financial risk management 14 Financial assets and liabilities by categories 15 Financial assets and liabilities by fair value hierarchy	IAS 32, IFRS 7, IFRS 9, IFRS 13
Segment reporting	6 Segment reporting	IFRS 8, IFRS 15
Revenue recognition	6 Segment reporting 23 Trade and other receivables	IFRS 15
Other income	8 Other income and other expenses	IFRS 15
Research and development costs	8 Other income and other expenses	IAS 38
Government grants	8 Other income and other expenses	IAS 20
Share-based payments	10 Employee benefits and Board remuneration	IFRS 2
Earnings per share	13 Earnings and dividend per share	IAS 33
Other shares and participations	14 Financial assets and liabilities by categories 20 Other non-current assets	IAS 32, IAS 36, IFRS 9
Fair value measurement	15 Financial assets and liabilities by fair value hierarchy	IFRS 13
Intangible assets	16 Intangible assets	IAS 38
Tangible assets	17 Property, plant and equipment and Right-of-use Assets	IAS 16
Joint arrangements	18 Participations in associated companies and joint ventures	IFRS 11, IAS 28, IFRS 12
Investments in associates	18 Participations in associated companies and joint ventures	IAS 28, IFRS 12
Impairment testing	19 Impairment testing	IAS 36
Inventories	22 Inventories	IAS 2
Trade receivables	23 Trade and other receivables	IFRS 9
Liquid funds	24 Liquid funds	IAS 7
Borrowings	27 Interest-bearing liabilities	IFRS 9
Income taxes	28 Income taxes on the balance sheet	IAS 12
Decommissioning obligation	29 Nuclear-related assets and liabilities	IFRIC 5
Provisions	30 Other provisions	IAS 37
Pensions and similar obligations	31 Pension obligations	IAS 19
Leases	34 Leases	IFRS 16
Contingent liabilities	36 Pledged assets and contingent liabilities	IAS 37
Events after the balance sheet date	39 Events after the balance sheet date	IAS 1

1.7 Uniper acquisition

On 8 October 2019, Fortum entered into agreements to acquire all the shares held by funds managed by Elliott Management Corporation and its affiliates ("Elliott") and Knight Vinke Energy Advisors Limited and its affiliates ("Knight Vinke"). Control over Uniper was acquired on 26 March 2020. On 31 March 2020, Fortum consolidated the balance sheet of Uniper. The income statement impact from 26 March 2020 to 31 March 2020 was not material. Fortum's consolidated stake in Uniper was 73.4% on 31 March 2020, and 78.0% on 31 December 2021 (31 Dec 2020: 76.1%). Uniper was accounted for as an associated company until 31 March 2020.

The purchase price accounting for the Uniper acquisition was completed on 31 March 2021. No further fair value adjustments were made to the purchase price allocation presented in the 31 December 2020 financial statements.

Fortum presented the preliminary purchase price allocation for the Uniper acquisition at 31 December 2020, which resulted in adjustments to Uniper's 31 March 2020 opening balance sheet. Fair value adjustments made to Uniper's 31 March 2020 opening balance sheet mainly related to property, plant and equipment and right-of-use assets, participations in associates and joint ventures, lease liabilities, other provisions, and deferred taxes.

Increase in the value of property, plant and equipment resulted in additional depreciation (EUR 16 million in 2021); and increase in the value of the lease liability (due to a lower discount rate) resulted in lower interest cost (EUR 9 million in 2021). The lease adjustment was revised in the first quarter of 2021 in connection with the finalisation of the purchase price allocation for the Uniper acquisition. Excess of the acquisition value over the fair value of Uniper's net assets (EUR 515 million) is recognised as goodwill. See Note 3 Acquisitions, disposals and assets held for sale. In connection with the purchase price allocation, Fortum was also required to assess the circumstances giving rise to items recognised in Uniper segment's income statement during the one-year window from the acquisition date. In the first quarter of 2021, Fortum adjusted impairments (EUR 22 million) and reversals of impairments (EUR 12 million) from Uniper's standalone income statement. These adjustments did not have an impact on Uniper's 31 March 2020 opening balance sheet.

1.8 New accounting standards, amendments and interpretations

New accounting standards, amendments and interpretations effective from 1 January 2021 did not have a material impact on Fortum's consolidated financial statements.

New accounting standards, amendments and interpretations issued by the balance sheet date and effective from 1 January 2022, or later, are not expected to have a material impact on Fortum's consolidated financial statements.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

2 Critical accounting estimates and judgements

The preparation of IFRS consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities existing at the balance sheet date, as well as the reported amounts of revenues and expenses during the reporting period.

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances based on, for instance, the analysis of energy policy and the regulatory environment. Actual results and timing may differ from these estimates.

The table below lists the areas where management's accounting estimates and judgements are most critical to reported results and financial position; as well as where to find more information on the areas of critical accounting estimate and judgement.

Critical accounting estimates and judgements	Note
Judgement used in the purchase price allocation of the acquisition of Uniper shares	3 Acquisitions, disposals and assets held for sale
Judgement used in determining the valuation of certain financial instruments	14 Financial assets and liabilities by categories 15 Financial assets and liabilities by fair value hierarchy
Assigned values and useful lives determined for intangible assets and property, plant and equipment acquired in a business combination	16 Intangible assets 17 Property, plant and equipment and right-of-use assets
Assumptions related to impairment testing of property, plant and equipment and intangible assets as well as associated companies and joint ventures	16 Intangible assets 17 Property, plant and equipment and right-of-use assets 18 Participations in associated companies and joint ventures 19 Impairment testing
Judgement used when assessing the nature of Fortum's interest in its investees, when considering the classification of Fortum's joint arrangements, as well as commitments arising from these arrangements	18 Participations in associated companies and joint ventures
Estimates used for the recognition and measurement of deferred tax assets	28 Income taxes on the balance sheet 37 Legal actions and official proceedings
Assumptions made to determine long-term cash flow forecasts of estimated costs for provision related to nuclear production	29 Nuclear-related assets and liabilities
Assumptions made when estimating provisions	30 Other provisions
Assumptions used to determine future pension obligations	31 Pension obligations
Assumptions used to determine the lease liability	34 Leases
Judgement used in accounting for price-adjustment clauses contained in long-term contracts	35 Capital and other commitments

Climate-related matters

Fortum's power generation is mainly based on natural gas-fired generation, and carbon dioxide-free hydro and nuclear power. Fortum targets to reduce the share of coal in power generation. Fortum is also a large producer of district heat. In addition, Uniper segment operates a large commodities trading business and has natural gas storage sites, which play an important role in ensuring a secure and flexible gas supply.

Fortum's climate targets are aligned with the goals of the Paris Agreement and Fortum is committed to carbon neutrality by 2050 at the latest. In Europe, Fortum is committed to at least 50% CO_2 emissions reduction (Scope 1 and 2) in its European generation by 2030 (compared to base-year 2019); and carbon neutrality (Scope 1 and 2) by 2035 at the latest; as well as 35% reduction in Scope 3 greenhouse gas emissions by 2035 (compared to base-year 2021).

Fortum's climate-related targets are reflected in the consolidated financial statements generally when specific actions have been approved. Most significant impact on climate-related targets is to the following financial statement items:

- Impairment testing: approved actions towards Fortum's climate targets are reflected in the assumptions used in the impairment testing. See Note 19 Impairment testing.
- Intangible assets and Property, plant and equipment: economic lives and book values of property, plant and equipment reflect approved actions towards Fortum's climate-related targets. See Note 16 Intangible assets and Note 17 Property, plant and equipment.
- Nuclear provisions include future costs for decommissioning nuclear power plants, and the appropriate treatment of spent fuel. See Note 29 Nuclear-related assets and liabilities.
- Other provisions, such as restructuring provisions, asset retirement obligations and environmental provisions, are recognised when Fortum has a present legal or constructive obligation. See Note 30 Other provisions.

For accounting treatment applied to emission allowances, see Note 22 Inventories.

Impact of Covid-19 on consolidated financial statements

Fortum has considered the potential impact of the Covid-19 pandemic on its business operations, and concluded the overall effect in the consolidated financial statements not to be significant.

During 2020 and 2021, the Covid-19 pandemic resulted in new and partly unexpected risks as societies and governments across the world implemented drastic measures to contain the spread of the disease. Although the impacts for Fortum have so far been limited, and the situation compared to the end of 2020 has improved, the risks related to a prolonged pandemic cannot be ruled out. The main risk factors include lower commodity prices, decreased demand, increased risk of credit defaults and delayed payments, project delays, and increased risk of operational incidents or prolonged maintenance as a result of travel restrictions, absence of key personnel, as well as difficulties in obtaining key materials and spare parts. Fortum is closely monitoring the development of the pandemic and its potential impacts.

Fortum has assessed whether there are any indications for impairment based on internal and external sources of information, such as the effects of the Covid-19. Fortum does not currently foresee that Covid-19 would have such long-term effects that it would impact the overall values of its non-current assets, such as property, plant and equipment and intangible assets.

Geopolitical uncertainties

For geopolitical uncertainties, see Note 4 Financial risk management and Note 39 Events after the balance sheet date, as well as Risk management section in the Operating and financial review.

3 Acquisitions, disposals and assets held for sale

ACCOUNTING POLICIES

SUBSIDIARIES

Acquisition of subsidiaries are accounted for using the acquisition method. The consideration transferred is measured as the aggregate of acquisition date fair values of acquired net assets. Identifiable assets acquired and liabilities assumed are measured initially at acquisition date fair values, irrespective of the extent of any minority interest. The excess of the cost of acquisition over the fair value of the identifiable net assets acquired is recorded as goodwill.

Subsidiaries are fully consolidated from the date on which control is transferred to the Group and are no longer consolidated from the date that control ceases. See Note 1.3 Principles for consolidation.

ASSETS HELD FOR SALE

Assets or disposal groups are classified as assets held for sale if their carrying amounts will be recovered principally through a sale transaction rather than through continuing use. For this to be the case, the asset, or the disposal group, must be available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets or disposal groups, and the sale must be highly probable. These assets, or in the case of disposal groups, assets and liabilities, are presented separately on the consolidated balance sheet and measured at the lower of the carrying amount and fair value less costs to sell. Assets classified as held for sale, or included in a disposal group classified as held for sale, are not depreciated.

CRITICAL ACCOUNTING ESTIMATES AND JUDGMENTS: UNIPER PURCHASE PRICE ALLOCATION

Preparing purchase price allocation requires management to make judgements when determining the fair value of the assets acquired and liabilities assumed. In the Uniper transaction, determining the fair values of property, plant and equipment and right-of-use assets, lease liabilities, provisions, contingent liabilities and long-term purchase obligations has required management judgement.

3.1 Acquisitions

EUR million	2021	2020
Gross investments in shares in subsidiary companies	210	3,646
Gross investments in shares in associated companies and joint ventures	44	119
Gross investments in other shares	36	42
Total	**290**	**3,807**

3.1.1 Acquisitions

Gross investments in shares during 2021 were EUR 290 million (2020: 3,807). Acquisition of subsidiary shares mainly relate to the acquisition of Uniper shares. During 2021 Fortum invested EUR 35 million (2020: 44) in wind partnerships in Russia.

3.1.2 Uniper acquisition in March 2020

On 8 October 2019, Fortum entered into agreements to acquire all the shares held by funds managed by Elliott Management Corporation and its affiliates ("Elliott") and Knight Vinke Energy Advisors Limited and its affiliates ("Knight Vinke"). The transaction was closed in two tranches. Control over Uniper was acquired on 26 March 2020 upon closing of the first tranche of the agreement, 19.6% of the shares. A liability for the maximum amount of shares in the second tranche, 3.8% of the shares, was recognised on the acquisition date. The second tranche of the agreement was closed on 8 May 2020 with the maximum amount of shares.

At 31 March 2020 Fortum's consolidated stake in Uniper was 73.4%. The total purchase consideration for the combined shareholding was EUR 2.6 billion, which increased Fortum's total investment in Uniper to EUR 6.5 billion.

EUR million	Uniper
Acquisition of shares	2,858
Liquid funds in acquired companies	-1,328
Acquisition of shares in cash flow	**1,530**
Interest-bearing liabilities in acquired companies	1,414
Other financial net debt in acquired companies	596
Gross investments in shares	**3,540**

Acquisition accounting

The purchase price allocation on the Uniper acquisition was completed on 31 March 2021. Fair value adjustments were mainly made to property, plant and equipment and right-of-use assets, participations in associates and joint ventures, lease liabilities, other provisions, and deferred taxes. Excess of the acquisition value over Uniper's net assets is presented as goodwill. Fortum elected to measure non-controlling interest in Uniper based on the proportionate value of acquired net assets.

Acquired net assets are presented in the following table.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

EUR million	31 Mar 2020
ASSETS	
Goodwill	1,779
Other intangible assets	980
Property, plant and equipment and right-of-use assets	9,268
Participations in associates and joint ventures	750
Derivative financial instruments	21,958
Interest-bearing receivables	1,840
Shares in Nuclear Waste Funds	1,602
Margin receivables	413
Trade and other receivables	7,236
Deferred and income tax assets	1,021
Inventories	1,565
Liquid funds	1,328
Total assets	**49,739**
LIABILITIES	
Derivative financial instruments	21,084
Interest-bearing liabilities	1,575
Pension obligations	953
Nuclear provisions	1,758
Other provisions	3,935
Deferred and income tax liabilities	348
Margin liabilities	924
Trade and other payables	7,852
Total liabilities	**38,428**
Net assets on Uniper's balance sheet	**11,312**
Less goodwill on Uniper's balance sheet [1)]	-1,779
Net assets from Uniper excluding goodwill	**9,533**
Purchase consideration	2,587
Previously held equity interest	4,613
Acquisition value	**7,201**
Non-controlling interest on Uniper's balance sheet	-424
Non-controlling interest from Uniper acquisition	-2,423
Total non-controlling interest (NCI)	**-2,847**
Goodwill	**515**

1) Goodwill on Uniper's balance sheet is deducted as it is not an identifiable asset of Fortum according to IFRS.

Acquired net assets are based on Uniper's first quarter 2020 financial report published on 7 May 2020. Balance sheet line items have been classified in accordance with Fortum's balance sheet categorisation and, as such, is not fully comparable to Uniper's standalone balance sheet. Further, Fortum and Uniper are both co-owners in the Swedish nuclear company OKG AB. OKG AB is consolidated into Uniper Group as a subsidiary with a 45.5% minority representing Fortum's ownership in OKG AB. Fortum accounted for the shareholding in OKG AB as an associated company until 31 March 2020, and consolidated OKG AB as a subsidiary from 31 March 2020.

Shareholding in Uniper has been acquired in stages as Fortum held 49.99% of Uniper shares prior to the acquisition of control on 26 March 2020. Under IFRS, the previously held associated company interest is fair valued upon gaining control, and any gain or loss from the difference between the balance sheet value and the fair value of the interest is recognised to the consolidated income statement. The fair value of the previously held associated company interest in Uniper was EUR 4,613 million. The fair value was based on Uniper share price at 26 March 2020, slightly adjusted by a premium for significant influence. There are no significant unobservable inputs used in the valuation (market approach corresponding to fair value hierarchy level 2). No gain or loss was recognised from fair valuing the previously held equity interest as the fair value was approximately equal to the carrying amount.

Acquisition-related costs of EUR 20 million are included in items affecting comparability in the 2020 consolidated income statement. See Note 7 Comparable operating profit and comparable net profit.

3.1.3 Other share transactions

During 2021, the Fortum-Rusnano wind investment fund sold the 200-MW Kalmykia wind parks to the Fortum-Russian Direct Investment Fund (RDIF) joint venture.

During 2020, Fortum's joint venture, the Fortum-Rusnano wind investment fund, sold the 50-MW Ulyanovsk 2 and the 300-MW Rostov wind farms to a new joint venture established with RDIF aimed at the operation of renewable power plants in Russia.

3.2 Disposals

EUR million	2021	2020
Gross divestments of shares in subsidiary companies	1,196	1,156
Gross divestments of shares in associated companies and joint ventures	2,898	31
Gross divestments of other investments	28	40
Total	**4,122**	**1,226**

3.2.1 Disposals of subsidiary companies

Disposals during 2021

On 22 June 2021, Fortum announced that it had signed an agreement to divest the 250-MW Pavagada II and the 250-MW Rajasthan solar power plants in India to Actis. The total consideration from the divestment on a debt and cash-free basis, including the effect of deconsolidating of the net debt amounted to approximately EUR 280 million. The sale of Pavagada II was concluded in October 2021 and the first phase of Rajasthan divestment in November 2021. Fortum recorded a tax-exempt sales gain of EUR 11 million in the 2021 comparable operating profit of the City Solutions segment.

In February 2020, Uniper signed an agreement with Saale Energie GmbH, a subsidiary of the Czech company Energetický a průmyslový holding, a. s., on the sale of the interest in the Schkopau lignite-fired power plant in Germany.

Uniper is the operator of the power plant and holds a stake of about 58%. Saale Energie holds a stake of around 42% in the Schkopau power plant and took over Uniper's stake effective 1 October 2021.

On 12 March 2021, Fortum announced that it had signed an agreement to sell its district heating business in the Baltics to Partners Group. On 2 July 2021, Fortum concluded the sale. The total consideration of the sale amounted to approximately EUR 710 million. Fortum recorded a tax-exempt capital gain of EUR 254 million in the City Solutions segment's 2021 results.

On 2 March 2021, Fortum announced it had decided to construct the largest solar power plant in Russia through a joint venture established with RDIF. In December 2021, 78 MW of the capacity was commissioned and the remaining capacity will be commissioned in the second half of 2022. The power plant is based on capacities won by Fortum in CSA auctions in 2018 and 2019. In March 2021, Fortum sold the CSA-backed solar power project to the joint venture with RDIF, which had a positive effect of EUR 17 million in the 2021 comparable operating profit of the Russia segment.

In December 2020, Fortum decided to sell eight small hydropower plants in Sweden with an average annual power generation of 0.1 TWh to Downing Renewables & Infrastructure Trust plc. The total purchase price on a debt and cash free basis is EUR 64.5 million. The transaction closed on 2 February 2021.

Disposals during 2020

In December 2019, Fortum and Credit Suisse Energy Infrastructure Partners (CSEIP) signed an agreement whereby funds advised by CSEIP acquired an 80% stake in Fortum's Nordic wind portfolio. The total consideration on a debt- and cash-free basis was approximately EUR 170 million. The transaction, excluding the Sørfjord wind park, which was still under construction, was closed on 14 May 2020. The transaction on Sørfjord wind park was closed on 20 January 2021.

On 3 July, Fortum announced it had agreed to sell the district heating business in Järvenpää, Finland for EUR 375 million to a consortium consisting of Vantaa Energy Ltd, Infranode, and Keva. Fortum completed the transaction on 19 August 2020 and recorded a tax-exempt capital gain of EUR 291 million in the City Solutions segment's 2020 results.

On 27 April 2020, Fortum signed an agreement to sell 60% of its public charging point operator, Fortum Recharge AS, for electrical vehicles in the Nordics to Infracapital. The transaction closed on 29 May 2020, and Fortum recorded a tax-exempt capital gain of EUR 72 million in Other Operation's 2020 results. The cash consideration was EUR 87 million.

In December 2019, Fortum signed an agreement to sell its district heating business in Joensuu, Finland to Savon Voima Oyj. The total consideration on a debt- and cash-free basis was approximately EUR 530 million. The transaction was completed on 10 January 2020, and Fortum recorded a tax-exempt capital gain of EUR 431 million in the City Solutions segment's 2020 results.

Divestments of shares in subsidiaries - Impact on financial position

EUR million	2021	2020
Gross divestments of shares in subsidiary companies	1,196	1,156
Intangible assets and property, plant and equipment	886	394
Other non-current and current assets	172	66
Liquid funds	42	10
Interest-bearing loans	-254	-250
Other liabilities and provisions	-168	-79
Net assets divested	**676**	**142**
Reclassified to participations in associates and joint ventures	37	11
Result from transaction	**357**	**794**

3.2.2 Other disposals

On 20 September 2021, Fortum concluded the sale of its 50% ownership in the Swedish district heating and cooling company Stockholm Exergi Holding AB (publ) to a consortium of European institutional investors of APG, Alecta, PGGM, Keva, and AXA. The signing of the transaction was announced on 30 June 2021. The total consideration of the sale amounted to SEK 29.5 billion (approximately EUR 2.9 billion). Fortum recorded a tax-exempt capital gain of EUR 2,350 million in the City Solutions segment's 2021 results.

3.3 Assets held for sale

Assets held for sale at 31 December 2021 include equity investment in Javelin, UK (Uniper segment), and the Öresundverket power plant in Malmö, Sweden (Uniper segment).

Assets held for sale at 31 December 2020 included Schkopau lignite-fired power plant (Uniper segment) and Sørfjord wind park (Generation segment). The transaction on Schkopau power plant was closed on 1 October 2021, and the transaction on Sørfjord wind park on 20 January 2021.

EUR million	31 Dec 2021	31 Dec 2020
Assets held for sale		
Intangible assets and property, plant and equipment and right-of-use assets	25	230
Deferred tax assets	-	9
Other non-current and current assets	83	96
BS Total	**108**	**335**
Liabilities related to assets held for sale		
Interest-bearing liabilities	-	43
Deferred tax liabilities	-	33
Pension and asset retirement obligations	-	18
Other liabilities and provisions	-	112
BS Total	**-**	**206**

4 Financial risk management

Fortum's risk management framework, objectives, organisation and processes as well as a description of strategic, sustainability, financial and operational risks can be found in the Risk management section of the Operating and financial review (OFR).

Uniper was consolidated to Fortum as a subsidiary as of 31 March 2020, and Uniper is a separate reportable segment of Fortum. Additionally, Uniper is a separate listed company operating under German laws and regulations with its own risk management systems, including a set of risk policies defining the risk management organisation principles, processes and responsibilities. Uniper does not directly apply the risk management systems applicable to other Fortum segments, however, its key risk management principles and processes are materially similar.

4.1 Commodity market and fuel risks

Fortum's business is exposed to fluctuations in prices and availability of commodities used in the production, transmission and sales of energy products. The main exposure is toward electricity prices and volumes, gas prices and volumes, prices of emissions and prices and availability of fuels. Fortum hedges its exposure to commodity market risks in order to reduce volatility in cash flow and to increase the predictability of future results.

Risk management for commodity hedging and trading activities is based on general standards in the industry and involves the segregation of duties, as well as daily calculation, monitoring and reporting of results, positions and risks. Controls are in place to ensure exposures are kept within approved limits and mandates. Hedging involves the use of derivative financial instruments, as well as fixed-price physical delivery contracts.

Derivatives are also entered into for proprietary trading purposes which is conducted exclusively in compliance with strict internal and regulatory restrictions.

4.1.1. Sensitivity arising from commodity derivatives according to IFRS 7

Sensitivity analysis shows the sensitivity arising from financial commodity derivatives as defined in IFRS 7. Sensitivities are presented with most descriptive measure about the risk management and usage of derivatives in Uniper segment and Fortum's other segments.

Fortum, excluding Uniper

In Fortum, excluding Uniper, derivatives are used for hedging purposes with hedge accounting applied to most hedging strategies. Sensitivities in the table below are calculated based on the electricity position as of 31 December. Positions are actively managed in the day-to-day business operations and therefore the sensitivities vary from time to time. Sensitivity analysis includes only the market risks arising from derivatives i.e. the underlying physical electricity sales and purchases are not included. Sensitivity is calculated with the assumption that electricity forward and futures quotations would change 1 EUR/MWh for the period Fortum, excluding Uniper, has derivatives.

Sensitivity according to IFRS 7

+/- 1 EUR/MWh change in electricity forward and futures quotations, EUR million	Effect	2021	2020
Effect on profit before income tax	-/+	1	1
Effect on equity	-/+	57	58

Uniper segment

In Uniper segment, derivatives are used mainly for hedging, but also for proprietary trading purposes.

Commodity price risks in Uniper segment are measured based on a value-at-risk approach with 95% confidence interval and take into account the amount of open position as well as the prices, their volatility and the liquidity on the respective markets. Value-at-risk figures are supplemented by stop-loss and volume based indicators. When necessary, additional portfolio-specific restrictions are set.

Based on the current Uniper portfolio, as of December 2021, the calendar year based weighted value-at-risk, which takes market liquidities into account and ignores correlations between years, was EUR 1,422 million (2020: 463) for financial and physical commodity contracts covering next three years.

4.1.2. Electricity price and volume risk

The exposure to Nordic electricity prices and normal volume fluctuations (e.g. due to weather-driven demand and supply changes) is the largest commodity market risk exposure for Fortum in terms of impact to earnings. The exposure arising from outright power production (hydro and nuclear production assets) is mainly hedged by entering into electricity derivatives contracts on exchanges such as Nasdaq Commodities or the European Energy Exchange, as well as directly with counterparties active in the energy and financial markets. The main objective of hedging is to reduce the effect of electricity price volatility on cash flows and to increase the predictability of future results. The Generation segment and Uniper segment have separate hedging strategies covering several years in the short- to medium term. These hedging strategies are executed within approved mandates and are continuously evaluated as electricity and other commodity market prices, the hydrological balance and other relevant parameters change.

Generation segment's hedging for power sales is performed in EUR on a Nordic level covering both Finland and Sweden. The currency component of these hedges in the Swedish entity is currently not hedged. Generation segment's sensitivity to the Nordic electricity market price is dependent on the hedge level for a given time period. As per 31 December 2021, approximately 75% of the Generation segment's estimated Nordic power sales volume was hedged for the calendar year 2022 with a price 34 EUR/MWh and approximately 50% for the calendar year 2023 with a price 31 EUR/MWh.

Uniper segment's power hedging is performed in EUR only in Sweden as there is no electricity production in other Nordic countries. The currency exposure in the Swedish entity is hedged according to a separate hedging strategy. Uniper segment's sensitivity to the Nordic electricity price is dependent on the hedge level for a given time period. Uniper segment's Nordic generation hedges as per 31 December 2021 was approximately 80% at 18 EUR/MWh for 2022, and approximately 60% at 18 EUR/MWh for 2023.

In the Russia segment, electricity prices are the main sources of market risk. The electricity price is highly correlated with the gas price. Exposure is partly mitigated through regulated fixed-price bilateral agreements, but the majority of electricity sales is exposed to spot price risk. There are no derivatives contracts in the Russia segment.

4.1.3 Commodity derivatives

The table below discloses Fortum Group's commodity derivatives for which hedge accounting according to IFRS 9 is applied. The fair values represent the values disclosed on the balance sheet. See also Note 14 Financial assets and liabilities by categories for accounting principles and Note 15 Financial assets and liabilities by fair value hierarchy for basis of fair value estimations.

Commodity derivatives subject to hedge accounting 2021

	Volume, TWh				Fair value, EUR million		
	Under 1 year	1–5 years	Over 5 years	Total	Positive	Negative	Net
Electricity derivatives	25	31	1	57	349	1,648	-1,298
Gas derivatives	30	-	-	30	335	1,750	-1,415
Netting against commodity exchanges [1)]					-215	-215	-
Total	**55**	**31**	**1**	**87**	**469**	**3,183**	**-2,713**

Commodity derivatives subject to hedge accounting 2020

	Volume, TWh				Fair value, EUR million		
	Under 1 year	1–5 years	Over 5 years	Total	Positive	Negative	Net
Electricity derivatives	28	28	1	58	237	410	-173
Netting against commodity exchanges [1)]					-89	-89	-
Total					**148**	**321**	**-173**

1) In Fortum, excluding Uniper, receivables and liabilities against commodity exchanges arising from standard derivative contracts with same delivery period are netted.

Maturity analysis of commodity derivatives

Amounts in the table are fair values.

	2021				2020			
EUR million	Under 1 year	1-5 years	Over 5 years	Total	Under 1 year	1-5 years	Over 5 years	Total
Commodity derivatives, assets	65,165	16,965	44	**82,174**	7,416	2,662	68	**10,146**
Commodity derivatives, liabilities	71,839	16,495	126	**88,460**	7,756	2,428	111	**10,295**

4.2 Liquidity and refinancing risk

Fortum's business is exposed to liquidity and refinancing risks primarily through the need to finance the Group's business operations including margining and collaterals issued for trading and hedging activities.

In addition to the margining risk, trading derivative financial instruments exposes the Group to a liquidity risk associated with having to provide rating- dependent financial collateral like cash or bank guarantees. A downgrade in rating could trigger counterparties' right to demand additional collateral, which would need to be provided via cash or bank guarantees.

The derivative instruments used by the Group are traded via exchanges and over-the-counter with selected counterparties based on bilateral margining agreements. Both ways of trading require the exchange of cash to cover credit risks (margining payments). The sharp increase in commodity prices during latter part of 2021 has increased the net margining payments significantly. Margin receivables from commodity hedging activities at balance sheet date was EUR 9,163 million (2020: 1,132) and margin liabilities EUR 985 million (2020: 331).

Liquidity and refinancing risks are managed through a combination of cash positions and committed credit and other guarantee facility agreements with the core banks. The maturity profile of loans is monitored to ensure that there is at all times access to adequate liquidity for investments, loan maturities and margining required for commodity trading and hedging activities. Cash pools of Uniper are not combined with the cash pools of its ultimate parent company Fortum Corporation.

Fortum's business is capital intensive and it has a diversified loan portfolio mainly consisting of long-term financing denominated in EUR and commercial papers. Long-term financing is primarily raised by issuing bonds under Fortum Corporation's Euro Medium Term Note programme, as well as through bilateral and syndicated loan facilities from a variety of different financial institutions.

In Fortum, financing is primarily raised on parent company level and funds are distributed internally through various internal financing arrangements. For example, operations of PAO Fortum are mainly financed via equity and intra-group long-term RUB denominated loans. The internal RUB loan receivables are hedged via external derivative contracts offsetting the currency exposure for the parent company.

On 31 December 2021, 66% (2020: 85%) of the Group's total external loans was raised by the parent company Fortum Corporation, and remaining 29% (2020: 6%) by the Uniper segment and 5% (2020: 9%) by other subsidiaries.

At the end of 2021, financial net debt was EUR 789 million (2020: 7,023) and adjusted net debt EUR 3,227 million (2020: 9,784).

On 31 December 2021, loan maturities for the coming twelve-month period amounted to EUR 8,389 million (2020: 1,717), including EUR 3,129 million commercial papers, EUR 2,300 million revolving credit facilities and EUR 1,731 million current portion of long-term loans. Maturities in 2022 also include EUR 736 million loans with no contractual due date.

At the end of the reporting period, the Group's liquid funds totalled EUR 7,592 million (2020: 2,308). Liquid funds include EUR 2,966 million (2020: 289) held by the Uniper segment. Russian subsidiaries held EUR 300 million (2020: 244) of liquid funds in the form of cash and bank deposits.

Maturity of loans

EUR million	2021
2022	8,389
2023	3,848
2024	867
2025	18
2026	772
2027 and later	2,251
Total	**16,144**

For more information on loans, see Note 27 Interest-bearing liabilities.

Liquid funds, major credit lines and debt programmes 2021

EUR million	Total facility	Drawn amount	Available amount
Liquid funds			
Fortum			4,626
Uniper segment			2,966
Total			**7,592**
of which in Russia			300
Committed credit lines			
Fortum Corporation, EUR 1,750 million syndicated credit facility	1,750	1,750	-
Fortum Corporation, EUR 800 million bilateral credit facility	800	500	300
Uniper, EUR 1,800 million syndicated credit facility	1,800	1,800	-
Fortum Corporation, bilateral overdraft facilities	100	-	100
Total	**4,450**	**4,050**	**400**
Debt programmes (uncommitted)			
Fortum Corporation, CP programme EUR 1,000 million	1,000	988	12
Fortum Corporation, CP programme SEK 10,000 million	976	660	316
Uniper, CP programme EUR 1,800 million [1]	1,800	1,480	-
Fortum Corporation, EMTN programme EUR 8,000 million	8,000	3,698	4,302
Uniper, Debt Issuance programme EUR 2,000 million	2,000	-	2,000
Total	**13,776**	**6,826**	**6,630**

1) Link to Uniper EUR 1,800 million syndicated credit facility: available only for undrawn syndicated credit facility amount. Since whole Uniper syndicated credit facility was drawn, no Uniper CP limit available as of 31 December 2021.

Liquid funds, major credit lines and debt programmes 2020

EUR million	Total facility	Drawn amount	Available amount
Liquid funds			
Fortum			2,019
Uniper segment			289
Total			**2,308**
of which in Russia			244
Committed credit lines			
Fortum Corporation, EUR 1,750 million syndicated credit facility	1,750	-	1,750
Fortum Corporation, EUR 1,450 million syndicated credit facility	1,450	-	1,450
Uniper, EUR 1,800 million syndicated credit facility	1,800	-	1,800
Fortum Corporation, bilateral overdraft facilities	100	-	100
Total	**5,100**	**-**	**5,100**
Debt programmes (uncommitted)			
Fortum Corporation, CP programme EUR 1,000 million	1,000	120	880
Fortum Corporation, CP programme SEK 10,000 million	997	75	921
Uniper, CP programme EUR 1,800 million	1,800	65	1,735
Fortum Corporation, EMTN programme EUR 8,000 million	8,000	4,195	3,805
Uniper, Debt Issuance programme EUR 2,000 million	2,000	-	2,000
Total	**13,797**	**4,455**	**9,341**

Maturity analysis of interest-bearing loans and derivatives

Interest-bearing loans are non-discounted expected cash flows including future interest payments and amortisations. Interest rate and currency derivatives represent the fair value of the derivatives on the balance sheet. Maturity analysis of commodity derivatives is disclosed separately in the Note 4.1.3 Commodity derivatives.

	2021				2020			
EUR million	Under 1 year	1-5 years	Over 5 years	Total	Under 1 year	1-5 years	Over 5 years	Total
Interest-bearing loans	8,490	5,728	2,450	16,669	1,856	4,912	3,711	10,479
Interest rate and currency derivative liabilities	107	17	19	143	181	82	37	300
Interest rate and currency derivative receivables	-227	-87	-1	-315	-115	-133	-83	-331
Total	**8,371**	**5,659**	**2,468**	**16,498**	**1,922**	**4,860**	**3,665**	**10,448**

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4.3 Interest rate risk and currency risk

4.3.1 Interest rate risk

Fortum is exposed to cash flow risk from changes in interest rates mainly from interest-bearing liabilities and derivatives on a fixed- and floating rate basis. Additionally, changes in general interest rate level may have an impact on discount rates of various provisions, like pension provisions and asset retirement obligations, causing changes in the amount of adjusted net debt and finance costs without cash flow impact.

Fortum manages the interest rate exposure through a duration target of the loan portfolio (excluding lease liabilities and provisions), and cash flow at risk limit. Fortum uses different types of financing contracts and interest rate derivative contracts to manage the interest rate exposure, and evaluates and develops the strategies in order to find an optimal balance between risk and financing cost.

On 31 December 2021, the duration of Fortum's loan portfolio (including derivatives) was 1.7 years (2020: 2.0). Approximately 82% (2020: 76%) of the loan portfolio was on a floating rate basis, or fixed rate loans maturing within the next 12-month period. The flow risk, measured as the difference between the base case interest cost estimate and the worst-case scenario estimate for Fortum's loan portfolio for the coming 12 months, was EUR 63 million (2020: 16). The increase of flow risk is mainly driven by increase of new loans, especially floating loans, and a significant increase in interest rate volatilities at the end of 2021 in several currencies.

The average interest rate for the total loan portfolio, including derivatives in finance costs, was 1.3% at the balance sheet date (2020: 1.5%). Part of the external loans, EUR 925 million (2020: 634), have been swapped to RUB and the average interest cost for these loans, including cost for hedging the RUB, was 8.3% at the balance sheet date (2020: 6.2%). The average interest rate of EUR loans was 0.6% (2020: 0.9%).

Fortum uses interest rate derivatives and to large extend applies hedge accounting when hedging the loan portfolio of the Group. There is an ongoing reform of certain floating interest benchmark rates to alternative risk free rates (ARR) due to the forthcoming IBOR (Interbank Offered Rates) transition. Since EURIBOR (Euro Interbank Offered Rate) is expected to continue as the benchmark rate, as it has been already fully reformed, all hedges are expected to continue to be 100% effective with no impact on finance costs – net. In addition to significant EURIBOR exposure, the Group has interest rate derivatives in RUB and SEK and sees that the IBOR transition will not have significant impact on the value and effectiveness of these derivatives.

Fortum Group has no interest rate derivatives or external loans in currencies (USD, GBP) where the IBOR transition had impact already starting in year 2022 and thus there has not been any need to restructure the portfolio. Agreements with reference to EONIA (Euro Overnight Index Average) have been amended to ESTR (Euro Short Term Rate) during 2021. Fortum Group will continue to monitor the development of the IBOR transition.

4.3.2 Currency risk

Fortum's policy is to hedge major transaction exposures on a local level in the reporting currency of each legal entity in order to avoid exchange differences in the profit and loss statement. An exception is Generation segment's hedging of power sales in Sweden where the currency component is not hedged. Fortum Treasury and Uniper Treasury manage each own risks centrally by executing internal and external currency deals to mitigate the currency risk. Derivatives are used to hedge existing foreign exchange risks, not for proprietary trading.

Fortum transaction exposure, excluding Uniper

	2021			2020		
EUR million	**Net Position**	**Hedge**	**Open**	**Net Position**	**Hedge**	**Open**
RUB	744	-744	0	455	-455	0
SEK	-898	901	3	1,825	-1,825	1
PLN	499	-498	1	417	-416	2
NOK	748	-746	2	84	-82	2
INR	-	-	-	86	-86	0
USD	-36	37	1	-87	89	1
Other	5	-2	3	-4	4	0
Total	**1,062**	**-1,052**	**11**	**2,777**	**-2,771**	**6**

Fortum has cash flows, assets and liabilities in currencies other than EUR and is therefore exposed to fluctuations in exchange rates. Currency exposures are divided into transaction exposures (foreign exchange exposures relating to contracted or estimated cash flows and balance sheet items where changes in exchange rates will have an impact on earnings and cash flows) and translation exposure (foreign exchange exposure that arises when profits and balance sheets in foreign entities are consolidated).

Transaction exposures arise mainly from physical and financial trading of commodities, existing and new investments, external and internal financing and shareholder loans. Contracted cash flow exposures are hedged to reduce volatility in future cash flows. These hedges normally consist of currency derivative contracts, which are matched against the underlying future cash flow according to maturity. Fortum has currency cash flow hedges both with and without hedge accounting treatment under IFRS. Those currency cash flow hedges for which hedge accounting is not applied are mainly hedging commodity derivatives and create volatility in operating profit. There was no significant ineffectiveness arising from cash flow hedges in 2021.

As of 31 December 2021, for Fortum, excluding Uniper, the one-day value-at-risk (VAR) with 99% confidence from loans, receivables and derivatives was EUR 2.4 million (2020: 1.4) in the income statement and EUR 1.4 million (2020: 2.4) in equity. Income statement sensitivity resulted mainly from cash flows in SEK and NOK, and equity sensitivity mainly from cash flows in PLN and USD. For Uniper, one-day VAR with 99% confidence from translation of deposits and borrowings in foreign currency and derivatives was EUR 19 million (2020: 18) and resulted primarily from the positions in GBP, USD and SEK.

Translation exposure position includes net investments in foreign subsidiaries and associated companies. Translation exposures in Fortum are generally not hedged as the majority of these assets are considered to be long-term strategic holdings. In Fortum, this means mainly entities operating in Sweden, Russia and United Kingdom, whose base currency is not euro.

Exchange differences arising from the translation of the net investment in foreign entities are taken to equity. The net effect of exchange differences on equity attributable to equity holders mainly from RUB and SEK was EUR 184 million in 2021 (2020: -492). Part of this translation exposure has been hedged and the notional amount of foreign currency hedges were EUR -263 million in 2021 (2020: -238). The foreign currency hedge result amounted to EUR -12 million in 2021 (2020: 53). There was no significant ineffectiveness arising from net investment hedges in 2021.

Interest rate and currency derivatives by instrument 2021

	Notional amount Remaining lifetimes				Fair value		
EUR million	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Hedge accounting							
Foreign exchange derivatives	282	136	-	417	9	2	7
Interest rate swaps	1,300	1,323	1,175	3,798	71	27	44
Cross currency swaps	214	47	-	261	30	2	28
Non-hedge accounting							
Foreign exchange derivatives	15,404	1,050	-	16,455	204	111	93
Interest rate swaps	-	34	-	34	0	0	0
Cross currency swaps	-	24	-	24	-	1	-1
Total	**17,200**	**2,613**	**1,175**	**20,989**	**315**	**143**	**172**
Of which long-term					88	36	52
Short-term					227	107	120

Interest rate and currency derivatives by instrument 2020

	Notional amount Remaining lifetimes				Fair value		
EUR million	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Hedge accounting							
Foreign exchange derivatives	304	88	-	392	4	5	-1
Interest rate swaps	825	1,875	1,675	4,375	154	61	93
Cross currency swaps	14	261	-	275	38	3	35
Non-hedge accounting							
Foreign exchange derivatives	7,991	1,743	-	9,734	135	228	-93
Interest rate swaps	-	20	-	20	-	0	0
Cross currency swaps	-	24	-	24	-	1	-1
Total	**9,134**	**4,010**	**1,675**	**14,819**	**331**	**299**	**32**
Of which long-term					216	118	98
Short-term					115	181	-66

4.4 Credit risk

Fortum is exposed to counterparty risk whenever there is a contractual arrangement with an external counterparty.

Credit risk exposures relating to financial derivative instruments are often volatile and include both the replacement risk and the settlement risk. Exchange-traded derivatives are cleared through central clearing parties (CCPs) or through clearing banks while over-the-counter (OTC) derivative contracts are concluded directly with a number of different counterparties including energy wholesalers and retailers, utilities, trading companies, energy companies, industrial end-users and financial institutions active in the financial and energy markets. Currency and interest rate derivative counterparties are limited to investment grade banks and financial institutions. International Swaps and Derivatives Association (ISDA) Master agreements, which include netting clauses and in some cases Credit Support Annex agreements, are in place with most of these counterparties. The majority of commodity derivative counterparties have investment-grade or comparable ratings. Master agreements, such as those published by ISDA and European Federation of Energy Traders (EFET), which include netting clauses, are in place with the majority of the counterparties.

Due to the financing needs and management of liquidity, Fortum has counterparty credit exposure towards a number of banks and financial institutions in the form of deposits and towards corporate issuers of commercial papers, mainly in the Nordic market. The majority of the exposure is towards Fortum's key relationship banks, which are highly creditworthy institutions. Investments in commercial papers were all with investment grade issuers at 31 December 2021. Fortum also has exposure to the Russian financial sector in terms of deposits with financial institutions, as well as to banks that provide guarantees for suppliers and contracting parties. Deposits in Russia have been concentrated to the most creditworthy state-owned or controlled banks, as well as affiliates of key relationship banks. The creditworthiness of banks and financial institutions is monitored so that mitigating actions can be taken as ratings or the financial situation changes.

Credit risk relating to customers, suppliers and trading partners is spread across a wide range of industrial counterparties, energy companies, government and municipal entities, utilities, small businesses, housing associations and private individuals over a range of geographic regions. The majority of exposure is in the form of trade receivables from the sale of electricity, gas and heat in the Nordic market, continental Europe and Russia. The credit risk in the electricity and heat sales business in Russia is deemed to be higher than in the Nordic and continental European market.

4.4.1 Credit quality of major financial assets

Fortum recognises loss allowance for expected credit losses on financial assets classified to amortised cost category at each reporting date. The impairment model is applied to financial assets such as trade receivables, deposits, commercial papers, and loan and other interest-bearing receivables. See Note 23 Trade and other receivables for details on expected credit losses recognised for trade receivables.

Expected credit loss is calculated on an individual contract basis for deposits, commercial papers and loan and other interest-bearing receivables. No impairment loss is recognised on cash in bank accounts since expected credit loss is immaterial due to low risk of default. The expected credit losses according to this model are based on assessment of the individual counterparty's risk of default. The risk of default is evaluated at each reporting date based on credit ratings to determine if credit risk has increased significantly. Whenever possible, the risk of default is derived from available market data (liquid credit default swaps or liquid debt instruments) which ensures that forward-looking information is considered. If there are no publicly available market data, an internal credit rating is applied. The value of collateral and other measures taken to reduce credit risk (e.g., credit default insurance) is included in the calculation of expected credit losses in the “loss given default” ratio.

A financial asset with an investment-grade rating is assumed to have low credit risk. A change of credit rating from investment to non-investment grade constitutes a significant increase in credit risk. If the credit risk on the financial asset has not increased significantly since the initial recognition, loss allowance equals to 12 month ECL. If the credit risk on the financial asset has increased significantly since initial recognition, loss allowance equals to the lifetime expected credit losses. There have been no significant increases in credit risk during 2021.

The loss allowance for interest-bearing receivables totalled EUR 16 million on 31 December 2021 (2020: 7). Amounts for interest-bearing receivables including bank deposits and derivative financial instruments recognised as assets are presented by counterparties in the following table.

All counterparties for currency and interest rate derivatives and the majority of counterparties for bank deposits have an external rating from S&P Global Ratings, Fitch and/or Moody’s credit agencies. For counterparties rated by more than one rating agency, the lowest of the ratings is used to determine if it is investment grade.

In the commodity derivatives and commercial paper market, there are a number of counterparties not rated by S&P Global Ratings, Fitch or Moody’s. For these counterparties, Fortum assigns an internal rating. The internal rating categories that are considered to be comparable to investment grade have similar financial metrics or display historical default rates which correspond to investment grade companies rated by S&P Global Ratings, Fitch or Moody’s.

Credit quality of major financial assets

	2021		2020	
EUR million	Carrying amount	of which past due	Carrying amount	of which past due
Receivables with investment grade or comparable rating				
Deposits, commercial papers and cash in bank accounts	7,342	-	2,107	-
Fair values of interest rate and currency derivatives	315	-	331	-
Fair values of derivatives on exchanges	27,856	-	3,795	-
Fair values of commodity derivatives	49,886	-	5,638	-
Loan and other interest-bearing receivables	1,036	-	995	-
Lease receivables	136	-	196	-
Total receivables with investment grade or comparable rating	**86,571**	**-**	**13,062**	**-**
Receivables with non-investment grade or comparable rating				
Deposits, commercial papers and cash in bank accounts	164	-	94	-
Fair values of commodity derivatives	4,433	-	711	-
Loan and other interest-bearing receivables	19	-	58	-
Receivable from SIBUR related to divested shares of OOO Tobolsk CHP	40	-	23	-
Total receivables with non-investment grade or comparable rating	**4,656**	**-**	**886**	**-**
Other receivables 1)				
Loan receivables from associates and joint ventures	1,158	-	1,150	-
Restricted cash mainly given as collateral for commodity exchanges	59	-	48	-
Cash in other bank accounts	87	-	107	-
Total other receivables	**1,304**	**-**	**1,305**	**-**
Total	**92,531**	**-**	**15,253**	**-**

1) Other receivables include financial assets which have not been divided to investment-grade and non-investment grade or comparable ratings.

Financial instruments subject to master netting agreements:

The following tables present the recognised financial instruments that are offset, or subject to enforceable master netting arrangements and other similar agreements but not offset. The column 'net amount' shows the impact on the Group's balance sheet if all netting rights were exercised.

Netting agreements for financial assets and liabilities 2021

EUR million	Gross amount	Gross amount netted in the balance sheet 1)	Net amounts presented in the balance sheet	Conditional netting amount (netting agreements)	Financial collateral received /pledged	Net amount
Financial assets						
Interest-rate and currency derivatives	315	-	315	129	153	33
Commodity derivatives	87,019	4,845	82,174	56,383	-1,576	27,368
Trade receivables	12,916	-	12,916	5,651	0	7,265
Total	**100,250**	**4,845**	**95,405**	**62,162**	**-1,423**	**34,666**
EUR million						
Financial liabilities						
Interest-rate and currency derivatives	143	-	143	129	5	9
Commodity derivatives	93,306	4,845	88,406	56,383	4,293	27,785
Trade payables	12,152	-	12,152	5,651	-	6,501
Total	**105,600**	**4,845**	**100,755**	**62,162**	**4,298**	**34,295**

1) In Fortum, excluding Uniper, receivables and liabilities from electricity and other commodity exchanges arising against standard derivative contracts with same delivery period are netted.

Netting agreements for financial assets and liabilities 2020

EUR million	Gross amount	Gross amount netted in the balance sheet 1)	Net amounts presented in the balance sheet	Conditional netting amount (netting agreements)	Financial collateral received /pledged	Net amount
Financial assets						
Interest-rate and currency derivatives	331	-	331	87	109	135
Commodity derivatives	10,939	793	10,146	5,290	-100	4,956
Trade receivables	7,115	-	7,115	3,692	-	3,424
Total	**18,386**	**793**	**17,593**	**9,069**	**9**	**8,515**
EUR million						
Financial liabilities						
Interest-rate and currency derivatives	299	-	299	87	3	209
Commodity derivatives	11,088	793	10,295	5,290	151	4,854
Trade payables	7,126	-	7,126	3,692	-	3,434
Total	**18,513**	**793**	**17,720**	**9,069**	**154**	**8,497**

1) In Fortum, excluding Uniper, receivables and liabilities from electricity and other commodity exchanges arising against standard derivative contracts with same delivery period are netted.

5 Capital risk management

In December 2020, Fortum updated the strategy to drive the clean energy transition and deliver sustainable financial performance. Aligned with the goals of the Paris Agreement, Fortum targets carbon neutrality by 2050 with ambitious mid-term targets.

The updated strategy builds on four priorities:

- ‘Transform own operations to carbon neutral’,
- ‘Strengthen and grow in CO_2-free power generation’,
- ‘Leverage strong position in gas to enable the energy transition’, as well as
- ‘Partner with industrial and infrastructure customers’.

Fortum’s coal-fired generation capacity will be reduced by more than 50% by the end of 2025, to approximately 5 GW and Fortum targets carbon neutrality for the European generation by 2035 at the latest.

Fortum is focusing on growing a sizeable portfolio of onshore wind and solar based power generation primarily in Europe to make it a meaningful EBITDA contributor. The target is to build 1.5-2 GW of new capacity by 2025. This capacity will partly be built on our own balance sheet and partly through partnerships.

Further, Fortum aims to gradually transform its Russian asset portfolio towards renewables, while over time reducing our fossil exposure.

In parallel with the strategy alignment, Fortum and Uniper have together identified cooperation benefits expected to bring a positive cash impact of approximately EUR 100 million annually. More than EUR 50 million of these annual benefits are estimated to be achieved by the end of 2023, with full effect of approximately EUR 100 million annually in 2025 creating value for both companies and their shareholders.

Financial targets, dividend policy, and 2022 guidance for capital expenditure

Fortum continues to be committed to maintaining a rating of at least BBB. The long-term financial targets are:

- Financial net debt/comparable EBITDA below 2x, defined as Alternative Performance Measure.
- Hurdle rates for new investments based on weighted average cost of capital (“WACC”)
  - +100 basis points for green investments
  - +200 basis points for other investments

Fortum's dividend policy is ‘to pay a stable, sustainable, and over time increasing dividend’. Fortum’s Board of Directors proposes a dividend of EUR 1.14 per share for the year 2021 with the target to increase the dividend going forward.

The estimated annual capital expenditure, for 2022 is approximately EUR 1,500 million, including maintenance and excluding acquisitions. The share of maintenance is estimated to be EUR 800 million.

In July 2021 S&P Global Ratings revised its long-term credit rating for Fortum to BBB, with a stable outlook (previously BBB with Negative Outlook). Fitch Ratings long-term credit rating for Fortum was also revised in June 2021 to BBB, with a stable outlook (previously BBB with Negative Outlook).

S&P Global Ratings long-term credit rating for Uniper was also revised in September 2021 to BBB, with a stable outlook. In July 2021, S&P Global Ratings also revised its long-term rating for Uniper to BBB, with a stable outlook (previously BBB with Negative Outlook).

In January 2022, S&P Global Ratings affirmed both Fortum’s and Uniper’s rating of BBB with a stable outlook.

Financial net debt/comparable EBITDA ratio

EUR million	Note	2021
+Interest-bearing liabilities		17,220
- BS Liquid funds		7,592
- Non-current securities		111
- Collateral arrangement securities		549
- Securities in interest-bearing receivables		660
- BS Margin receivables		9,163
+ BS Margin liabilities		985
+ Net margin liabilities		-8,179
Financial net debt	27	**789**
IS Operating profit		-588
+ IS Depreciation and amortisation		-1,281
EBITDA		**693**
- IS Items affecting comparability		3,124
Comparable EBITDA		**3,817**
Financial net debt/comparable EBITDA		**0.2**

See ▸ Note 7 Comparable operating profit and comparable net profit for details on items affecting comparability, and ▸ Note 27 Interest-bearing liabilities, including further details of the financing and liquidity status and see ▸ Definitions and reconciliations of key figures.

Comparable EBITDA is defined as an alternative performance measure and used as a component in the capital structure target 'Financial net debt-to-Comparable EBITDA'.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

6 Segment reporting

SIGNIFICANT ACCOUNTING POLICIES

REVENUE RECOGNITION

Fortum's operations comprise the provision of gas, electricity, heating and cooling as well global energy trading and optimisation and waste management services. Revenue streams can be divided into five groups: gas sales, power sales to wholesale markets, power sales to retail customers, heating sales and waste treatment sales.

Revenue is recognised when goods are transferred or services are performed, i.e. when a performance obligation is satisfied and control of the good or service underlying the particular performance obligations is transferred to the customer. Revenue is shown at the price that Fortum expects to be entitled to and it is presented net of rebates, discounts, value-added tax and selective taxes, such as electricity tax. Revenues also include the surcharge mandated by the German Renewable Energy Sources Act in the Uniper segment. Revenues include effects from physically settled contracts for which own use exemption cannot be used according to IFRS 9, see Note 7 Comparable operating profit and comparable net profit. Accounting policies for the different revenue streams are described below.

POWER SALES TO WHOLESALE MARKETS AND THROUGH BILATERAL CONTRACTS

Physical electricity trades to wholesale markets are made at a spot price and thus there are no variable elements. Electricity sales are recognised on delivery at the price defined in wholesale market. Fortum is also selling power to industrial customers and municipalities through bilateral contracts. These contracts can include fixed price components that are recognised in line with the customer's actual consumption profile, when the nature of the performance obligation is to deliver power instead of standing-ready to deliver power. When Fortum is acting as an agent in electricity trade by granting access to Nord Pool power trading system, Fortum presents the bilateral trades between Fortum and the customer on a net basis and only the service fee is recorded as revenue.

POWER SALES TO RETAIL CUSTOMERS

Fortum's contracts with consumer and business customers cover electricity sales, while the distribution service is delivered by the transmission company operating the local network. There is only one performance obligation, which is to stand-ready to supply electricity to the customer. The transaction price generally includes both a fixed monthly charge and a variable fee based on the volume of electricity supplied. As Fortum's promise is to stand ready to deliver electricity, the fixed and variable components are recognised based on the fees chargeable from the customer. If automated meter reading is not available, electricity consumption between the last meter reading and the end of the month is estimated.

HEAT SALES

In many areas the district heating service covers both the distribution and sale of heat. Fortum is usually responsible for delivering the whole service, even when heat is being produced by a third party, and is acting as a principal for heat sales as well. There is only one performance obligation, which is to stand-ready to supply heat to the customer. The fees charged from the customer generally comprise a fixed monthly charge and a variable fee based on the volume of heat supplied. As Fortum's promise is to stand ready to deliver heat, the fixed and variable components are recognised based on the fees chargeable from the customer. In Russia and Poland there are also areas where Fortum operates only the heat production facilities while some third party is responsible for the distribution of heat. In these areas the performance obligation is to supply heat and revenue is recognised based on the volume of heat that Fortum is entitled to charge from the customer.

GAS SALES

Revenues are generated from sales of gas via traded markets, as well as to industrial customers and resellers, and include hedges settled through physical delivery, which are recognised when delivery takes place and control is transferred to the customer. Gas sales include also revenues earned from the transportation of gas. Contracts generally contain one performance obligation for which the entire transaction price is recognised.

For physically settled transactions that are in the scope of IFRS 15 (own-use transactions), revenue is recognised based on contract prices, as these reflect the economic character of the transactions and the contractually agreed consideration amounts. If IFRS 15 provides for a different method, for example when constraint on variable considerations is applicable, contract prices are adjusted accordingly.

Gas contracts can also include fixed price components that are recognised in line with the customer's actual consumption profile, when the nature of the performance obligation is to deliver gas instead of standing-ready to deliver gas.

WASTE TREATMENT SALES

Majority of revenue from waste management services arises from fees charged for receiving waste from customers (i.e. gate fees). The fee is usually determined based on the volume of waste received, there are no variable elements in pricing. Fortum is required to treat the waste and this performance obligation is satisfied when treatment has been performed. Transportation of the waste forms another performance obligation. Fees for waste treatment and transportation services are separately agreed in the contract and correspond to the price that would be charged for these services separately. Revenue for transportation service is recognised when the service has been provided.

Waste treatment sales include also various types of soil and landfill site projects, which mostly take place at customer sites. Fees charged are invoiced based on payment schedules agreed with the customer. The customer obtains the benefit of the construction work simultaneously when the construction work proceeds, and therefore project revenues are recognised over time. Progress of the construction is best measured either through costs incurred, or the completed area of the construction site.

NETTING AND INTER-SEGMENT TRANSACTIONS

Generation and City Solution segments sell their electricity production to Nord Pool and Consumer Solutions segment buys its electricity from Nord Pool. For these segments eliminations of sales include eliminations of sales and purchases with Nord Pool that are netted at Group level on an hourly basis and posted either as revenue or cost depending on if Fortum is a net seller or net buyer during any particular hour. Intersegment sales, expenses and results for the different business segments are affected by intragroup deliveries, which are eliminated on consolidation. Inter-segment transactions are based on commercial terms.

6.1 Business structure

Fortum's reportable segments are Generation, Russia, City Solutions, Consumer Solutions and Uniper. Other Operations includes corporate functions, R&D and technology development projects.

Fortum revised its reportable segments following the consolidation of Uniper as a subsidiary on 31 March 2020, and reports Uniper as a separate segment.

Uniper was accounted for as an associated company until 31 March 2020 with three-month time lag, which meant that Fortum's first quarter results included Fortum's share of Uniper results from 1 October 2019 to 31 March 2020 reported in Other Operations. See also Note 18 Participations in associated companies and joint ventures.

Further, reporting of both the Uniper segment and the Generation segment were impacted by adjustments for the joint ownership in the Swedish nuclear company, OKG Aktiebolag (OKG AB). Fortum and Uniper are co-owners in the Swedish nuclear company OKG AB. OKG AB is consolidated into Uniper Group as a subsidiary with a 45.5% minority representing Fortum's ownership in OKG AB. Fortum accounted for the shareholding in OKG AB as an associated company until 31 March 2020. On 31 March 2020, OKG AB was consolidated as a subsidiary to Fortum Group. Fortum has adjusted Uniper's standalone income statement and balance sheet numbers in respect of Fortum's shareholding in OKG AB, as well as adjusted operating profit, share of profit/loss in associates and joint ventures and net assets of OKG AB recorded in the Generation segment. Consequently, the Group's subsidiary, OKG AB, is split between the two segments according to ownership.

6.2 Segment structure

Fortum discloses segment information in a manner consistent with internal reporting to Fortum's Board of Directors and Fortum Executive Management, led by the President and CEO. Fortum segments are based on the type of business operation, combined with one segment based on geographical area and one segment based on a separately listed sub group. Fortum's reportable segments are the business divisions Generation, Russia, City Solutions, Consumer Solutions and Uniper.

6.3 Definitions for segment information

Fortum's segment information discloses the financial measurements used in financial target setting and forecasting, management's follow up of financial performance and allocation of resources in the Group's performance management process. See Note 1.4 Measures for performance.

Segment reporting is based on the same accounting policies as Fortum Group.

Description of reportable segments:

Group

Reportable segments

Generation

Generation is responsible for Nordic power generation. The segment comprises CO_2-free nuclear, hydro, and wind power generation, as well as power portfolio optimisation, trading, market intelligence, thermal power for the capacity reserve, and global nuclear services. The segment does not include the Nordic hydro and nuclear power generation or the trading activities of Uniper. As of 31 March 2020, the segment includes Generation's proportionate share of OKG.

Russia

The Russia segment comprises power and heat generation and sales in Russia. The segment includes Fortum's fully owned power plants and its joint ventures for building and operating approximately 3.4 GW of renewable power generation and for power and heat sales, as well as Fortum's more than 29% holding in TGC 1. These joint ventures and the associated company are accounted for using the equity method. The segment does not include Uniper's Russian subsidiary Unipro.

City Solutions

City Solutions is responsible for sustainable solutions for urban areas. The segment comprises heating, cooling, waste-to-energy, and other circular economy solutions, as well as solar power generation, services, and development of new biomass-based businesses. The business operations are located in the Nordics, Poland, and India. The segment has also included Fortum's 50% holding in Stockholm Exergi, which was a joint venture accounted for using the equity method. Stockholm Exergi Holding AB was divested in September 2021. The segment does not include the operations of Fortum's subsidiary Uniper.

Consumer Solutions

Consumer Solutions is responsible for the electricity and gas retail businesses in the Nordics, Poland and Spain, including the customer service and invoicing businesses. Fortum is the largest electricity retail business in the Nordics, with approximately 2.2 million customers across different brands in Finland, Sweden, Norway, Poland and Spain. The business provides electricity as well as related value-added and digital services.

Uniper

The Uniper segment comprises Fortum's majority ownership in Uniper, a subsidiary of Fortum. Uniper is a leading international energy company with activities in more than 40 countries. Its business is the secure provision of energy and related services. Its main activities include power generation in Europe and Russia as well as global energy trading and optimisation, which Uniper reports in three businesses – European Generation, Global Commodities and Russian Power Generation – in its financial statements. Approximately 50% of the power generating capacity is gas-based, 30% coal-based, and 20% hydro- or nuclear-based. The segment includes Uniper's proportionate share of OKG.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

6.4 Segment information

Consolidated income statement

		Generation [1]		Russia		City Solutions [1]		Consumer Solutions		Uniper		Other Operations		Total	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Power sales [1]		2,690	1,878	761	791	205	121	2,253	1,057	28,365	16,994	0	0	34,274	20,841
Heat sales		-	-	137	134	612	516	-	-	437	191	-	-	1,186	841
Gas sales		167	84	-	-	1	1	225	139	59,577	22,176	-	-	59,970	22,400
Waste treatment sales		0	-	-	-	250	252	-	-	-	-	-	-	250	252
Other sales		42	44	8	4	235	185	144	70	17,612	5,154	138	140	18,179	5,598
Sales		**2,899**	**2,006**	**906**	**929**	**1,302**	**1,075**	**2,622**	**1,267**	**105,992**	**44,514**	**138**	**140**	**113,860**	**49,931**
Internal eliminations		-143	-421	-3	-2	-39	-64	-14	-2	-29	0	-104	-110	-331	-598
Netting of Nord Pool transactions [2]														-1,128	-317
IS **External sales**		**2,756**	**1,585**	**903**	**927**	**1,264**	**1,012**	**2,608**	**1,264**	**105,964**	**44,514**	**34**	**30**	**112,400**	**49,015**
Comparable EBITDA		1,299	886	404	394	317	239	123	153	1,789	856	-114	-94	3,817	2,434
IS Depreciation and amortisation		-189	-164	-142	-143	-182	-191	-71	-63	-668	-494	-28	-35	-1,281	-1,090
IS **Comparable operating profit**		**1,110**	**722**	**261**	**251**	**135**	**47**	**52**	**90**	**1,120**	**363**	**-142**	**-129**	**2,536**	**1,344**
Impairment charges and reversals		-	2	-35	-	-	-	-	-	-48	0	-	-	-83	2
Capital gains and other related items		50	0	1	1	2,608	723	0	0	9	-13	14	53	2,681	765
Impact from acquisition accounting		-	-	-	-	-	-	-	-	-	-	-	-222	-	-222
Changes in fair values of derivatives hedging future cash flow		-107	-12	0	0	-72	5	443	39	-5,688	-706	-	-	-5,424	-675
Other		1	0	-	-	-	-	-	-	-294	386	-6	-	-299	386
IS **Items affecting comparability**	6, 7	**-56**	**-11**	**-34**	**1**	**2,536**	**728**	**443**	**39**	**-6,021**	**-333**	**8**	**-169**	**-3,124**	**255**
IS **Operating profit**		**1,054**	**711**	**227**	**252**	**2,671**	**775**	**495**	**129**	**-4,901**	**29**	**-134**	**-298**	**-588**	**1,599**
Comparable share of profit/loss of associates and joint ventures [3]		11	13	62	47	42	57	-	-	39	38	0	502	154	656
IS Share of profit/loss of associates and joint ventures	18	36	29	62	47	42	57	-	-	51	54	0	470	192	656

1) Sales, both internal and external, include effects from realised hedging contracts. Effect on sales can be negative or positive depending on the average contract price and the realised spot price. Power sales in Fortum, excluding Uniper, contains realised result from commodity derivatives, which have not had hedge accounting status under IFRS 9, but have been considered operatively as hedges.
2) Sales and purchases with Nord Pool Spot are netted on Group level on an hourly basis and posted either as revenue or cost depending on whether Fortum is a net seller or net buyer during any particular hour.
3) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

Segment assets and liabilities

		Generation		Russia		City Solutions		Consumer Solutions		Uniper		Other Operations		Total	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Non-interest-bearing assets		6,066	5,780	1,923	2,020	2,874	3,512	1,496	780	26,616	20,646	283	270	39,258	33,009
BS Participations in associates and joint ventures	18	1,005	961	678	577	74	612	-	-	671	729	32	33	2,461	2,912
Eliminations														-386	-57
Total segment assets		**7,071**	**6,742**	**2,601**	**2,597**	**2,949**	**4,123**	**1,496**	**780**	**27,286**	**21,375**	**315**	**303**	**41,333**	**35,863**
Interest-bearing receivables	21													3,107	3,000
BS Deferred tax assets	28													2,149	1,089
Other assets														95,481	15,550
BS Liquid funds	24													7,592	2,308
Total assets														**149,661**	**57,810**
Segment liabilities		**735**	**508**	**93**	**166**	**492**	**445**	**371**	**215**	**22,315**	**13,943**	**190**	**167**	**24,196**	**15,443**
Eliminations														-386	-57
Total segment liabilities														**23,810**	**15,386**
BS Deferred tax liabilities	28													827	952
Other liabilities														94,140	15,233
Total liabilities included in capital employed														**118,777**	**31,570**
Interest-bearing liabilities	27													17,220	10,662
BS Total equity														13,665	15,577
Total equity and liabilities														**149,661**	**57,810**

Gross investments / divestments

		Generation		Russia		City Solutions		Consumer Solutions		Uniper		Other Operations		Total	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Gross investments in shares	3	7	70	36	48	2	114	-	0	9	3	237	3,572	290	3,807
Capital expenditure [1]	16, 17	168	158	47	43	161	219	68	57	673	635	15	34	1,116	1,146
Gross divestments of shares	3	129	171	18	0	3,870	895	0	10	88	69	19	81	4,122	1,226

1) In 2021, 2020 comparatives were revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.

Comparable operating profit including Comparable share of profit of associates and joint ventures and Comparable return on net assets

		Generation		Russia		City Solutions		Consumer Solutions		Uniper [3]	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Comparable operating profit		1,110	722	261	251	135	47	52	90	1,120	363
Comparable share of profit/loss of associates and joint ventures [1]	7, 18	11	13	62	47	42	57	-	-	39	38
Comparable operating profit including comparable share of profit of associates and joint ventures [1]		**1,121**	**735**	**323**	**298**	**177**	**104**	**52**	**90**	**1,160**	**401**
Segment assets at the end of the year		7,071	6,742	2,601	2,597	2,949	4,123	1,496	780	27,286	21,375
Segment liabilities at the end of the year		735	508	93	166	492	445	371	215	22,315	13,943
Comparable net assets		**6,336**	**6,234**	**2,508**	**2,431**	**2,456**	**3,679**	**1,125**	**565**	**4,971**	**7,432**
Comparable net assets average [2]		**6,221**	**6,006**	**2,516**	**2,693**	**2,915**	**3,679**	**746**	**569**	**7,021**	**N/A**
Comparable return on net assets, % [1]		**18.0**	**12.2**	**12.9**	**11.1**	**6.1**	**2.8**	**6.9**	**15.9**	**16.5**	**N/A**

1) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.
2) Average net assets are calculated using the opening balance of the financial year and each quarter's closing value.
3) Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from the second quarter of 2020, consolidated Uniper's results into its income statement. Comparable net assets average and Comparable return on net assets for the Uniper segment are presented from 2021 onwards as information for full 12 months is available.

Employees

	Generation		Russia		City Solutions		Consumer Solutions		Uniper [1]		Other Operations		Total [1]	
	2021	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Number of employees 31 December	1,116	1,143	2,627	2,935	1,766	2,093	1,176	1,048	11,494	11,751	961	963	19,140	19,933
Average number of employees [1]	1,153	1,163	2,862	2,969	1,964	2,051	1,091	1,216	11,751	8,945	976	959	19,796	17,304

1) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31 2020.

6.5 Group-wide disclosures

The Group's operating segments operate mainly in the Nordic countries, Germany, United Kingdom, Russia and the Netherlands.

The Group's domicile is Finland.

The table below presents sales by geographical area based on customer location. Capital expenditure, assets and personnel are reported where assets and personnel are located. Participations in associates and joint ventures are not presented by location since these companies may have business in several geographical areas.

Due to the large number of customers and the variety of business activities, there is no individual customer whose business volume is material to Fortum's total business volume.

Sales by geographical area based on customer location

EUR million	2021	2020
Nordics	10,848	4,754
Germany	24,248	12,223
Russia	1,935	1,610
United Kingdom	30,933	9,618
Other Europe 1)	35,864	19,195
Other 1)	8,572	1,615
IS Total	**112,400**	**49,015**

1) The category Other Europe was introduced in 2021 and comparatives have been reclassified accordingly.

Nordic power production is not presented by country since Nordic power production is mainly sold through Nord Pool.

Capital expenditure by country

EUR million	2021	2020
Finland	160	160
Germany 1)	285	290
Russia	177	158
Sweden	186	186
United Kingdom	127	89
Other countries 2)	182	262
Total 1)	**1,116**	**1,146**

1) In 2021, 2020 comparatives were revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition. In 2021, Norway has been included in Other and comparatives have been reclassified accordingly.
2) In 2021, Norway was included in Other countries and comparatives have been reclassified accordingly.

Non-current assets by country

EUR million	2021	2020
Finland 1)	3,058	3,110
Germany 1)	4,727	4,695
Russia	4,542	4,291
Sweden	7,421	8,003
United Kingdom	916	833
Other and eliminations 1)	3,012	3,614
Total 1)	**23,677**	**24,546**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. Comparatives have been reclassified accordingly. See Note 22 Inventories.

Non-current assets include intangible assets, property, plant and equipment and right-of-use assets as well as participations in associates and joint ventures.

Number of employees on 31 December by country

	2021	2020
Finland	2,377	2,370
Germany	4,922	4,947
Russia	6,902	7,466
Sweden	1,755	1,752
United Kingdom	1,067	1,047
Other	2,117	2,351
Total	**19,140**	**19,933**

6.6 Other revenue-related disclosures

Fortum anticipates revenues of EUR 1,340 million (2020: 922) from unsatisfied performance obligations, mostly related to gas and bilateral electricity contracts. Of this total, EUR 453 million is attributable to 2022 (2020: EUR 234 million to 2021) and EUR 887 million to years after 2022 (2020: EUR 688 million to years after 2021).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

7 Comparable operating profit and comparable net profit

7.1 Reconciliation of operating profit to comparable operating profit

Fortum uses Alternative performance measures (APMs) in the financial target setting and forecasting, management's follow up of financial performance of segments and the Group as well as allocation of resources in the Group's performance management process. The business performance of the operations cannot be compared from one period to another without adjusting for items affecting comparability and therefore they are excluded from Comparable operating profit and Comparable EBITDA. Definitions are presented in the section ▸ **Definitions and reconciliations of key figures**.

Reconciliation of operating profit to comparable operating profit 2021

EUR million	Unadjusted	Impairment charges and reversals	Capital gains and other related items	Changes in fair values of derivatives hedging future cash flow	Other	Reported
Sales	166,218	-	-	-53,817	-	112,400
Other income	70,209	-1	-2,682	-55,010	-136	12,380
Materials and services	-217,515	-	-	112,198	148	-105,170
Employee benefits	-1,718	-	-	-	156	-1,561
Depreciation and amortisation	-1,364	83	-	-	-	-1,281
Other expenses	-16,419	-	1	2,054	131	-14,232
IS **Comparable operating profit**	**-**	**83**	**-2,681**	**5,424**	**299**	**2,536**
IS Items affecting comparability	-	-83	2,681	-5,424	-299	-3,124
IS **Operating profit**	**-588**					**-588**

Reconciliation of operating profit to comparable operating profit 2020

EUR million	Unadjusted	Impairment charges and reversals	Capital gains and other related items	Impact from acquisition accounting	Changes in fair values of derivatives hedging future cash flow	Other	Reported
Sales	42,517	-	-	-	6,499	-	49,015
Other income	10,517	0	-784	-	-4,679	-252	4,802
Materials and services	-38,286	-	-	-	-5,805	-208	-44,298
Employee benefits	-1,206	-	-	-	-	11	-1,195
Depreciation and amortisation	-1,092	-1	-	-	-	3	-1,090
Other expenses	-10,851	-	20	222	4,659	60	-5,890
IS **Comparable operating profit**	**-**	**-2**	**-765**	**222**	**675**	**-386**	**1,344**
IS Items affecting comparability	-	2	765	-222	-675	386	255
IS **Operating profit**	**1,599**						**1,599**

Impairment charges and reversals

Impairment charges and reversals of previously recognised impairments are adjusted from depreciation and amortisation and presented in items affecting comparability. Impairments in 2021 include EUR 40 million impairment in connection with the sale of the Schkopau lignite power plant in Germany (Uniper segment), and a tax-deductible non-cash impairment of EUR 35 million in connection with the sale of the Argayash CHP plant in Russia (Russia segment).

Capital gains and other related items

Capital gains and other related items include capital gains and transaction costs from acquisitions, which are adjusted from other income and other expenses, respectively.

Capital gains and other related items in 2021 include EUR 2,350 million gain from the sale of the 50% stake in the Swedish district heating and cooling company, Stockholm Exergi Holding AB, EUR 254 million gain from the sale of the district heating business in the Baltics, and EUR 50 million gain from the sale of eight small hydropower plants in Sweden. See ▸ **Note 3.2** Disposals. Capital gains and other related items in 2020 included EUR 431 million gain from the divestment of the district heating business in Joensuu, Finland; EUR 291 million gain from divestment of the district heating business in Järvenpää, Finland; and EUR 72 million gain from the divestment of Fortum Recharge AS (see ▸ **Note 3.2** Disposals); as well as Uniper acquisition-related costs of EUR 20 million (see ▸ **Note 3.1** Acquisitions).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Impact from acquisition accounting

Consolidation of an associated company results includes recording a share of the associated company's other comprehensive income (OCI). If an associated company is either divested or becomes a subsidiary, IFRS requires that these previously recorded OCI items are reclassified inside equity either via the consolidated income statement or directly to retained earnings, depending on the nature of the OCI item. Reclassification does not have an impact on total equity.

The above reclassification resulted in a one-time, non-cash income statement impact of EUR -222 million on 31 March 2020 when Uniper became Fortum's subsidiary. This amount represented a part of Fortum's share of Uniper's OCI for the time when Uniper was an associated company, with no impact to Fortum's total equity. The amount mainly related to exchange rate differences arising from translation of foreign operations recorded by Uniper. Fortum's share of Uniper's non-recyclable other comprehensive income, EUR -84 million, was reclassified to retained earnings. See Consolidated statement of changes in equity.

Changes in fair values of derivatives hedging future cash flow

Unrealised changes in the fair values of financial derivative instruments hedging future cash flows that do not qualify for hedge accounting and physical contracts that are treated as derivatives are recognised in items affecting comparability. For additional information, see Note 14 Financial assets and liabilities by categories.

Impacts from settlement of physical contracts that have been treated as derivatives are adjusted to sales and materials and services to reflect the contract pricing as opposed to market pricing ("contract pricing adjustment"). Adjustments are needed to improve the understanding of the financial performance when comparing results from one period to another.

Other

Other includes mainly restructuring expenses, adjustments to certain provisions, and reversals of temporary reductions in current assets.

7.2 Reconciliation from operating profit to comparable net profit

In 2021 Fortum introduced two new APMs to provide additional financial performance indicators to support meaningful comparison of underlying net profitability between periods, Comparable net profit and Comparable earnings per share.

EUR million	Note	2021	2020
IS Operating profit		**-588**	**1,599**
IS Items affecting comparability	6, 7.1	3,124	-255
IS Comparable operating profit		**2,536**	**1,344**
IS Share of profit/loss of associates and joint ventures		192	656
Adjustments to share of profit/loss of associates and joint ventures	18	-38	0
Comparable share of profit/loss of associates and joint ventures		154	656
IS Finance costs - net		107	-56
Adjustments to finance costs - net	11	-146	-48
Comparable finance costs - net		-38	-103
Comparable profit before income tax		**2,651**	**1,897**
IS Income tax expense		175	-344
Adjustments to income tax expense		-780	45
Comparable income tax expense		-605	-299
IS Non-controlling interests		852	-32
Adjustments to non-controlling interests		-1,121	-82
Comparable non-controlling interests		-268	-114
Comparable net profit		**1,778**	**1,483**
Comparable earnings per share, EUR	13	**2.00**	**1.67**

Comparable share of profit/loss of associates and joint ventures

Share of profit/loss of associates and joint ventures is adjusted for significant items, similar to adjustments made to arriving at comparable net profit, in those entities that are classified as Fortum's principal associates and joint ventures. For more information on Fortum's principal associates and joint ventures, see Note 18 Participations in associated companies and joint ventures. Uniper was Fortum's associated company until 31 March 2020.

Comparable finance costs - net

Finance costs – net are adjusted for e.g. nuclear-related items recognised in other financial items - net, fair value changes on financial items, as well as impairment charges and reversals of previously recorded impairment charges on financial items.

Comparable income tax expense

Income tax expense is adjusted for tax impacts on items affecting comparability, adjustments to finance costs – net, tax rate changes and other onetime adjustments.

See also Definitions and reconciliations of key figures.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

8 Other income and other expenses

ACCOUNTING POLICIES

Gains and losses on derivative financial instruments reported gross within other income and other expenses mainly include impacts from derivative financial instruments in Uniper segment. These consist of derivatives representing economic hedging relationship for which hedge accounting according to IFRS 9 is not applied, and to limited extent transactions conducted in connection with proprietary trading. Other income and expenses exclude unrealised fair value changes of derivatives hedging future cash flows and physical contracts that are treated as derivatives which are recognised in items affecting comparability. For additional information see Note 7 Comparable operating profit and comparable net profit, and Note 14 Financial assets and liabilities by categories. Gains and losses on exchange rate differences reported within other operating income and expenses consist primarily of realised and unrealised gains and losses from the translation of foreign currency receivables and liabilities in Uniper segment.

GOVERNMENT GRANTS

Government grants are recognised at their fair value when there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions. Government grants are deferred and recognised in the income statement to match with the related costs.

8.1 Other income

EUR million	2021	2020
Gains on derivative financial instruments	11,442	3,989
Gains on exchange rate differences	659	636
Other	279	177
IS **Total**	**12,380**	**4,802**

8.2 Other expenses

EUR million	2021	2020
Losses on derivative financial instruments	12,240	4,339
Losses on exchange rate differences	716	521
IT and telecommunication costs	302	248
Other	974	781
IS **Total**	**14,232**	**5,890**

Gains and losses on derivative financial instruments include net realised gain of EUR 336 million (2020: loss -7) on non-hedge accounted derivatives hedging cash flow, and net unrealized loss of EUR 1,015 million (2020: 318) on non-hedge accounted commodity derivatives for which the offsetting change in value of the underlying hedged asset, such as inventory or receivable, is recognized within operating profit and currency derivatives.

The major components recorded in 'Other' are the external operation and maintenance costs of power and heat plants, expenses relating to properties and other operative expenses.

Auditors' fees

EUR million	2021	2020
Deloitte		
Audit fees	2.9	2.6
Audit-related assignments	0.5	0.3
Tax assignments	-	0.2
Other assignments	0.7	0.2
Total	**4.1**	**3.3**
PwC		
Audit fees	11.0	11.3
Audit-related assignments	0.6	0.5
Tax assignments	0.2	0.1
Other assignments	0.9	1.2
Total [1]	**12.7**	**13.1**

1) PwC fees are presented for the period after consolidating Uniper as a subsidiary on 31 March 2020.

Deloitte Oy is the appointed auditor until the next Annual General Meeting in 2022. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft ("PwC Germany") is the appointed auditor of the subsidiary Uniper SE.

Audit fees include fees for the audit of the consolidated financial statements, review of interim reports, as well as fees for the audit of Fortum Corporation and its subsidiaries. Audit-related assignments include fees for assurance of sustainability reporting, and other assurance and associated services related to the audit. Tax assignments include fees for tax advice services. Other assignments consist of advisory services.

9 Materials and services

EUR million	2021	2020
Materials	103,923	43,377
Transmission costs	788	532
External services	459	389
IS **Total**	**105,170**	**44,298**

Materials consists mainly of coal, gas and nuclear fuels.

Materials include EUR 773 million (2020: 624) purchased from associates and joint ventures consisting of nuclear and hydropower purchased at production cost (including interest costs and production taxes) and purchased steam. See Note 38 Related party transactions.

10 Employee benefits and Board remuneration

EUR million	2021	2020
Wages and salaries	1,190	913
Pensions		
Defined contribution plans	74	51
Defined benefit plans	75	64
Social security costs	172	133
Share-based incentives	7	9
Other employee costs	43	26
IS **Total**	**1,561**	**1,195**

The compensation package for Fortum's employees consists of salaries, fringe benefits, short-term incentives, profit sharing paid to the Personnel Fund (in Finland) and long-term incentives.

For further information on pensions see Note 31 Pension obligations.

10.1 Short-term incentives

As a main principle, all employees are covered by the programme or alternatively by a business specific or a comparable local variable pay arrangement. Short-term incentive (STI) programmes are designed to support the achievement of the Group's financial and other relevant targets on an annual basis.

The Board of Directors determines the performance criteria and award levels for the Fortum Executive Management. The awards are based on the achievement of Group financial performance, divisional targets and individual targets. The target incentive opportunity is 20% and the maximum incentive opportunity is 40% of the annual base salary. The Board of Directors assesses the performance of the President and CEO and the members of the Fortum Executive Management on a regular basis.

Awards for other employees are based on a combination of Group, divisional, functional and personal or team targets. The targets are set in annual performance discussions held at the beginning of each year. Awards under the STI programme are paid solely in cash.

10.2 Long-term incentives

Fortum and Uniper have separate long-term incentive programmes: Fortum's share-based long-term incentive (LTI) programme supplemented by restricted share programme, and Uniper's non-share-based performance cash plan.

The purpose of long-term incentive programmes is to support the delivery of sustainable long-term performance, align the interests of management with those of shareholders, and support in committing and retaining key individuals.

LTI programme provides participants with the opportunity to earn company shares. Under the LTI programme, and subject to the decision of the Board of Directors, a new LTI plan commences annually. The Board of Directors approves participation of the Fortum Executive Management members in each annually commencing LTI plan. Subject to a decision by the Board of Directors, the President and CEO is authorised to decide on individual participants and potential maximum awards for other participants than the Fortum Executive Management in accordance with the nomination guidelines approved by the Board of Directors. Participation in the LTI plan precludes the individual from being a member in the Fortum Personnel Fund.

Each LTI plan begins with a three-year earnings period, during which participants may earn share rights if the performance criteria set by the Board of Directors are fulfilled. If the minimum performance criteria are not met, no shares will be awarded. If performance is exceptionally good and the targets approved by the Board of Directors are achieved, the combined gross value of all variable compensation cannot exceed 120% of the person's annual salary in any calendar year. After the earnings period has ended and the relevant taxes and other employment-related expenses have been deducted, participants are paid the net balance in the form of shares.

For LTI plans commencing in 2017 and later, the share awards are not subject to a minimum lock-up period. However, Fortum Executive Management members aggregate ownership of Fortum shares has to be greater than or equal to their annual salary. Those members, whose aggregate ownership of Fortum shares does not yet fulfil the shareholding requirement are required to retain at least 50% of the shares received until the required level of shareholding is met. For LTI plan commenced in 2016, any shares awarded to Fortum Executive Management members are subject to one- or three-year lock-up period.

The Restricted share programme is supplementing the current LTI programme. The Restricted share programme is following the main terms and conditions of the general LTI programme with the exception that the allocated shares will be delivered after the three-year plan period independent of performance measures, subject to continued employment. The Restricted share programme is designated for special purposes defined by the Board of Directors, such as retention.

The Board of Directors has the right to revise the targets set in the incentive plans, deviate from the payment based on achievement of the set earnings criteria, or to discontinue any ongoing incentive plan.

The share plans under the LTI arrangement are accounted for as partly equity- and partly cash-settled arrangements. The earned reward that the participants receive in shares is accounted for as an equity-settled transaction. For participants receiving cash only, the total arrangement is accounted for as cash-settled transaction. The reward is recognised as an expense during the earnings period with a corresponding increase in the liabilities for transactions settled in cash, and a corresponding increase in equity for the transactions settled in shares. The social charges related to the arrangement payable by the employer are accrued as a liability. The liabilities for share-based plans including social charges at the end of the year 2021 was EUR 12 million (2020: 12), including EUR 9 million (2020: 8) recorded in equity.

At year end 2021, approximately 150 key employees are participants in at least one of the ongoing LTI plans.

Shares granted

The following table presents changes in the number of share rewards (for LTI plans 2017 onwards):

	2021	2020
1 January	1,603,146	1,717,656
Granted	920,517	630,475
Settled	-410,830	-434,607
Expired or forfeited	-294,740	-310,378
Outstanding 31 December	**1,818,093**	**1,603,146**

At year end 2021, for plans started before 2017, number of shares under lock-up was 38,531 shares.

In 2021, Uniper SE introduced a non-share-based performance cash plan for Uniper SE's board of management and selected management personnel. The plan is granted in annual tranches, with a three-year performance period for each trance. Uniper SE did not have any ongoing performance plans at the end of 2020.

10.3 Uniper's Supervisory Board compensation

Fortum's President and CEO and some Fortum Executive Management members are members in the Supervisory Board of Uniper SE. From 2021 onwards, Supervisory Board compensation will be fully paid out as fixed compensation. Until 2021, members received a component of 20% of their compensation in the form of variable compensation. That variable compensation was granted as a right to a future payment in the form of virtual shares. The variable compensation is paid in cash after the end of the four-year earnings period.

10.4 Employee share savings programme

The purpose of Fortum's employee share savings programme is to motivate Fortum employees to invest and retain ownership in the company.

The programme includes annually commencing savings periods during which employees can save a proportion of their salaries and purchase Fortum shares with the accrued savings.

For each savings period participants will, as a gross reward, be granted one matching share for each two purchased savings shares after approximately three years from the beginning of the savings period. The prerequisites for receiving matching shares are that the participant holds the purchased savings shares until the end of the holding period, and that his or her employment has not ended before the end of the holding period.

Each plan consists of one-year savings period followed by two-year holding period. Shares are purchased with the accumulated savings at the market price quarterly after the release of Fortum's interim reports. The programme is accounted for as an equity-settled transaction, and the cost related to matching shares is recognised as expense during the vesting period.

10.5 Fortum Personnel Fund

The Fortum Personnel Fund (for employees in Finland only) has been in operation since 2000. The Board of Directors determines the criteria for the fund's annual profit-sharing bonus. Members of the personnel fund are the permanent and fixed-term employees of the Group.

The profit-sharing received by the fund is distributed equally between the members. Each employee's share is divided into a tied amount and an amount available for withdrawal. It is possible to transfer a maximum of 15% of capital from the tied amount to the amount available for withdrawal each year.

The fund's latest financial year ended at 30 April 2021 and the fund then had a total of 2,508 members (2020: 2,379). At the end of April 2021 Fortum contributed EUR 0.4 million (2020: 1.7) to the personnel fund as an annual profit-sharing bonus based on the financial results of 2020. The combined amount of members' shares in the fund was EUR 20 million (2020: 18).

10.6 The President and CEO and the Fortum Executive Management (FEM) remuneration

The Fortum Executive Management (FEM) consists of nine members, including the President and CEO. The following table presents the total remuneration of the President and CEO and the FEM and takes into account the changes in FEM during the year. The expenses are shown on accrual basis.

Management remuneration

	2021		2020		
EUR thousand	Markus Rauramo, President and CEO 2)	Other FEM members 2)	Markus Rauramo, President and CEO from 1 July 2020 2)	Pekka Lundmark, President and CEO until 1 July 2020	Other FEM members
Salaries and fringe benefits	1,559	3,727	808	521	3,195
Performance bonuses 1)	423	896	82	-	472
Share-based incentives 1)	1,006	2,276	249	94	2,553
Pensions (statutory)	311	829	140	82	599
Pensions (voluntary)	315	536	158	132	593
Social security expenses	69	405	31	18	279
Total	**3,683**	**8,670**	**1,467**	**848**	**7,691**

1) Based on estimated amounts.
2) In addition to the information provided in the above table, the estimated compensation for the membership in the Supervisory Board of Uniper SE for the President and CEO Markus Rauramo was EUR 305 thousand (2020:101), and for other FEM members, EUR 255 thousand (2020:181). In 2020 this compensation is for the period that Uniper has been consolidated as subsidiary.

The annual contribution for the President and CEO Markus Rauramo's pension arrangement is 20% of the annual fixed compensation. The annual fixed compensation consists of base salary and fringe benefits. The President and CEO's retirement age is determined in accordance with the Finnish Employees' Pension Act. In case his assignment is terminated before the retirement age, the President and CEO is entitled to retain the benefits accrued in the arrangement. The annual contribution for the President and CEO Pekka Lundmark's pension arrangement was 25% of the annual salary. The annual salary consisted of base salary and fringe benefits.

For the other members of the FEM, the retirement age varies between 62 and 65, or is determined in accordance with the Finnish Employees' Pension Act. According to Group policy, all new supplementary pension arrangements are defined contribution plans. The pension premium for FEM members is 20% of the annual base salary. In the end of 2021, the additional pension arrangements for the President and CEO and other FEM members are defined contribution pension plans and thus no liability has been recognised on the balance sheet. In 2020, a pension liability of EUR 1,283 thousand was recognised on the balance sheet related to the defined benefit plans for FEM members.

In the event that Fortum decides to give notice of termination to the President and CEO, he is entitled to the salary for the notice period (6 months) and a severance pay equal to 6 months' salary. For other FEM members, the notice period for both parties is six months, and in case the company terminates the contract, members are entitled to the salary for the notice period and a severance pay equal to 6 months' salary, except for one member who is entitled to a payment of 18 months' salary in case of notice by the company.

Number of shares delivered to the management

The table below shows the number of shares delivered to the President and CEO and other FEM members under the LTI arrangements. FEM members whose aggregate ownership of Fortum shares does not yet fulfil the shareholding requirement are required to retain at least 50% of the shares received until the required level of shareholding is met.

	2021 2)	2020 3)
FEM members at 31 December 2021		
Markus Rauramo, CEO from 1 July 2020	25,921	12,273
Nebahat Albayrak, member of FEM from 1 June 2021	-	N/A
Alexander Chuvaev 1)	20,013	36,417
Eveliina Dahl, member of FEM from 1 May 2021	N/A	N/A
Bernhard Günther, member of FEM from 1 February 2021	-	N/A
Per Langer	4,555	5,656
Simon-Erik Ollus, member of FEM from 29 March 2021	3,046	N/A
Mikael Rönnblad	5,985	6,787
Nora Steiner-Forsberg, member of FEM from 1 May 2021	N/A	N/A
Former FEM members		
Arun Aggarwal, member of FEM until 17 November 2021	5,304	4,012
Pekka Lundmark, CEO until 1 July 2020	N/A	28,527
Risto Penttinen, member of FEM until 30 April 2021	4,906	6,612
Arto Räty, member of FEM until 31 May 2021	4,476	5,392
Sirpa-Helena Sormunen, member of FEM until 30 April 2021	4,992	6,230
Tiina Tuomela, member of FEM until 29 March 2021	-	7,239
Total	**79,198**	**119,145**

1) Estimated number of shares after local tax and tax-related deductions. Due to local legislation, share rights will be paid in cash instead of shares.
2) Share delivery based on share plans 2018-2020.
3) Share delivery based on share plan 2017-2019.

10.7 Board of Directors and management shareholding

On 31 December 2021, the members of the Board of Directors owned a total of 5,000 shares (2020: 9,540), which corresponds to 0.00% (2020: 0.00%) of the company's shares and voting rights.

Number of shares held by members of the Board of Directors

	2021	2020
Board members at 31 December 2021		
Veli-Matti Reinikkala, Chair	5,000	5,000
Anja McAlister, Deputy Chair	-	-
Luisa Delgado	-	N/A
Essimari Kairisto	-	-
Teppo Paavola	-	-
Philipp Rösler	-	-
Annette Stube	-	-
Former Board members		
Eva Hamilton	N/A	40
Matti Lievonen	N/A	4,500
Klaus-Dieter Maubach	N/A	-
Total	**5,000**	**9,540**

The President and CEO and other members of the FEM owned a total of 224,369 shares (2020: 281,308), which corresponds to approximately 0.03% (2020: 0.03%) of the company's shares and voting rights.

Number of shares held by members of the Fortum Executive Management

	2021	2020
FEM members at 31 December 2021		
Markus Rauramo	99,308	72,949
Nebahat Albayrak	-	N/A
Alexander Chuvaev	54,602	54,602
Eveliina Dahl	806	N/A
Bernhard Günther	-	N/A
Per Langer	48,971	44,155
Simon-Erik Ollus	3,854	N/A
Mikael Rönnblad	16,454	10,356
Nora Steiner-Forsberg	374	N/A
Former FEM members		
Arun Aggarwal	N/A	4,461
Risto Penttinen	N/A	30,559
Arto Räty	N/A	10,592
Sirpa-Helena Sormunen	N/A	21,195
Tiina Tuomela	N/A	32,439
Total	**224,369**	**281,308**

10.8 Board remuneration

The Board of Directors comprises five to ten members who are elected at the Annual General Meeting for a one-year term of office, which expires at the end of the first Annual General Meeting following the election. The Board of Directors consists of seven members at the end of 2021.

The Annual General meeting confirms the yearly compensation for the Board of Directors. Board members are not offered any long-term incentive benefits or participation in other incentive schemes. There are no pension arrangements for the Board members. Social security costs EUR 2 thousand (2020: 6) have been recorded for the fees in accordance with local legislation in respective countries.

Fees for the Board of Directors

EUR thousand	2021	2020
Chair	77.2	77.2
Deputy Chair	57.5	57.5
Chair of the Audit and Risk Committee [1)]	57.5	57.5
Members	40.4	40.4

1) If not Chairman or Deputy Chairman simultaneously.

Every member of the Board of Directors receives a fixed yearly fee and additional fees for each meeting attended.

A meeting fee of EUR 600 is paid for Board and Committee meetings. For Board members living outside Finland in Europe, the meeting fee is EUR 1,200; for Board members living outside Europe, the meeting fee is EUR 1,800. For Board and Committee meetings held as a telephone conference, the meeting fee is paid as EUR 600 to all members. No fee is paid for decisions made without a separate meeting.

Board members are entitled to travel expense compensation in accordance with the company's travel policy.

Compensation for the Board of Directors

EUR thousand	2021	2020
Board members at 31 December 2021		
Veli-Matti Reinikkala, Chair from 28 April 2021	92	77
Anja McAlister, Deputy Chair from 28 April 2021	65	57
Luisa Delgado, member of the board from 28 April 2021	34	N/A
Essimari Kairisto, Chair of the Audit and Risk Committee from 23 April 2020	76	72
Teppo Paavola, member of the board from 23 April 2020	58	45
Philipp Rösler	55	57
Annette Stube, member of the board from 23 April 2020	57	42
Former Board members		
Eva Hamilton, member of the board until 28 April 2021	19	55
Kim Ignatius, Chair of the Audit and Risk Committee and member of the board until 23 April 2020	N/A	21
Matti Lievonen, Chair until 28 April 2021	32	101
Klaus-Dieter Maubach, Deputy Chairman and member of the board until 29 March 2020 [1)]	15	65
Total	**504**	**593**

1) In addition to the information provided in the above table, the estimated compensation for the membership in the Supervisory Board of Uniper SE for Klaus-Dieter Maubach was EUR 51 thousand (2020:157). In 2020 this compensation is for the period that Uniper has been consolidated as subsidiary.

11 Finance costs – net

EUR million	Note	2021	2020
Interest expense			
Borrowings		-170	-186
Leasing and other interest expenses [1)]		-49	-23
Capitalised borrowing costs [1)]	17	16	39
IS **Total**		**-202**	**-170**
Interest income			
Loan receivables and deposits		135	96
Leasing and other interest income		21	16
IS **Total**		**156**	**111**
Other financial items - net			
Return from nuclear funds, nuclear fund adjustment and unwinding of nuclear provisions	29	146	19
Fair value changes, impairments and reversals		-1	29
Unwinding of discounts on other provisions and pension obligations	30, 31	3	-45
Other financial expenses and income		5	0
IS **Total**		**154**	**3**
IS **Finance costs - net**		**107**	**-56**

Comparable finance costs - net

EUR million	2021	2020
IS **Finance costs - net**	**107**	**-56**
Adjustments to finance costs - net		
Return from nuclear funds, nuclear fund adjustment and unwinding of nuclear provisions	-146	-19
Fair value changes, impairments and reversals	1	-29
Comparable finance costs - net	**-38**	**-103**

1) In 2021, 2020 comparatives were revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.

In 2021, Fortum introduced a new Comparable net profit APM. See more information in Note 1 Significant accounting policies and Definitions and reconciliations of key figures.

Interest expenses on borrowings totalled EUR 170 million (2020: 186) including interest expenses on loans of EUR 146 million (2020: 160), and EUR 24 million (2020: 26) interest cost – net from derivatives hedging the loan portfolio. Interest expenses from leases were EUR 32 million (2020: 21) and other interest expenses were EUR 16 million (2020: 2).

Interest income, EUR 156 million (2020: 111), includes EUR 128 million (2020: 88) interest income from shareholder loan receivables and other loan receivables, and EUR 7 million (2020: 8) from deposits. Interest income from leases was EUR 15 million (2020: 12) and other interest income was EUR 5 million (2020: 4).

Return from Nuclear Funds include interest income from the Finnish Nuclear waste fund and changes in fair values in the Swedish Nuclear waste fund. The change between 2021 and 2020 in unwinding of discount on other provisions and pension obligations comes mainly from a positive effect of changes in discount rates on other provisions in the Uniper segment. For additional information see Note 29 Nuclear-related assets and liabilities, Note 30 Other provisions and Note 31 Pension obligations.

Interest rate and currency derivatives in finance costs – net

EUR million	2021	2020
Interest rate and cross currency swaps		
Interest expenses on borrowings	16	24
Exchange rate difference from derivatives	-12	52
Rate difference in fair value gains and losses on financial instruments [1)]	-55	-2
Total fair value change of interest rate derivatives in finance costs - net	**-51**	**74**
Foreign exchange derivatives		
Interest expenses on borrowings	-40	-50
Exchange rate difference from derivatives	-15	61
Rate difference in fair value gains and losses on financial instruments	4	0
Total fair value change of currency derivatives in finance costs - net	**-51**	**11**
Total	**-102**	**85**

1) Fair value gains and losses on financial instruments include fair value change of hedging derivatives in fair value hedge relationship to EUR -55 million (2020: -2).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

12 Income tax expense

12.1 Profit before tax

EUR million	2021	2020
Finland	561	1,088
Germany	-3,186	269
Russia	455	403
Sweden	2,195	-65
United Kingdom	-824	-102
Other	509	606
IS **Total** [1]	**-289**	**2,199**

1) Profit before taxes in 2020 includes contribution from Uniper for the period of 1 April to 31 December 2020 since Uniper was consolidated as a subsidiary from 31 March 2020.

Profit before tax by country represents the respective countries' part of total profit before tax for Fortum Group according to IFRS, based on the same accounting principles as consolidated financial statements. This means that the respective country's profits include such items as share of profits from associates and joint ventures, and effects of accounting for nuclear provisions, which are not included in taxable profits in the local subsidiaries.

12.2 Major components of income tax expense by country

EUR million	2021	2020
Current taxes		
Finland	-107	-35
Germany	-506	-81
Russia	-97	-84
Sweden	-100	30
United Kingdom	0	-
Other	-93	-52
Total	**-903**	**-222**
Deferred taxes		
Finland	-1	-32
Germany	606	-23
Russia	12	-12
Sweden	162	-81
United Kingdom	179	37
Other	118	-12
Total	**1,076**	**-123**
Adjustments recognised for current tax of prior periods		
Finland	0	1
Germany	21	1
Russia	-2	-
Sweden	-	-1
United Kingdom	-	-
Other	-17	1
Total	**2**	**2**
IS **Income tax expense**	**175**	**-344**

12.3 Income tax rate reconciliation

The table below explains the difference between the theoretical enacted tax rate in Finland compared to the tax rate in the consolidated income statement.

EUR million	2021	%	2020	%
Profit before tax	-289		2,199	
Tax calculated at nominal Finnish tax rate	58	20.0	-440	20.0
Differences in tax rates in other jurisdictions	341	118.0	-52	2.4
Tax rate changes	32	11.2	4	-0.2
Tax exempt capital gains	561	194.1	167	-7.6
Impact of acquisition accounting	-	-	-70	3.2
Tax exempt income and other non-deductible expenses [1)]	-14	-4.9	24	-1.1
Share of profit of associates and joint ventures	32	11.1	189	-8.6
Taxes related to dividend distributions [1)]	-12	-4.2	-24	1.1
Tax effects of changes in value and non-recognition of deferred taxes	-851	-294.6	-129	5.9
Other items	9	3.2	-16	0.7
Adjustments recognised for taxes of prior periods	20	6.9	3	-0.1
IS Income tax expense	**175**	**60.7**	**-344**	**15.7**

1) Taxable dividends related to Germany, included in Taxes related to dividend distributions, were in 2021 reclassified to Tax exempt income and other non-deductible expenses in order to better reflect the nature of these taxes. Comparatives have been reclassified accordingly.

Key tax indicators:

- The weighted average applicable income tax rate for 2021 is 141.9% (2020: 22.1%).
- The effective income tax rate in the income statement for 2021 is 60.7% (2020: 15.7%).
- The comparable effective income tax rate for 2021 is 24.2% (2020: 24.1%). In 2021, Fortum introduced Comparable net profit APM, which resulted in recalculation of the comparable effective income tax rate. 2020 comparative has been recalculated accordingly.

See **Note 7** Comparable operating profit and comparable net profit and **Definitions and reconciliations of key figures**.

The major items affecting the effective income tax rate are as follows:

- The differences in tax rates in other jurisdictions increased the rate by 118.0% (2020: 2.4%), mainly related to Germany.
- Due to the loss before taxes in 2021, the one-time tax-free capital gains increased the rate by 194.1% (2020: -7.6%). Gains mainly relate to the sale of Stockholm Exergi Holding AB in Sweden.
- Tax effects of changes in value and non-recognition of deferred taxes during 2021 reduced the effective tax rate by -294.6% (2020: 5.9%), mainly related to derivative financial instruments and provisions in Germany.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

13 Earnings and dividend per share

ACCOUNTING POLICIES

EARNINGS PER SHARE

Basic earnings per share is calculated by dividing the net profit attributable to the owners of the parent company by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares purchased by the Group and held as treasury shares.

DIVIDENDS

Dividends proposed by the Board of Directors are not recognised in the financial statements until they have been approved by the company's shareholders at the Annual General Meeting.

13.1 Earnings per share

Earnings per share, basic

	2021	2020
IS Profit attributable to owners of the parent (EUR million)	739	1,823
Weighted average number of shares (thousand)	888,294	888,294
Basic earnings per share (EUR)	0.83	2.05

As Fortum currently has no dilutive instruments outstanding, diluted earnings per share is the same as basic earnings per share.

Comparable earnings per share

	2021	2020
Comparable net profit (EUR million)	1,778	1,483
Weighted average number of shares (thousand)	888,294	888,294
Comparable earnings per share (EUR)	2.00	1.67

In 2021, Fortum introduced a new APM, Comparable earnings per share. See more information in Note 1 Significant accounting policies and Definitions and reconciliations of key figures.

13.2 Dividend per share

A dividend in respect of 2021 of EUR 1.14 per share, amounting to a total dividend of EUR 1,013 million based on the amount of shares registered as at 2 March 2022, is to be proposed at the planned Annual General Meeting on 28 March 2022. These Financial statements do not reflect this dividend.

A dividend for 2020 of EUR 1.12 per share, amounting to a total of EUR 995 million, was decided in the Annual General Meeting on 28 April 2021. The dividend was paid on 7 May 2021.

A dividend for 2019 of EUR 1.10 per share, amounting to a total of EUR 977 million, was decided in the Annual General Meeting on 23 April 2020 and the dividend was paid on 5 May 2020.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

14 Financial assets and liabilities by categories

ACCOUNTING POLICIES

FINANCIAL ASSETS

Fortum classifies its financial assets in the following categories according to IFRS 9: financial assets at amortised cost, financial assets at fair value through profit or loss and financial assets at fair value through other comprehensive income. The classification is made at initial recognition and depends on the financial asset's contractual cash flow characteristics and the Group's business model for managing them.

In order for the financial asset to be classified and measured at amortised cost or fair value through other comprehensive income, it needs to give rise to cash flows that are solely payments of the principal and interest on the principal amount outstanding. This assessment is referred to as the SPPI test and is performed at an instrument level. When the SPPI criteria is not met, financial assets are classified to fair value through profit or loss category.

Financial assets are presented as non-current assets unless they are held for trading, expected to be realised within 12 months at the closing date or they have a maturity of under 12 months at closing date. These are classified as current assets.

FINANCIAL ASSETS AT AMORTISED COST

Fortum measures financial assets at amortised cost when the financial asset is included in the held-to-collect business model with fixed or determinable payments that are payments of amount outstanding or interest on it. They arise when the Group provides money, goods or services directly to a debtor. Financial assets at amortised cost include non-derivative financial assets with fixed or determinable payments that are not quoted in an active market.

Financial assets at amortised cost are subject to impairment using expected credit loss (ECL) model. Gains and losses from derecognition of the asset are recognised in profit and loss.

FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT OR LOSS

Financial assets at fair value through profit or loss include financial assets held for trading in the short term, financial assets designated upon initial recognition irrevocably as fair value through profit or loss and financial assets mandatorily recognised at fair value through profit or loss according to IFRS 9. Derivatives are classified as held for trading unless they are designated as effective hedging instruments.

Gains and losses arising from changes in the fair value are included in the income statement in the period in which they arise.

FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

Other equity investments designated at fair value through other comprehensive income are not subject to impairment assessment and accumulated reserves are not recycled to profit or loss upon derecognition. Dividends received are recognised in profit and loss.

Investments designated at fair value through other comprehensive income mainly consist of other equity investments coming from the acquisition of Uniper which the Group has elected to designate irrevocably at fair value through other comprehensive income.

DERECOGNITION

Fortum derecognises financial assets when the rights to receive cash flows from the assets have expired or when it has substantially transferred the risks and rewards of the assets outside of the Group.

IMPAIRMENT

Fortum recognises an allowance for expected credit losses (ECL) according to IFRS 9 for financial assets measured at amortised cost. See further information on ECL in Note 4.4.1 Credit quality of major financial assets and in Note 23 Trade and other receivables.

Financial assets measured at fair value through profit or loss are not included in ECL assessment as they are already measured at fair value. A financial asset is written-off when there is no reasonable expectation of recovering the contractual cash flows.

FINANCIAL LIABILITIES

All financial liabilities are recognised initially at fair value. In the case of loans and borrowings and payables, incurred transaction costs are deducted. In subsequent periods, all financial liabilities, except derivatives and financial liabilities which the Group has at initial recognition irrevocably designated at fair value through profit or loss, are stated at amortised cost; any difference between proceeds (net of transaction costs) and the redemption value is recognised as interest cost over the period of the borrowing using the effective interest rate method.

Derivative financial instruments entered into by the Group, that are not designated as hedging instruments are classified as liabilities at fair value through profit and loss. Amortisation of the effective interest rate and gains and losses of liabilities are recognised in the income statement.

Group's financial liabilities include trade and other payables, loans and borrowings and derivative financial instruments. Borrowings or portion of borrowings being hedged with a fair value hedge are recognised at fair value through profit or loss. Derecognition of financial liabilities takes place when the Group has fulfilled the contractual obligations.

ACCOUNTING FOR DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

Within the ordinary course of business, the Group routinely enters into sale and purchase transactions for commodities. Contracts that were entered into and continue to be held for the purpose of receipt or delivery of the commodity in accordance with the Group's expected sale, purchase or usage requirements are not within the scope of IFRS 9 ("own use exemption"). Physical contracts to buy or sell a non-financial item, which are fair valued using the fair value option to off-set accounting mismatch, or where own use exemption or hedge accounting cannot be applied are fair valued through the income statement.

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured at their fair value. Gains and losses resulting from the initial fair value measurement of a derivative ("day one" gains and losses) are eliminated against the corresponding derivative asset or liability, if the initial fair value is determined based on valuation model with input parameters that are unobservable from active markets. For derivatives whose initial fair value is evidenced by a quoted price in an active market for an identical contract or based on a valuation technique that uses only data from observable markets, gains and losses from the initial measurement are accounted for similarly to gains or losses on the subsequent measurement.

The method of recognising the resulting gain or loss on the subsequent measurement depends on whether the derivative is designated as a hedging instrument eligible for hedge accounting, and if so, the nature of the item being hedged. The Group designates certain derivatives as either: (1) hedges of highly probable forecast transactions (cash flow hedges); (2) hedges of the fair value of recognised assets or liabilities, or unrecognised firm commitments (fair value hedge); or (3) hedges of net investments in foreign operations.

The Group documents at the inception of the transaction the relationship between hedging instruments and hedged items, whether the hedged item is one or several risk components separately or in aggregation, as well as its risk management objective and strategy for undertaking various hedge transactions. When applying hedge accounting the Group also documents its assessment, of whether the derivatives that are used in hedging transactions are meeting the hedge accounting effectiveness criteria: (1) there is an economic relationship between the hedged item and the hedging instrument, (2) the effect of credit risk does not dominate the value changes that result from that economic relationship; and (3) the hedge ratio of the hedging relationship is the same as applied in the risk management. The Group also documents its assessment, both at hedge inception and on an ongoing basis, of whether the derivatives that are used in hedging transactions are highly effective by assessing the prospective capacity of the derivatives in offsetting changes in fair values or cash flows of hedged items. Hedge accounting is discontinued only when the hedging relationship ceases to meet the hedge effectiveness criteria.

CASH FLOW HEDGE

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognised in equity. Gain or loss relating to the ineffective portion is recognised immediately in the income statement. Amounts accumulated in equity are recycled in the income statement in the periods when the hedged item will affect profit and loss (e.g. when the forecasted sale that is hedged takes place). However, when the forecast transaction that is hedged results in the recognition of a non-financial asset (e.g. inventory) or a liability, the gains and losses previously deferred in equity are transferred from equity and included in the initial measurement of the cost of the asset or liability. When a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity is recognised in the income statement when the forecast transaction is ultimately also recognised in the income statement. When a forecasted transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately recognised in the income statement.

Fortum hedges its exposure to commodity market risks and applies hedge accounting by risk components. Hedge accounting is applied to Nordic electricity price risk, where the Nordic area priced physical electricity delivery is commonly divided into three risk components: (1) system price risk, (2) electricity price area difference risk (EPAD) and (3) currency risk. For each of these separate risk components there are specific derivative contracts available, which each are being effective hedges for the associated risk components.

In addition, hedge accounting is applied to certain derivative contracts hedging gas price risk. These are physically settled fixed-price forward and futures contracts, for which the own-use exemption cannot be applied (failed own-use contracts), where the contract constitutes an effective hedge of cash flows of the gas volumes to be delivered ("all-in-one" hedge).

FAIR VALUE HEDGE

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of a hedged item for which the effective interest method is used is amortised to profit or loss for the periods until maturity of the hedged item.

NET INVESTMENT HEDGING IN FOREIGN OPERATIONS

Hedges of net investments in foreign operations are accounted for similarly to cash flow hedges. Any gain or loss on the hedging instrument relating to the effective portion of the hedge is recognised in equity; the gain or loss relating to the ineffective portion is recognised immediately in the income statement. Gains and losses accumulated in equity are included in the income statement when the foreign operation is disposed of.

DERIVATIVES THAT DO NOT QUALIFY FOR HEDGE ACCOUNTING

Certain derivative instruments representing economic hedging relationship do not qualify for hedge accounting. Gains and losses on non-hedge accounted derivatives for which the offsetting impact of the hedged item is recognised in operating profit are reported in other income and other expenses in the income statement. Unrealised fair value changes of non-hedge accounted commodity derivatives hedging future cash flow and physical contracts that are accounted for as derivatives within the scope of IFRS 9 are recognised in items affecting comparability in the income statement. Gains and losses on interest rate and currency derivative instruments are recognised in finance costs – net with corresponding hedge items.

Financial assets and liabilities in the tables below are split into categories in accordance with IFRS 9. The categories are further divided into classes which are the basis for valuing a respective asset or liability. Further information can be found in the Notes mentioned in the table.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Financial assets by category 2021

		Amortised cost	Fair value through profit or loss			Fair value through other comprehensive income			
EUR million	**Note**		**Hedge accounting, fair value hedges**	**Non-hedge accounting**	**Other financial assets**	**Net investment and Cash flow hedges**	**Other equity investments**	**Lease receivables**	**Total financial assets**
Financial instruments in non-current assets									
Other non-current assets	20	316			136		118		570
Derivative financial instruments	4								
Commodity derivatives				16,955		53			17,009
Interest rate and currency derivatives			49	34		5			88
Long-term interest-bearing receivables	21	2,125			147			119	2,392
Financial instruments in current assets									
Derivative financial instruments	4								
Commodity derivatives				64,750		416			65,165
Interest rate and currency derivatives			22	170		34			226
Trade receivables	23	12,916							12,916
Other receivables	23	1,927			13				1,940
Short-term interest-bearing receivables	21	145			553			17	715
Liquid funds	24	7,545			47				7,592
Total		**24,974**	**71**	**81,909**	**897**	**507**	**118**	**136**	**108,613**

Financial assets by category 2020

		Amortised cost	Fair value through profit or loss			Fair value through other comprehensive income			
EUR million	**Note**		**Hedge accounting, fair value hedges**	**Non-hedge accounting**	**Other financial assets**	**Net investment and Cash flow hedges**	**Other equity investments**	**Lease receivables**	**Total financial assets**
Financial instruments in non-current assets									
Other non-current assets	20	291			70		118		479
Derivative financial instruments	4								
Commodity derivatives				2,707		23			2,730
Interest rate and currency derivatives			134	46		36			216
Long-term interest-bearing receivables	21	2,106			116			181	2,402
Financial instruments in current assets									
Derivative financial instruments	4								
Commodity derivatives				7,292		125			7,416
Interest rate and currency derivatives			20	89		6			115
Trade receivables	23	7,115							7,115
Other receivables	23	1,728			62				1,790
Short-term interest-bearing receivables	21	145			437			16	598
Liquid funds	24	2,262			46				2,308
Total		**13,646**	**154**	**10,133**	**732**	**190**	**118**	**196**	**25,170**

Financial liabilities by category 2021

		Amortised cost	Fair value through profit or loss			Fair value through other comprehensive income		
EUR million	**Note**		**Hedge accounting, fair value hedges**	**Non-hedge accounting**	**Other financial liabilities**	**Net investment and Cash flow hedges**	**Lease liabilities**	**Total financial liabilities**
Financial instruments in non-current liabilities								
Interest-bearing liabilities	27	6,087	1,669 [1)]				945	8,701
Derivative financial instruments	4							
Commodity derivatives				16,373		248		16,621
Interest rate and currency derivatives			9	8		18		36
Financial instruments in current liabilities								
Interest-bearing liabilities	27	7,840			549		130	8,519
Derivative financial instruments	4							
Commodity derivatives				68,905		2,934		71,839
Interest rate and currency derivatives			2	103		2		107
Trade payables	33	12,152						12,152
Other liabilities	33	425						425
Total		**26,503**	**1,680**	**85,390**	**549**	**3,202**	**1,075**	**118,400**

1) Fair valued part of bond in fair value hedge relationship.

Financial liabilities by category 2020

		Amortised cost	Fair value through profit or loss			Fair value through other comprehensive income		
EUR million	**Note**		**Hedge accounting, fair value hedges**	**Non-hedge accounting**	**Other financial liabilities**	**Net investment and Cash flow hedges**	**Lease liabilities**	**Total financial liabilities**
Financial instruments in non-current liabilities								
Interest-bearing liabilities	27	5,746	2,145 [1)]				894	8,785
Derivative financial instruments	4							
Commodity derivatives				2,462		77		2,539
Interest rate and currency derivatives			25	63		30		118
Financial instruments in current liabilities								
Interest-bearing liabilities	27	1,284			432		161	1,877
Derivative financial instruments	4							
Commodity derivatives				7,512		244		7,756
Interest rate and currency derivatives			10	167		4		181
Trade payables	33	7,126						7,126
Other liabilities	33	972						972
Total		**15,128**	**2,180**	**10,203**	**432**	**356**	**1,055**	**29,354**

1) Fair valued part of bond in fair value hedge relationship.

15 Financial assets and liabilities by fair value hierarchy

ACCOUNTING POLICIES

Fair value measurements are classified using a fair value hierarchy i.e. Level 1, Level 2 and Level 3 that reflects the significance of the inputs used in making the measurements.

FAIR VALUES UNDER LEVEL 1 MEASUREMENT HIERARCHY

The fair value of financial assets and liabilities classified as Level 1 is based on unadjusted quoted prices in active markets at the closing date. Level 1 consist e.g. commodity derivatives traded in active markets.

FAIR VALUES UNDER LEVEL 2 MEASUREMENT HIERARCHY

The fair value of financial assets and liabilities classified as Level 2 is based on observable input parameters, which are other than quoted prices.

The fair value of financial instruments traded in active markets in Level 2 is calculated using prices derived from quoted market prices at the closing date. Known calculation techniques, such as estimated discounted cash flows, are used to determine fair value of interest rate and currency financial instruments. The fair value of interest-rate swaps is calculated as the present value of the estimated future cash flows. The fair value of forward foreign exchange contracts is determined using forward exchange market rates at the closing date. Fair values of options are determined by using option valuation models. The fair value of financial liabilities is estimated by discounting the future contractual cash flows at the current market interest rate that is available to the Group for similar financial instruments. The counterparty credit risk has been taken into account when determining fair value. The credit risk is determined based on a portfolio valuation in a bilateral approach covering both Fortum's own credit risk (debt value adjustment) and the credit risk of the corresponding counterparty (credit value adjustment).

The Group bases the calculation on existing market conditions at each closing date. Financial instruments used in Fortum are standardised products that are either cleared via exchanges or widely traded in the market. Credit risk from trading commodity derivatives is mitigated by clearing trades through exchanges or by limiting trades to OTC counterparties considered to be creditworthy, or secured by credit worthy guarantees. Financial derivatives are traded with credit worthy financial institutions with investment grade ratings.

FAIR VALUES UNDER LEVEL 3 MEASUREMENT HIERARCHY

The fair value of financial assets and liabilities classified as Level 3 is based on unobservable input parameters.

Level 3 consist mainly investments in unlisted shares classified as other investments for which the fair value can't be reliably measured and derivative financial instrument for which the fair value has been determined using valuation techniques with unobservable inputs. The input parameters of Level 3 of the fair value hierarchy for equity investments are specified taking into account economic developments and available industry and corporate data. The counterparty credit risk has been adjusted when determining the fair value.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Financial assets

		Level 1		Level 2		Level 3		Netting [1]		Total	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
In non-current assets											
Other investments	20	71	75	46	43	99	70			216	188
Derivative financial instruments											
Commodity derivatives	4										
Hedge accounting				62	52			-9	-29	53	23
Non-hedge accounting		5,136	1,030	11,708	1,563	207	138	-96	-24	16,955	2,707
Interest rate and currency derivatives	4										
Hedge accounting				54	170					54	170
Non-hedge accounting				34	46					34	46
Interest-bearing receivables		111	98			36	17			147	116
In current assets											
Derivative financial instruments											
Commodity derivatives	4										
Hedge accounting		50		572	185			-207	-60	416	125
Non-hedge accounting		22,876	2,851	45,575	5,090	326	6	-4,028	-655	64,750	7,292
Interest rate and currency derivatives	4										
Hedge accounting				57	26					57	26
Non-hedge accounting				170	89					170	89
Other receivables				13	62					13	62
Interest-bearing receivables		596	432		46	4	5			600	483
Total		**28,840**	**4,486**	**58,291**	**7,372**	**672**	**237**	**-4,340**	**-768**	**83,465**	**11,326**

1) Receivables and liabilities from standard electricity and other commodity derivative contracts against exchanges with same delivery period are netted in Fortum, except in Uniper-segment.

Financial liabilities

		Level 1		Level 2		Level 3		Netting 2)		Total	
EUR million	**Note**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
In non-current liabilities											
Interest-bearing liabilities 1)	27			1,669	2,145					1,669	2,145
Derivative financial instruments											
Commodity derivatives	4										
Hedge accounting				257	106			-9	-29	248	77
Non-hedge accounting		4,874	634	11,336	1,598	259	254	-96	-24	16,373	2,462
Interest rate and currency derivatives	4										
Hedge accounting				27	56					27	56
Non-hedge accounting				8	63					8	63
In current liabilities											
Interest-bearing liabilities	27			549	497					549	497
Derivative financial instruments											
Commodity derivatives	4										
Hedge accounting		420		2,721	304			-207	-60	2,934	244
Non-hedge accounting		20,316	2,545	52,531	5,612	86	10	-4,028	-655	68,905	7,512
Interest rate and currency derivatives	4										
Hedge accounting				4	14					4	14
Non-hedge accounting				103	167					103	167
Total		**25,610**	**3,179**	**69,205**	**10,561**	**345**	**264**	**-4,340**	**-768**	**90,822**	**13,236**

1) Fair valued part of bonds in fair value hedge relationship.
2) Receivables and liabilities from standard electricity and other commodity derivative contracts against exchanges with same delivery period are netted in Fortum, except in Uniper-segment.

At the end of December 2021, the net fair value of commodity derivatives was EUR -6,225 million, including assets of EUR 82 billion and liabilities of EUR 88 billion (EUR -149 million in December 2020, including assets of EUR 10 billion and liabilities of EUR 10 billion). The increase from December 2020 mainly relates to derivative financial instruments in the Uniper segment resulting from higher market prices for commodities.

Net fair value amount of interest rate and currency derivatives was EUR 171 million, including assets EUR 315 million and liabilities EUR 143 million. Fortum has cash collateral agreements with some counterparties. At the end of December 2021 Fortum had received EUR 152 million from collateral agreements. The received cash has been booked as short-term liability.

During 2021 there has been no transfers between Level 1 and Level 2.

Changes in fair value hierarchy Level 3

EUR million	**1 Jan 2021**	**Purchases**	**Sales**	**Settlements**	**Gains / losses in income statement**	**Transfers into level 3**	**Transfers out of level 3**	**Gains / losses in OCI**	**31 Dec 2021**
On balance sheet, net									
Other investments	70	31			-3	52	-52	1	99
Commodity derivatives, fair values	382		166	-2	219				765
Commodity derivatives, day-1 gains and losses	-501		-100	26					-575
Interest-bearing receivables	22	19		-6	5				40
Total on balance sheet, net	**-27**	**50**	**66**	**18**	**221**	**52**	**-52**	**1**	**329**

16 Intangible assets

ACCOUNTING POLICIES

Intangible assets, except goodwill, are stated at historical cost less accumulated amortisation and impairment losses; and amortised on a straight-line basis over their expected useful lives.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each closing date. An asset's carrying amount is written down to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. See further information on the impairment testing in ▸ Note 19 Impairment testing.

Economic lives and book values intangible assets reflect approved actions towards Fortum's climate-related targets.

GOODWILL

Goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of net identifiable assets of the acquired subsidiary, associate or joint venture at the date of acquisition. Goodwill on acquisitions of subsidiaries is included in intangible assets and tested annually for impairment. Goodwill on acquisition of associates and joint ventures is included in investments in associates and joint ventures and is tested for impairment as part of the overall balance. Goodwill is carried at cost less accumulated impairment losses. Impairment losses on goodwill are not reversed. Gains and losses on disposal of an entity include the carrying amount of goodwill relating to the entity sold.

CONTRACT-BASED INTANGIBLE ASSETS

Majority of contract-based intangible assets are concession rights in Germany, which are valued at amortised costs. The remaining useful life of concession rights is approximately 30 years.

RESEARCH AND DEVELOPMENT COSTS

Research and development costs are recognised as expense as incurred and included in other expenses in the consolidated income statement. If development costs are expected to generate future income, they are capitalised as intangible assets and depreciated over the period of the income streams.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSIGNED VALUES AND USEFUL LIVES IN ACQUISITIONS

In an acquisition acquired intangible and tangible assets are fair valued and their remaining useful lives are determined. Management believes that the assigned values and useful lives, as well as the underlying assumptions, are reasonable. Different assumptions and assigned lives could have a significant impact on the reported amounts.

The Group has significant carrying values in property, plant and equipment, intangible assets and participations in associated companies and joint ventures which are tested for impairment according to the accounting policy. See further information on the impairment testing in ▸ Note 19 Impairment testing.

	Goodwill		Contract-based		Other [1]		Total [1]	
EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Cost 1 January	**1,069**	**612**	**1,328**	**-**	**1,514**	**921**	**3,911**	**1,533**
Translation differences and other adjustments	22	-58	29	-	27	-53	78	-111
Acquisition of subsidiary companies [2]	-	515	-	1,349	-	523	-	2,388
Capital expenditure	-	-	-	-	118	124	119	124
Disposals	-	-	-1	-	-21	-12	-21	-12
Sale of subsidiary companies	-70	-	-22	-	-58	-4	-150	-4
Transfer to assets held for sale [2]	-	-	-	-22	-	-	-	-22
Reclassifications	-	-	-	-	6	15	6	15
Cost 31 December	**1,021**	**1,069**	**1,334**	**1,328**	**1,586**	**1,514**	**3,941**	**3,911**
Accumulated depreciation 1 January	**-**	**-**	**794**	**-**	**850**	**426**	**1,643**	**426**
Translation differences and other adjustments	-	-	29	-1	16	-15	45	-16
Acquisition of subsidiary companies [2]	-	-	-	809	-	324	-	1,134
Disposals	-	-	-1	-	-20	-14	-21	-14
Sale of subsidiary companies	-	-	-22	-	-37	-3	-59	-3
Transfer to assets held for sale [2]	-	-	-	-22	-	-	-	-22
Reclassifications	-	-	-	-8	-	1	-	-7
Depreciation for the year	-	-	20	15	144	130	164	145
Impairment charges	-	-	-	-	2	-	2	-
Accumulated depreciation 31 December	**-**	**-**	**820**	**794**	**955**	**850**	**1,775**	**1,643**
BS **Carrying amount 31 December**	**1,021**	**1,069**	**514**	**534**	**632**	**664**	**2,167**	**2,268**

1) In 2021, CO_2 emission allowances included in Intangible assets were reclassified to Inventories. Comparatives have been reclassified accordingly. See ▸ Note 22 Inventories.
2) See ▸ Note 3 Acquisitions, disposals and assets held for sale.

Goodwill in groups of cash-generating units

Goodwill is allocated to operating segments corresponding to groups of cash-generating units that benefit from the synergies of the acquired goodwill.

EUR million	2021	2020
Uniper	515	515
Consumer Solutions	223	214
Russia	144	134
City Solutions	137	205
Total	**1,021**	**1,069**

Other intangible assets

Other intangible assets include customer contracts, and costs for software products and software licenses.

17 Property, plant and equipment and right-of-use assets

ACCOUNTING POLICIES

Property, plant and equipment mainly include power and heat production-related buildings, structures and machinery, waterfall rights, and other buildings and machinery.

Property, plant and equipment are stated at historical cost less accumulated depreciation and impairment losses on the consolidated balance sheet. Historical cost includes expenditure that is directly attributable to the acquisition of an item. Borrowing costs are included in the cost of qualified assets. Additionally, the cost of an item of property, plant and equipment includes the estimated cost of its dismantlement, removal or restoration when there is a contractual obligation towards a third party, or a legal obligation.

Acquired assets on the acquisition of a new subsidiary are stated at their fair values at the date of acquisition.

See Note 30 Other provisions for information about asset retirement obligations, Note 29 Nuclear-related assets and liabilities, for information about provisions for decommissioning nuclear power plants and Note 34 Leases, for information about right-of-use assets.

Land, water areas and waterfall rights are not depreciated since they have indefinite useful lives.

Depreciation on other assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, as follows:

- Buildings and structures: 10-50 years
- Machinery and equipment: 3-65 years

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance expenses are charged to the income statement during the financial period in which they are incurred.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each closing date. An asset's carrying amount is written down to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount. See further information on the impairment testing in Note 19 Impairment testing.

Economic lives and book values of property, plant and equipment reflect approved actions towards Fortum's climate-related targets.

BORROWING COSTS

Borrowing costs directly attributable to the construction of qualifying assets are added to the cost of those assets. Qualifying assets are assets that take a substantial time to get ready for their intended use or sale.

	Land and waterfall rights		Buildings and structures		Machinery, equipment and other		Advances paid and construction in progress		Total	
EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Cost 1 January	**4,436**	**2,578**	**10,400**	**4,103**	**32,285**	**8,667**	**1,602**	**419**	**48,723**	**15,768**
Translation differences and other adjustments [1]	-75	219	145	-259	444	-224	41	-41	554	-305
Acquisition of subsidiary companies [2]	-	1,636	-	6,414	-	22,825	-	3,088	-	33,963
Capital expenditure [1] [3]	6	6	56	35	232	346	754	668	1,046	1,056
Additions to right-of-use assets	34	-	41	97	97	57	-	-	173	154
Decreases in right-of-use assets	-	-	-11	-60	-21	-29	-	-	-32	-90
Nuclear asset retirement cost	-	-	-	-	56	172	-	-	56	172
Disposals	-14	-1	-33	-51	-337	-191	-8	-23	-392	-267
Sale of subsidiary companies [2]	-17	-1	-257	-89	-602	-117	-100	-2	-975	-209
Transfer to assets held for sale [2]	-	-3	-	-126	-	-1,375	-	-	-	-1,504
Reclassifications	2	4	233	336	841	2,154	-1,116	-2,507	-41	-14
Cost 31 December	**4,371**	**4,436**	**10,574**	**10,400**	**32,996**	**32,285**	**1,172**	**1,602**	**49,113**	**48,723**
Accumulated depreciation 1 January	**280**	**1**	**5,936**	**1,765**	**22,983**	**3,877**	**157**	**-**	**29,357**	**5,644**
Translation differences and other adjustments	4	7	143	-68	180	110	-2	12	325	61
Acquisition of subsidiary companies [2]	-	265	-	4,124	-	18,679	-	1,263	-	24,331
Disposals	-10	-1	-32	-48	-331	-179	-1	-8	-373	-236
Sale of subsidiary companies [2]	-1	-	-78	-39	-269	-53	-	-	-348	-92
Decreases in right-of-use assets	-	-	-1	-3	-12	-29	-	-	-13	-32
Transfer to assets held for sale [2]	-	-	-	-118	-	-1,156	-	-	-	-1,274
Depreciation for the year	5	7	180	164	932	774	1	1	1,117	946
Impairment charges	-	-	19	-	15	-	-	-	34	-
Reclassifications	-	-	-3	160	-40	959	8	-1,111	-35	8
Accumulated depreciation 31 December	**279**	**280**	**6,164**	**5,936**	**23,460**	**22,983**	**162**	**157**	**30,064**	**29,357**
BS **Carrying amount 31 December**	**4,093**	**4,156**	**4,410**	**4,464**	**9,536**	**9,302**	**1,010**	**1,445**	**19,049**	**19,367**

1) 2020 comparatives were revised in 2021 due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.
2) See Note 3 Acquisitions, disposals and assets held for sale
3) Includes EUR 50 million (2020: 39) of other asset retirement costs.

Property, plant and equipment that are subject to restrictions in the form of real estate mortgages amount to EUR 81 million (2020: 380). See Note 36 Pledged assets and contingent liabilities.

Borrowing costs of EUR 16 million were capitalised in 2021 (2020: 39) (In 2021, 2020 comparatives were revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.). The interest rate used for capitalising borrowing costs varied from 2% to 7% (2020: 2%-5%). For constructions financed by the Group, a uniform rate may be used based on interest rates of financial liabilities, including leases.

Property, plant and equipment includes right-of-use assets from leases in which Fortum acts as the lessee. See Note 34 Leases.

18 Participations in associated companies and joint ventures

ACCOUNTING POLICIES

The Group's interests in associated companies and jointly controlled entities are accounted for using the equity method of accounting. Assets acquired and liabilities assumed in the investment in associates or joint ventures are measured initially at their fair values at the acquisition date. The excess of the cost of acquisition over the fair value of the Group's share of the identifiable net assets acquired is recorded as goodwill.

The Group's share of its associates or joint ventures post-acquisition profits or losses after tax, and the expenses related to the adjustments to the fair values of the assets and liabilities assumed are recognised in the income statement. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. The Group's share of post-acquisition adjustments to associates or joint ventures equity that has not been recognised in the associate's or joint venture's income statement, is recognised directly in Group's shareholder's equity, and against the carrying amount of the investment.

When the Group's share of losses in an associate or a joint venture equals or exceeds its interest in the associate or joint venture, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associate or joint venture.

Material unrealised gains on transactions between the Group and its associates or joint ventures are eliminated to the extent of the Group's interest in the associate or joint venture. Material unrealised losses are also eliminated, unless the transaction provides evidence of an impairment of the asset transferred. Accounting policies of associates or joint ventures have been changed where necessary to ensure consistency with the policies adopted by the Group.

If more recent information is not available, the share of the profit of certain associated or joint venture companies is included in the consolidated accounts based on the latest available information.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS

Management is required to make significant judgements when assessing the nature of Fortum's interest in its investees and when considering the classification of Fortum's joint arrangements. In the classification, emphasis has been put on decision making, legal structure, financing and risks of the arrangements.

Management judgement is required when testing the carrying amounts for participations in associated companies and joint ventures for impairment. See Note 19 Impairment testing for more information.

18.1 Principal associated companies and joint ventures

	Forsmarks Kraftgrupp AB	Kemijoki Oy	TGC-1	TVO Oyj
Nature of the relationship	Co-owned nuclear company	Co-owned hydro company	Energy company (listed)	Co-owned nuclear company
Classification	Associated company	Associated company	Associated company	Joint venture
Segment	Generation, Uniper	Generation	Russia	Generation
Domicile	Sweden	Finland	Russia	Finland
Ownership interest, % 1)	34	58	29.99	26
Votes, %	34	28	29.99	26

1) Kemijoki and TVO have different series of shares. The ownership interest varies due to the changes in equity assigned to the different share series. The ownership interests for 2020 for Kemijoki Oy and TVO were 58% and 26% respectively.

Shareholdings in power production companies

Power plants are often built jointly with other power producers. Under the consortium agreements, each owner is entitled to electricity in proportion to its share of ownership, or other agreements, and each owner is liable for an equivalent portion of costs. The production companies are not profit making, since the owners purchase electricity at production cost, including interest cost and production taxes. The share of profit of these companies is mainly IFRS adjustments (e.g. accounting for nuclear-related assets and liabilities) and depreciations on fair value adjustments from historical acquisitions since the companies are not profit making under local accounting principles.

Fortum has material shareholdings in such power production companies (mainly nuclear and hydro) that are consolidated using equity method either as associated companies (Forsmarks Kraftgrupp AB and Kemijoki Oy) or as joint venture (Teollisuuden Voima Oyj (TVO)).

In Sweden, nuclear production company shareholding is 34.0% ownership of the shares in Forsmarks Kraftgrupp AB. Excluding non-controlling interests in the subsidiaries, Fortum's participation in the company is 29.7%, which reflects the share of electricity produced that Fortum can sell further to the market. The minority part of the electricity purchased is invoiced further to each minority owner according to their respective shareholding and treated as pass-through.

In Finland, Fortum has an ownership in power production company TVO that has two series of shares which entitle the shareholders to electricity produced in the different power plants owned by TVO. Shares in series A entitle to electricity produced in nuclear power plants Olkiluoto 1 and 2 and Fortum owns 26.6% of these shares. Series B entitles to electricity in the nuclear power plant currently under test production phase, Olkiluoto 3, and Fortum's ownership in this share series is 25,0%.

See also Associated companies in Note 29 Nuclear-related assets and liabilities.

The most significant hydro production company shareholding is 63.8% of the hydro shares and 26.7% of the monetary shares in Kemijoki Oy. Each owner of hydro shares is entitled to the hydropower production in proportion to its hydro shareholding.

Shareholdings in other principal associated companies and joint ventures

Fortum has also other shareholdings in listed companies, such as Territorial Generating Company 1 (TGC-1). The shareholding in TGC-1 is accounted for as an associated company as Fortum has representatives in the Board of Directors of the company. The share of profit of TGC-1 is accounted for based on previous quarter information since updated information as at 31 December is not available for financial statements.

Changes in shareholdings in principal associated companies and joint ventures

On 20 September 2021, Fortum concluded the sale of its 50% ownership in the Swedish district heating and cooling company Stockholm Exergi Holding AB (publ). See also Note 3.2.2 Other disposals.

On 31 March 2020 Fortum consolidated Uniper as a subsidiary, meaning that Uniper is no longer included in participations in associated and joint ventures on Fortum's consolidated balance sheet. Fortum and Uniper are co-owners in the Swedish nuclear company OKG AB. Fortum accounting for the shareholding in OKG AB as an associated company until 31 March 2020, and consolidated OKG as a subsidiary from 31 March 2020. See also Note 3.1.2 Uniper acquisition in March 2020.

Summarised financial information of the principal associated companies in 2021

EUR million	Forsmarks Kraftgrupp AB	Kemijoki Oy	TGC-1
Balance sheet	**31 Dec 2020**	**31 Dec 2020**	**30 Sept 2021**
Non-current assets	2,619	483	1,863
Current assets	441	7	273
Non-current liabilities	2,899	323	213
Current liabilities	128	116	223
Equity	33	52	1,700
Attributable to the owners of the parent	33	52	1,548
Attributable to non-controlling interests	-	-	153
Statement of comprehensive income	**1 Jan 2020 - 31 Dec 2020**	**1 Jan 2020 - 31 Dec 2020**	**1 Oct 2020 - 30 Sept 2021**
Sales	561	53	1,136
Profit or loss	-1	1	104
Attributable to the owners of the parent	-1	1	103
Attributable to non-controlling interests	-	-	2
Total comprehensive income	-1	1	105
Attributable to the owners of the parent	-1	1	103
Attributable to non-controlling interests	-	-	2
Reconciliation to carrying amount in Fortum Group			
Group's interest in the equity of the associate 1 January	12	30	409
Change in share of profit and OCI items	-	-	31
Dividends received	-	-	-14
Translation differences and other adjustments	-	-	39
Group's interest in the equity of the associate 31 December	**12**	**30**	**464**
Fair values on acquisitions and different accounting principles [1]	479	149	-8
Carrying amount 31 December	**491**	**179**	**456**
Market value of listed shares [2]			**135**

1) Impact of different accounting principles include mainly IFRS adjustments for nuclear-related assets and liabilities, capitalised borrowing costs and fair value adjustment for the acquired assets and liabilities. Fortum records its share of nuclear-related assets and liabilities in its nuclear associated companies according to equity method. The basis for recognition is similar as for Loviisa power plant, see accounting principles in Note 29 Nuclear-related assets and liabilities.

2) The market quotation is impacted by the limited free float of TGC-1 share.

Summarised financial information of the principal associated companies in 2020

EUR million	Forsmarks Kraftgrupp AB	Kemijoki Oy	TGC-1
Balance sheet	**31 Dec 2019**	**31 Dec 2019**	**30 Sept 2020**
Non-current assets	2,641	480	1,699
Current assets	423	6	211
Non-current liabilities	2,889	316	238
Current liabilities	141	118	1,725
Equity	34	52	1,498
Attributable to the owners of the parent	34	52	1,379
Attributable to non-controlling interests	-	-	120
Statement of comprehensive income	**1 Jan 2019 - 31 Dec 2019**	**1 Jan 2019 - 31 Dec 2019**	**1 Oct 2019 - 30 Sept 2020**
Sales	543	53	1,077
Profit or loss	-	1	42
Attributable to the owners of the parent	-	1	50
Attributable to non-controlling interests	-	-	-8
Total comprehensive income	-	1	40
Attributable to the owners of the parent	-	1	48
Attributable to non-controlling interests	-	-	-8
Reconciliation to carrying amount in Fortum Group			
Group's interest in the equity of the associate 1 January	8	30	523
Change in share of profit and OCI items	-	-	25
Dividends received	-	-	-14
Translation differences and other adjustments	3	-	-124
Group's interest in the equity of the associate 31 December	**12**	**30**	**409**
Fair values on acquisitions and different accounting principles [1]	444	151	-5
Carrying amount 31 December	**456**	**181**	**404**
Market value of listed shares [2]			**141**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Summarised financial information of the principal joint ventures

EUR million	2021 TVO Oyj	2020 TVO Oyj	2020 Stockholm Exergi AB
Balance sheet	**31 Dec 2021**	**31 Dec 2020**	**31 Dec 2020**
Non-current assets	7,946	7,691	2,663
Current assets	716	490	274
of which cash and cash equivalents	172	161	1
Non-current liabilities	5,967	5,599	1,461
of which non-current interest-bearing liabilities	4,599	4,569	1,023
Current liabilities	632	539	316
of which current financial liabilities	449	429	173
Equity	2,063	2,043	1,161
Attributable to the shareholders of the company	2,063	2,043	1,160
Attributable to non-controlling interests	-	-	1
Statement of comprehensive income	**1 Jan 2021 - 31 Dec 2021**	**1 Jan 2020 - 31 Dec 2020**	**1 Jan 2020 - 31 Dec 2020**
Sales	299	275	589
Depreciation and amortisation	-44	-45	-144
Interest income	5	12	-
Interest expense	-42	-40	-18
Income tax expense or income	-	-	-22
Profit or loss	-20	-	84
Other comprehensive income	44	-22	-14
Total comprehensive income	25	-22	70
Attributable to the shareholders of the company	25	-22	70
Reconciliation to carrying amount in Fortum Group			
Group's interest in the equity of the joint venture at 1 January	518	462	563
Change in share of profit and OCI items	5	-	35
Dividends received	-	-	-41
Investments	-	63	-
Translation differences and other adjustments	-	-6	24
Group's interest in the equity of the joint venture 31 December	**523**	**518**	**580**
Fair values on acquisitions and different accounting principles [1]	3	3	-61
Carrying amount 31 December	**526**	**521**	**519**

1) Impact of different accounting principles include mainly IFRS adjustments for nuclear-related assets and liabilities and capitalised borrowing costs. Fortum records its share of nuclear-related assets and liabilities in its nuclear associated companies according to equity method. The basis for recognition is similar as for Loviisa power plant, see accounting principles in Note 29 Nuclear-related assets and liabilities.

18.2 Participations in and share of profits from associated companies and joint ventures

Participations in associated companies and joint ventures on the balance sheet

EUR million	2021	2020
Principal associates	1,126	1,041
Principal joint ventures	526	1,039
Other associates	309	474
Other joint ventures	500	358
BS Total	**2,461**	**2,912**

Changes in participation during the year

EUR million	2021 Associated companies	2021 Joint ventures	2020 Associated companies	2020 Joint ventures
Opening balance 1 January	1,508	1,404	5,144	1,290
Acquisitions [1]	-	-	742	9
Investments	6	39	3	116
Share of profit of associates and joint ventures	104	88	559	97
Dividend income received	-37	-76	-61	-56
Divestments and capital returns [2]	-18	-551	-26	-22
Reclassifications [1]	-152	94	-4,666	3
OCI items in associates and joint ventures	-1	39	-174	-8
Translation differences and other adjustments	26	-12	-14	-25
Carrying amount at 31 December	**1,435**	**1,026**	**1,508**	**1,404**

1) Acquisitions and reclassifications in 2020 mainly relate to Uniper consolidation at 31 March 2020.
2) Divestments and capital returns mainly related to the sale of Stockholm Exergi AB.

During 2021 Fortum received EUR 113 million (2020: 116) in dividends from associates and joint ventures of which EUR 42 million (2020: 41) was received from Stockholm Exergi.

For information about investments and divestments of shares in associated companies, see Note 3 Acquisitions, disposals and assets held for sale.

Share of profit of associates and joint ventures

EUR million	2021	2020
Principal associates		
Forsmarks Kraftgrupp AB	46	46
Kemijoki Oy	-1	-1
TGC-1	33	24
Principal associates, total	**77**	**69**
Principal joint ventures		
TVO Oyj	-3	21
Principal joint ventures, total	**-3**	**21**
Other associates [1)]	27	490
Other joint ventures	91	76
IS **Total**	**192**	**656**

1) In 2020, included share of profit of EUR 469 million from Uniper SE.

Comparable share of profit of associates and joint ventures

EUR million	2021	2020
IS **Share of profit/loss of associates and joint ventures**	**192**	**656**
Adjustments to share of profit/loss of associates and joint ventures	-38	-
Comparable share of profit/loss of associates and joint ventures	**154**	**656**

In 2021, Fortum introduced a new Comparable net profit APM. See more information in Note 1 Significant accounting policies and Definitions and reconciliations of key figures.

There are no unrecognised share of losses of associated companies and joint ventures.

Uniper

Fortum previously accounted for Uniper as an associated company with a three-month time lag as Fortum published the annual report before Uniper's financial information was available. In the first quarter of 2020, Fortum revised its financial reporting schedule and publishes annual and interim reports after Uniper. Fortum's first quarter 2020 results included Fortum's share of Uniper's results from 1 October 2019 to 31 March 2020.

Fortum's share of Uniper's IV/2019 profits, EUR 162 million, included a reversal of the adjustment which Fortum already made in IV/2019 related to the impact from the reinstatement of the UK capacity market. Fortum also made a reversal of EUR 389 million (after tax) related to the negative impact of Uniper's IV/2019 impairments.

Fortum's share of Uniper's I/2020 profits, EUR 307 million, included a reversal of EUR 61 million after tax related to the negative impact of Uniper's I/2020 impairments.

In the purchase price allocation for the acquisition of 49.99% of the shares in Uniper, Fortum recorded a fair value adjustment of EUR 613 million (after tax), relating to political and regulatory risks of certain generation and production assets of Uniper. If Uniper reports negative impacts relating to these generation and production assets, Fortum assesses the potential need to use this fair value adjustment to reverse these negative impacts. Fortum has assessed and concluded to use the fair value adjustment to reverse the majority of this negative impact from the impairments reported by Uniper in their IV/2019 and I/2020 results.

The remaining fair value adjustment from the purchase price allocation for the acquisition of 49.99% of the shares in Uniper ceased to exist on 31 March 2020. Following the consolidation of Uniper as a subsidiary, Fortum has prepared a new purchase price allocation. See Note 3.1.2 Uniper acquisition in March 2020.

19 Impairment testing

ACCOUNTING POLICIES

The carrying values of goodwill, other intangible assets, property, plant and equipment, right-of-use assets, and non-financial investments are reviewed regularly for indication of impairment.

Indications of impairment are business-specific and are thus analysed separately by each segment; and include risks, such as changes in electricity and fuel prices, regulatory/political risks relating to energy taxes, price regulations, and limitations to the lifetime of assets.

Impairment testing is performed if there is an indication of impairment; and the asset is written down to its recoverable amount if its carrying amount is greater than the estimated recoverable amount.

In addition, goodwill and other intangible assets that have an indefinite useful life, and as such are not subject to amortisation, are tested annually for impairment, even if there is no indication of impairment. Impairment testing is performed and documented annually in connection with the long-term forecasting process.

Annual impairment testing is performed on a cash-generating unit level. Fortum defines cash-generating unit as the smallest group of assets that generate cash flows that are independent of the cash flows generated by other assets.

Goodwill is allocated to groups of cash-generating units that benefit from the synergies of the acquired goodwill.

Fortum uses value in use to establish the recoverable amount of cash-generating units. Value in use is determined by discounting future cash flows expected to be derived from group of assets. The carrying amount of group of cash generating units comprises net operating assets, including goodwill and fair value adjustments arising from acquisitions.

Non-financial assets, other than goodwill, that have been impaired in the past are reviewed for possible reversal of impairment at each reporting date.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS RELATED TO IMPAIRMENT TESTING

Impairment testing is forward-looking and requires management to make certain assumptions, as explained below.

The recoverable amounts of cash-generating units are determined by value in use calculations. These calculations are based on estimated discounted future cash flows in local currency from most recent, long-term forecast, and / or long-term assumptions approved by management. Cash flows cover an explicit forecast period of six years. The explicit forecast period is longer than five years as significant assets used by the business, such as power plants, have useful lives exceeding 20 years. Cash flow projections beyond the explicit forecast period are estimated by extrapolating projections using a steady or declining growth rate.

The period covered by cash flows is related to the useful lives of the assets being reviewed for impairment. The growth rate used to extrapolate the cash flow projections until the end of assets' useful lives is in line with the assumed inflation, taking into consideration market outlook forecast. Cash flows arising from future investments, such as new plants, are excluded; unless projects have been started, in which case the cash outflow needed to complete the started projects is included. In Russia, the generation capacity built after 2007 under the Russian Government's Capacity Supply Agreements receives guaranteed capacity payments for a period of 10 years after commissioning.

The discount rates reflect current assessments of the time value of money and relevant market risk premiums specific to each cash generating unit, reflecting risks and uncertainties for which the future cashflow estimates have not been adjusted.

Preparation of these cash flow estimates requires management to make assumptions relating to future expectations. Assumptions vary depending on the business the tested assets are in. Approved actions towards Fortum's climate targets are reflected in the assumptions used in the impairment testing.

Key assumptions used in impairment testing are presented below, as well as the basis for determining the value of each assumption. Assumptions are based on internal and external data that are consistent with observable market information, when applicable.

Key assumptions	Basis for determining the value for key assumptions
Power market development, recycling and waste solutions market development	Historical analysis and prospective forecasting
Regulation framework	Current market setup and prospective forecasting (e.g. CSA mechanism in Russia)
Utilisation of power plants and treatment facilities	Past experience, technical assessment and forecasted market development
Forecasted maintenance investments	Past experience, technical assessment and planned maintenance work
Discount rate	Mostly market-based information

Annual impairment testing

Annual impairment testing was performed as at 31 December 2021. The table below presents long-term pre-tax discount rates used in impairment testing by cash generating units:

Discount rate %	2021	2020
Consumer Solutions [1]	4.5-5.6	5.1-6.3
City Solutions [1]	4.8	4.8
Russia	11.7	11.8
Uniper [1]	4.6-11.7	n/a

1) Discount rate depends on location and type of business.

At 31 December 2021, the recoverable values were greater than their carrying values and therefore no impairments were booked.

The Group has considered the sensitivity of key assumptions as part of the impairment testing. When doing this, any consequential effect of the change on the other variables has also been considered. The calculations are most sensitive to changes in estimated future EBITDA levels, and changes in discount rate. Management estimates that no reasonably possible change in the discount rate used, or in future earnings would cause the carrying amount to exceed its recoverable amount in any group of cash generating units.

20 Other non-current assets

EUR million	2021	2020
Other investments	254	224
Interest-free receivables	316	255
BS Total	**570**	**479**

Other investments mainly include certain subsidiaries that are not included in the consolidated financial statements on materiality grounds, accounted for outside the scope of IFRS 9 and measured at cost (see Note 40 Group companies by segment); as well as shares in unlisted companies.

Interest-free receivables mainly include prepaid expenses.

21 Interest-bearing receivables

EUR million	2021	2020
Interest-bearing receivables	2,971	2,804
Finance lease receivables	136	196
Total	**3,107**	**3,000**

	2021		2020	
EUR million	Carrying amount	Fair value	Carrying amount	Fair value
Long-term loan receivables from associates and joint ventures	1,138	1,185	1,113	1,161
Non-current securities	111	111	98	98
Other long-term interest-bearing receivables	1,024	1,024	1,010	1,010
Total long-term interest-bearing receivables	**2,273**	**2,320**	**2,221**	**2,270**
Collateral arrangement securities	549	549	432	432
Other short-term interest-bearing receivables	149	149	151	151
Total short-term interest-bearing receivables	**698**	**698**	**582**	**582**
Total	**2,971**	**3,018**	**2,804**	**2,852**

Long-term interest-bearing receivables include receivables from associated companies and joint ventures of EUR 1,138 million (2020: 1,113). These receivables include EUR 955 million from Swedish nuclear companies, Forsmarks Kraftgrupp AB and Ringhals AB (2020: 964), which are mainly funded with shareholder loans, pro-rata to each shareholder's ownership.

22 Inventories

ACCOUNTING POLICIES

Inventories are stated at the lower of cost and net realisable value being the estimated selling price for the end product, less applicable variable selling expenses and other production costs. Cost is generally determined using the weighted average cost method.

Inventories which are acquired for the purpose of buying and selling commodities in the near future, generating profit from the fluctuation in market price, are stated at fair value less cost to sell.

EMISSION ALLOWANCES

In 2021, CO_2 emission allowances were reclassified from Other intangible assets to Inventories in order to better reflect the nature of these assets.

Inventories include CO_2 emission allowances for covering emissions caused by power and heat production. CO_2 emission allowances received free of charge are accounted at nominal value. Purchases of CO_2 emissions allowances meeting the IFRS 9 “own use”-criteria, are accounted for at contracted purchase price. Purchases of CO_2 emission allowances, which have failed to meet the “own use” –criteria, and are thus accounted for as derivatives, are recognised at market price applicable at the time of delivery.

CO_2 emission costs are settled by returning the emission allowances. The obligation for CO_2 emission costs is presented in Other payables, see Note 33 Trade and other payables. To the extent that the Group already holds allowances to cover the emission costs, the obligation is measured at the carrying amount of those allowances. Any shortfall of allowances needed to cover the settlement obligation is valued at the current market value of allowances.

The emission cost is recognised in the consolidated income statement within materials and services.

EUR million	2021	2020
Raw materials and supplies	703	671
Goods purchased for resale	1,247	583
Emission rights and green certificates [1]	168	540
Other	156	141
BS Total	**2,275**	**1,936**

1) In 2021, CO_2 emission allowances were reclassified from Intangible assets to Inventories. Comparatives have been reclassified accordingly.

Raw materials and supplies mainly consist of fuels consumed in the production process, or in the rendering of services; and include, in particular, coal, uranium and nuclear fuel rods. Goods purchased for resale include gas and coal inventories. Other mainly consists of work in progress and finished goods.

Inventories stated at fair value less costs to sell total EUR 74 million (2020: 45).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

23 Trade and other receivables

ACCOUNTING POLICIES

Trade receivables include revenue based on an estimate of electricity, gas, heat and cooling already delivered but not yet measured and not yet invoiced.

Impairment losses for trade receivables are calculated according to the expected credit loss (ECL) model. Loss allowances on trade receivables are measured at an amount equal to lifetime expected credit losses.

An allowance is made on the balance sheet for the expected future credit losses and remains on the balance sheet until it is written off as a credit loss or reversed. Allowances may remain on the balance sheet for several years pending the outcome of collection processes and court proceedings. Write-off policies differ by country depending on local legislation and assessment of recovery possibilities. For large trade receivables, ECL is calculated for the individual customer based on the estimated probability of default and expected recovery rate for the customer. These estimates are derived from available market data when possible, or based on the customer's rating. Adjustments are made if there are indications of decreased creditworthiness, e.g. based on payment behaviour. ECL for trade receivables from small customers are calculated on portfolio basis by country and business segment. The credit loss allowances are based on historical analysis of losses when possible, or on average default rates for customers based on externally available information. These rates are adjusted if there are any forward-looking indicators showing changes in expected credit losses. Trade receivables overdue more than 180 days are generally considered to be credit-impaired and allowances are made for the full amount, adjusted for expected recovery rates.

EUR million	2021	2020
Trade receivables	12,916	7,115
Other	1,940	1,790
BS Total	**14,856**	**8,906**

Other category includes other operating assets, accrued income and prepaid expenses.

Trade receivables

Ageing analysis of trade receivables

	2021			2020		
EUR million	**Gross**	**Expected credit loss allowance**	**Expected credit loss rate, %**	**Gross**	**Expected credit loss allowance**	**Expected credit loss rate, %**
Not past due	12,662	14	0	6,988	6	0
Past due 1-30 days	192	5	2	60	3	4
Past due 31-90 days	22	9	42	21	7	31
Past due 91-180 days	34	16	48	18	4	20
Past due more than 181 days	204	154	75	206	159	77
Total	**13,114**	**198**	**2**	**7,293**	**178**	**2**

Changes in expected credit loss allowance

EUR million	2021	2020
1 January	178	99
Expected credit loss allowance recognised during the year	43	17
Write-offs	-25	-51
Acquisition of subsidiary companies	-	127
Translation differences and other changes	3	-14
31 December	**198**	**178**

The majority of impaired trade receivables relate to the Russia and Uniper segments.

Trade receivables by currency (Gross)

EUR million	2021	2020
EUR	9,966	5,867
USD	1,196	377
GBP	795	433
NOK	353	86
SEK	346	126
RUB	295	274
PLN	143	102
Other	20	28
Total	**13,114**	**7,293**

Trade receivables are arising from a large number of customers mainly in EUR, USD, GBP and NOK mitigating the concentration of risk.

For further information regarding credit risk management and credit risks, see Counterparty and credit risks in the Operating and financial review and Note 4.4 Credit risk.

24 Liquid funds

ACCOUNTING POLICIES

Cash and cash equivalents in Liquid funds include cash in hand, deposits held at call with banks and other short-term, highly liquid investments with original maturities of three months or less. Cash and cash equivalents, deposits and commercial papers are measured at amortised cost. Fixed-term securities are measured at fair value through profit or loss.

Drawn amount of bank overdrafts are shown within borrowings in current liabilities on the balance sheet. Trading-related cash collaterals are included in margin receivables and otherwise restricted cash is treated as short-term interest-bearing receivables.

EUR million	2021	2020
Cash at bank and in hand	3,858	834
Deposits and securities with maturity under 3 months	3,687	1,063
Cash and cash equivalents	**7,545**	**1,898**
Deposits and commercial papers with maturity more than 3 months	-	363
Securities, fixed-term with maturity more than 3 months	47	46
Deposits and securities, maturity over 3 months but less than 12 months	**47**	**410**
BS Total	**7,592**	**2,308**

At the end of the reporting period, the Group's liquid funds totalled EUR 7,592 million (2020: 2,308). Liquid funds include EUR 2,966 million (2020: 289) held by the Uniper segment. Russian subsidiaries held EUR 300 million (2020: 244) of liquid funds in the form of cash and bank deposits.

Liquid funds totalling EUR 7,342 million (2020: 2,107) are placed with counterparties that have an investment grade credit rating.

At the end of the reporting period, Fortum had undrawn committed credit facilities amounting to EUR 400 million. The undrawn facilities consisted of EUR 300 million of the total new EUR 800 million bilateral revolving credit facility maturing in December 2022 with borrower's one-year extension option and EUR 100 million committed overdraft limits that are valid until further notice.

The EUR 1,750 million revolving credit facility with maturity in June 2023 and Uniper's revolving credit facility of EUR 1,800 million with maturity in September 2025 were both totally drawn in December 2021.

For further information regarding credit risk management and credit risks, see Note 4.4 Credit risk.

25 Share capital

	2021	2020
Number of registered shares 1 January and 31 December	888,294,465	888,294,465
Share capital, EUR million, 1 January and 31 December	3,046	3,046

Fortum Corporation has one class of shares. By the end of 2021, a total of 888,294,465 shares had been issued. Each share entitles the holder to one vote at the Annual General Meeting. All shares entitle holders to an equal dividend. At the end of 2021 Fortum Corporation's share capital, paid in its entirety and entered in the trade register, was EUR 3,046,185,953.00.

Fortum Corporation's shares are listed on Nasdaq Helsinki. The trading code is FORTUM. Fortum Corporation's shares are in the Finnish book entry system maintained by Euroclear Finland Ltd.

Details on the President and CEO and other members of the Fortum Executive Management Team's shareholdings and interest in the equity incentive schemes is presented in Note 10 Employee benefits and Board remuneration.

25.1 Authorisations from the Annual General Meeting 2021

In 2021, the Annual General Meeting decided to authorise the Board of Directors to decide on the repurchase and disposal of the company's own shares up to a maximum number of 20,000,000 shares, which corresponds to approximately 2.25% of all the shares in the company. These authorisations are effective until the next Annual General Meeting and, in any event, for a period no longer than 18 months. These authorisations had not been used as per 2 March 2022.

25.2 Convertible bond loans and bonds with warrants

Fortum Corporation has not issued any convertible bonds or bonds with attached warrants, which would entitle the bearer to subscribe for Fortum shares. The Board of Directors of Fortum Corporation has no unused authorisations from the General Meeting of shareholders to issue convertible bond loans or bonds with warrants or increase the company's share capital.

26 Non-controlling interests

Principal non-controlling interests

EUR million	2021	2020
Uniper, Germany	1,318	2,430
Fortum Oslo Varme AS Group, Norway	150	147
Other	66	48
BS Total	**1,534**	**2,624**

EUR million	Uniper 2021	Uniper 2020 [1)]
Sales	105,992	44,154
Loss/profit for the period	-4,122	4
Dividends paid to non-controlling interests	-157	-139
Total cash flows	2,663	-1,032
Current assets	91,093	18,414
Current liabilities	95,331	17,781
Current net liabilities/assets	**-4,238**	**633**
Non-current assets	27,683	11,729
Non-current liabilities	25,782	10,729
Non-current net assets	**1,901**	**1,000**
Net liabilities/assets	**-2,337**	**1,633**
of which attributable to non-controlling interests	1,318	2,430
Ownership interests held by non-controlling interests (%)	22	24

1) Uniper's income statement and cash flow information are included from 1 April 2020.

27 Interest-bearing liabilities

Financial net debt and adjusted net debt

EUR million	2021	2020
+ Interest-bearing liabilities	**17,220**	**10,662**
- BS Liquid funds	**7,592**	**2,308**
- Non-current securities	111	98
- Collateral arrangement securities	549	432
- Securities in interest-bearing receivables	**660**	**530**
- BS Margin receivables	9,163	1,132
+ BS Margin liabilities	985	331
+/- Net margin liabilities/receivables	**-8,179**	**-801**
Financial net debt	**789**	**7,023**
+ BS Pension obligations	1,190	1,520
+ Other asset retirement obligations	872	821
- BS Share of Finnish and Swedish Nuclear Waste Funds	3,515	3,445
+ BS Nuclear provisions	3,891	3,866
+ Nuclear provisions net of assets in Nuclear Waste Funds	375	421
+ Total provisions net of assets in Nuclear Waste Funds	**2,438**	**2,762**
Adjusted net debt	**3,227**	**9,784**

Financial net debt decreased during the year by EUR 6,234 million from EUR 7,023 million to EUR 789 million in December 2021. Liquid funds increased by EUR 5,284 million from EUR 2,308 million to EUR 7,592 million in December 2021. The higher commodity prices lead to higher margin requirements and the net margin receivables therefore increased by EUR 7,378 million from EUR 801 million to EUR 8,179 million in December 2021. Interest-bearing liabilities increased by EUR 6,558 million from EUR 10,662 million to EUR 17,220 million in December 2021.

Fortum has a collateral arrangement to release cash from the Nordic Power Exchange. This arrangement is presented with equal amounts, EUR 549 million (2020: 432), as a short-term interest-bearing liability and an interest-bearing receivable.

Underfunded pension obligations and asset retirement obligations, net of share in nuclear waste funds, are included in adjusted net debt.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Interest-bearing liabilities

EUR million	2021	2020
Non-current loans	7,756	7,891
Current loans	8,389	1,716
Total loans	**16,144**	**9,607**
Non-current lease liabilities	945	894
Current lease liabilities	130	161
Total lease liabilities	**1,075**	**1,055**
Total	**17,220**	**10,662**

EUR million	2021	2020
Bonds	2,706	3,758
Loans from financial institutions	3,715	2,556
Reborrowing from the Finnish State Nuclear Waste Management Fund	916	1,145
Lease liabilities	945	894
Other long-term interest-bearing liabilities	419	433
BS **Total long-term interest-bearing liabilities**	**8,701**	**8,785**
Current portion of long-term bonds	999	500
Current portion of loans from financial institutions	468	20
Current portion of other long-term interest-bearing liabilities	264	14
Commercial paper liabilities	3,129	260
Current portion of lease liabilities	130	161
Collateral arrangement liability	549	432
Other short-term interest-bearing liabilities	2,980	490
BS **Total short-term interest-bearing liabilities**	**8,519**	**1,877**
Total	**17,220**	**10,662**

Loans

			Repricing					
EUR million	**Effective interest rate, %**	**Carrying amount 2021**	**Under 1 year**	**1-5 years**	**Over 5 years**	**Fair value 2021**	**Carrying amount 2020**	**Fair value 2020**
Bonds	1.9	3,705	1,107	1,752	846	3,919	4,258	4,521
Loans from financial institutions	0.6	4,183	3,553	630	-	4,222	2,576	2,638
Reborrowing from the Finnish State Nuclear Waste Management Fund	0.5	1,165	1,165	-	-	1,213	1,145	1,210
Other long-term loans	2.6	433	221	-	212	463	447	488
Total long-term loans [1]	**1.2**	**9,487**	**6,047**	**2,382**	**1,058**	**9,817**	**8,425**	**8,857**
Collateral arrangement liability	0.8	549	549	-	-	549	432	432
Commercial paper liabilities	0.2	3,129	3,129	-	-	3,129	260	260
Other short-term loans	0.4	2,980	2,980	-	-	2,980	490	490
Total short-term loans	**0.3**	**6,658**	**6,658**	**-**	**-**	**6,658**	**1,182**	**1,182**
Total [2]	**0.8**	**16,144**	**12,704**	**2,382**	**1,058**	**16,475**	**9,607**	**10,039**

1) Includes current portion of long-term loans of EUR 1,731 million (2020: 534).
2) The average interest rate on loans and derivatives was 1.3% (2020: 1.5%).

The interest-bearing liabilities increased in 2021 by EUR 6,558 million to EUR 17,220 million (2020: 10,662). The amount of short-term loans increased by EUR 5,476 million, and at the end of the year the amount of short-term financing was EUR 6,658 million (2020: 1,182). The increase is mainly due to the use of commercial paper programmes, which increased by EUR 2,869 million to EUR 3,129 million on 31 December 2021.

In May 2021 Fortum repaid a maturing bond of EUR 500 million.

In December 2021 Fortum signed new bilateral financing agreements to further strengthen the liquidity position.

These agreements consisted of a EUR 400 million bank loan maturing in September 2024, a EUR 500 million bank loan (maturing in June 2023 with extension option of eight months) and a revolving credit facility of EUR 800 million (maturing in December 2022 with extension option of one year), of which EUR 500 million was drawn as of 31 December 2021. Additionally, Fortum withdrew the core revolving credit facility EUR 1,750 million in December 2021.

In December 2021 Uniper extended the existing EUR 400 million bank loan, maturing in September 2022, to mature in March 2023 and signed a new EUR 150 million bank loan with maturity in January 2024. Additionally, Uniper withdrew a revolving credit facility EUR 1,800 million in December 2021.

Current portion of long-term loans, EUR 1,731 million, consist of EUR 1,000 million bond maturing in September 2022, EUR 450 million term loan and EUR 281 million other loans. The EUR 450 million term loan is part of the EUR 2,000 million loan originally maturing in October 2022 of which EUR 1,550 million was prepaid in December 2021.

The average interest rate for the portfolio of EUR loans was 0.6% at the balance sheet date (2020: 0.9%). The average interest rate on total loans and derivatives was 1.3% at the balance sheet date (2020: 1.5%). Part of the external loans, EUR 925 million (2020: 634), have been swapped to RUB and the average interest cost for these loans, including cost for hedging the RUB, was 8.3% at the balance sheet date (2020: 6.2%).

For more information, see Note 4 Financial risk management Note 34 Leases and Note 36 Pledged assets and contingent liabilities.

Reconciliation of interest-bearing liabilities

				Non-cash changes			
EUR million	**1 Jan 2021**	**Divestment of subsidiary companies**	**Cash flow from financing activities [1)]**	**Non-cash collateral arrangement**	**Valuation differences/ Change in consolidation**	**Lease liabilities**	**31 Dec 2021**
Bonds	4,258		-500		-52		3,705
Reborrowing from the Finnish State Nuclear Waste Management Fund	1,145		21				1,165
Financial and other interest-bearing liabilities	4,204	-202	7,120	117	35		11,274
Lease liabilities	1,055		-152			173	1,075
Total	**10,662**	**-202**	**6,488**	**117**	**-17**	**173**	**17,220**

				Non-cash changes			
EUR million	**1 Jan 2020**	**Acquisition of subsidiary companies**	**Cash flow from financing activities [1)]**	**Non-cash collateral arrangement**	**Valuation differences/ Change in consolidation**	**Lease liabilities**	**31 Dec 2020**
Bonds	4,251				7		4,258
Reborrowing from the Finnish State Nuclear Waste Management Fund	1,185		-40				1,145
Financial and other interest-bearing liabilities	1,144	557	2,414	151	-61		4,204
Lease liabilities	108	1,018	-105		-5	38	1,055
Total	**6,688**	**1,575**	**2,269**	**151**	**-60**	**38**	**10,662**

1) Repayments and borrowings.

Bond issues

Issued/Maturity	**Interest basis**	**Interest rate, %**	**Effective interest, %**	**Currency**	**Nominal value million**	**Carrying amount EUR million**
Fortum Corporation EUR 8,000 million EMTN Programme [1)]						
2012/2022	Fixed	2.250	2.344	EUR	1,000	1,010
2019/2023	Fixed	0.875	0.996	EUR	1,000	998
2019/2026	Fixed	1.625	1.638	EUR	750	754
2019/2029	Fixed	2.125	2.247	EUR	750	749
2013/2023	Floating	Stibor 3M+1.13		SEK	1,000	98
2013/2043	Fixed	3.500	3.719	EUR	100	97
Total outstanding carrying amount 31 December 2021						**3,705**

1) EMTN = Euro Medium Term Note

28 Income taxes on the balance sheet

ACCOUNTING POLICIES

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the consolidated income statement, because of items of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is provided in full, using the balance sheet approach on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, if the deferred tax arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss, it is not accounted for. Deferred tax is determined using tax rates (and laws) that have been enacted or substantially enacted by the closing date and are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised. Deferred tax assets are set off against deferred tax liabilities if they relate to income taxes levied by the same taxation authority.

Deferred tax is provided on temporary differences arising from investments in subsidiaries, associates and joint ventures, except where the timing of the reversal of the temporary difference is controlled by the Group, and it is probable that the temporary difference will not be reversed in the foreseeable future.

The Group recognises liabilities for anticipated tax dispute issues based on estimates of whether additional taxes will be due. No provision will be recognised in the financial statements if Fortum considers the claims unjustifiable. Therefore, if taxes regarding ongoing tax disputes have to be paid before final court decisions, they are booked as a receivable. Where the final outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS AND ESTIMATES REGARDING FUTURE TAX CONSEQUENCES

Fortum has deferred tax assets and liabilities which are expected to be realised through the income statement over the extended periods of time in the future. In calculating the deferred tax items, Fortum is required to make certain assumptions and estimates regarding the future tax consequences attributable to differences between the carrying amounts of assets and liabilities as recorded in the financial statements and their tax basis.

Assumptions made include the expectation that future operating performance for subsidiaries will be consistent with historical levels of operating results, recoverability periods for tax loss carry-forwards will not change, and that existing tax laws and rates will remain unchanged into foreseeable future. Fortum believes that it has prudent assumptions in developing its deferred tax balances.

Fortum continually evaluates the probability of utilising deferred tax assets and considers various factors that, in addition to the actual and planned earnings of the past, take into account medium-term and long-term planning. The basis for recognising deferred tax assets is an estimate by management of the extent to which it is probable that there will be sufficient taxable profit in the foreseeable future against which the unused tax losses, tax credits and deductible temporary differences can be offset.

Assumptions and estimates regarding main uncertain tax positions are supported by external legal counsel or expert opinion.

If the actual final outcome (regarding tax disputes) would differ negatively from management's estimates with 10%, the Group would need to increase the income tax liability by EUR 11 million at 31 December 2021.

28.1 Deferred taxes on the balance sheet

	2021			2020		
EUR million	**1 Jan**	**Change**	**31 Dec**	**1 Jan**	**Change**	**31 Dec**
BS Deferred tax assets	1,089	1,060	2,149	77	1,013	1,089
BS Deferred tax liabilities	-952	125	-827	-865	-87	-952
Net deferred taxes	**138**	**1,184**	**1,321**	**-788**	**926**	**138**

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes relate to the same fiscal authority.

Movement in deferred tax assets and liabilities 2021

EUR million	Intangible assets	Property, plant and equipment and right-of-use assets	Pension obligations	Provisions	Derivative financial instruments	Tax losses and tax credits carry-forward	Other	Net deferred taxes
1 January 2021	-241	-1,228	542	1,273	-63	168	-312	138
Charged to income statement	44	-282	-156	395	1,258	-23	-161	1,076
Charged to other comprehensive income	-	-	-98	-	269	-	0	171
Exchange rate differences, reclassifications and other changes	-2	-44	-20	-10	11	1	0	-63
Acquisitions and disposals	0	2	-	0	0	0	-3	-1
31 December 2021	**-200**	**-1,551**	**268**	**1,658**	**1,476**	**146**	**-476**	**1,321**

Movement in deferred tax assets and liabilities 2020

EUR million	Intangible assets	Property, plant and equipment and right-of-use assets	Pension obligations	Provisions	Derivative financial instruments	Tax losses and tax credits carry-forward	Other	Net deferred taxes
1 January 2020	-104	-823	25	-17	33	63	36	-788
Charged to income statement	-10	-123	-8	-141	197	25	-84	-144
Charged to other comprehensive income	-	-3	135	-	27	-	-1	158
Exchange rate differences, reclassifications and other changes	6	122	238	177	3	12	-281	277
Acquisitions and disposals [1)]	-133	-447	159	1,254	-323	73	28	611
Transfer to assets held for sale	-	46	-7	-	-	-5	-10	24
31 December 2020	**-241**	**-1,228**	**542**	**1,273**	**-63**	**168**	**-312**	**138**

1) Acquisition and disposals included EUR 579 million from the acquisition of Uniper at 31 March 2020. See ▸ Note 3 Acquisition, disposals and assets held for sale.

Historically, Fortum had significant deferred tax liabilities owing to its investments in non-current assets that are depreciated faster for tax than for accounting purposes. Through the acquisition of Uniper, Fortum now has significant deferred tax assets related to provisions and derivative financial instruments. Deferred tax assets on derivative financial instruments increased during 2021 due to decrease in the net fair value of the unrealised commodity derivatives caused by high commodity market prices.

Expiry of tax losses carried forward and recognised deferred tax assets

EUR million	2021 Tax losses	2021 Deferred tax asset	2020 Tax losses	2020 Deferred tax asset
Tax losses carried forward without expiration date [1]	675	132	789	137
Tax losses carried forward with expiration date	58	8	166	31
Total	**733**	**139**	**955**	**168**

1) Majority relates to Germany, United Kingdom and Sweden.

Deferred tax assets are recognised for tax losses carried forward to the extent that realisation of the related tax benefit through future profits is probable.

Amount of temporary differences, tax losses carried forward and tax credits for which no deferred tax asset was recognised due to uncertainty of utilisation:

EUR million	2021	2020
Temporary differences [1]	4,910	2,437
Tax losses carried forward [2]	463	468
Tax credits	3	4
Total	**5,376**	**2,909**

1) Majority relates to Germany.
2) Majority relates to Uniper segment, and do not expire.

Deferred tax liabilities were not recognised on temporary differences of EUR 164 million (2020: 374) for investments in subsidiaries, branches, and associates and joint ventures to the extent that Fortum can control the reversal effect, and it is probable that temporary differences will not be reversed in the foreseeable future.

28.2 Income tax receivables

EUR million	2021	2020
Belgium	113	113
Other	48	43
BS **Total**	**161**	**156**

Income tax receivable in Belgium relates to income tax assessments for the years 2008–2012. Additional taxes of EUR 113 million were paid and, based on a supporting legal opinion, booked as an income tax receivable. See Note 37 Legal actions and official proceedings.

Other income tax receivables reflect corporate income taxes paid mainly in relation to the financial year, as well as payments according to received tax audit assessments in relation to previous years.

29 Nuclear-related assets and liabilities

ACCOUNTING POLICIES

Fortum owns Loviisa nuclear power plant in Finland, and through the acquisition of Uniper, OKG Aktiebolag (OKG) and Barsebäck Kraft AB (Barsebäck) nuclear power companies in Sweden. Fortum and Uniper are co-owners in the Swedish nuclear company OKG AB. In Fortum's consolidated balance sheet, Shares in Nuclear Waste Funds and the Nuclear provisions relate to Loviisa, OKG and Barsebäck nuclear power plants. Fortum's nuclear-related provisions and the related part of the Nuclear Waste Funds are both presented separately on the balance sheet.

Fortum's shares in the Nuclear Waste Funds are accounted for according to IFRIC 5, Rights to interests arising from decommissioning, restoration and environmental rehabilitation funds which states that the fund assets are measured at the lower of fair value or the value of the related liabilities since Fortum does not have control or joint control over the Nuclear Waste Funds. The Nuclear Waste Funds are managed by governmental authorities. The related provisions are the provision for decommissioning and the provision for disposal of spent fuel.

The fair values of the provisions are calculated according to IAS 37 by discounting the separate future cash flows, which are based on estimated future costs and actions already taken. The initial net present value of the provision for decommissioning (at the time of commissioning the nuclear power plant) has been included in the investment cost and is depreciated over the estimated operating time of the nuclear power plant. Changes in the technical plans etc., which have an impact on the future cash flow of the estimated costs for decommissioning, are accounted for by discounting the additional costs to the current point in time. The increased asset retirement cost due to the increased provision for decommissioning is added to property, plant and equipment and depreciated over the remaining estimated operating time of the nuclear power plant. For power plant units taken from use the increase is recognised immediately in the income statement.

The provision for spent fuel covers the future disposal costs for fuel used until the end of the accounting period. Costs for disposal of spent fuel are expensed during the operating time based on fuel usage. The impact of the possible changes in the estimated future cash flow for related costs is recognised immediately in the income statement based on the accumulated amount of fuel used until the end of the accounting period. The related interest costs due to unwinding of the provision is recognised in other financial items - net.

The interest income and possible fair valuation effects on the Nuclear Waste Funds assets are presented in other financial items - net.

Fortum's actual share of the Nuclear Waste Funds can be higher than the carrying value of the Fund in the balance sheet. The legal nuclear liability should be fully covered by payments and guarantees to the Nuclear Waste Fund in Finland. The same applies in Sweden for the nuclear power plants that are taken out of operation. For Swedish nuclear power plants in operation the nuclear liability should be fully covered at the end of the plants operating lifetimes. The difference between the legal liability and provisions can be material per power plant, as the legal liability in Finland is not discounted while the provisions are and in Sweden the legal liability is based on different assumptions than the provisions.

The annual fees to the Fund are based on changes in the legal liability, the return generated in the Nuclear Waste Fund and incurred costs of taken actions.

Fortum also has minority interests in nuclear power companies, including Teollisuuden Voima Oyj (TVO) in Finland and Forsmarks Kraftgrupp AB (Forsmark) in Sweden. The minority shareholdings are classified as associated companies and joint ventures and are consolidated with equity method. Both the Finnish and the Swedish companies are non-profit making, i.e. electricity production is invoiced to the owners at cost according to local GAAP. Accounting

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

policies of the associates regarding nuclear-related assets and liabilities have been changed where necessary to ensure consistency with the policies adopted by the Group.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS MADE WHEN ESTIMATING PROVISIONS RELATED TO NUCLEAR PRODUCTION

The provision for future obligations for nuclear waste management including decommissioning of Fortum's nuclear power plants and related spent fuel is based on long-term cash flow forecasts of estimated future costs. The main assumptions are technical plans, timing, cost estimates and discount rate. The technical plans, timing and cost estimates are approved by governmental authorities.

Any changes in the assumed discount rate would affect the provision. If the discount rate used would be lowered, the provision would increase. For the power plants where the actual Share of the Nuclear Waste Fund is higher than the provision an increase in provisions would be offset by an increase in the recorded share of Fortum's part of the Nuclear Waste Funds on the balance sheet. The total effect on the income statement would be positive since the decommissioning part of the provision is treated as an asset retirement obligation. This situation will prevail as long as the actual Share of the Nuclear Waste Fund is higher than recognised in the balance sheet and IFRS is limiting the carrying value of the assets to the amount of the provision since Fortum does not have control or joint control over the fund.

Based on Finnish and Swedish laws, Fortum has legal obligations to fully fund the legal liabilities decided by the governmental authorities, for decommissioning of the power plants and disposal of spent fuel through the Nuclear Waste Funds.

Both in Finland and in Sweden nuclear operators are legally obligated for the decommissioning of the plants and the disposal of spent fuel (nuclear waste management). In both countries the nuclear operators are obligated to secure the funding of nuclear waste management by paying to government operated nuclear waste funds. The nuclear operators also have to give securities to guarantee that sufficient funds exist to cover future expenses of decommissioning of the power plant and the disposal of spent fuel.

29.1 Nuclear-related assets and liabilities for consolidated nuclear power plants

EUR million	2021	2020
Carrying values on the balance sheet		
BS Nuclear provisions	3,891	3,866
BS Fortum's share of the Nuclear Waste Funds	3,515	3,445
Fortum's share of the fair value of the net assets in the Nuclear Waste Funds in Finland and Sweden	3,924	3,886
Share of fund not recognised on the balance sheet	408	441

Nuclear provision and fund accounted according to IFRS

Nuclear provisions include the provision for decommissioning and the provision for disposal of spent fuel. The carrying value of the nuclear provisions, calculated according to IAS 37, increased by EUR 25 million compared to 31 December 2020, totalling EUR 3,891 million at 31 December 2021.

Fortum's share of the Nuclear Waste Funds are from an IFRS perspective overfunded by EUR 408 million, since Fortum's share of the Funds on 31 December 2021 was EUR 3,924 million and the carrying value on the balance sheet was EUR 3,515 million. The Fund on Fortum's balance sheet can at maximum be equal to the amount of the provisions according to IFRS. As long as the Fund is overfunded from an IFRS perspective, the other financial items - net, is adjusted positively if the provisions increase more than the Fund, and negatively if the provision decreases below the actual value of the fund.

Legal liability for Loviisa nuclear power plant

The legal liability on 31 December 2021, decided by the Ministry of Economic Affairs and Employment in December 2021, was EUR 1,148 million.

The legal liability is based on a cost estimate, which is updated every year; and a technical plan, which is updated every three years. The legal liability is determined by assuming that the decommissioning would start at the beginning of the year following the assessment year and discounting is not applied in determining the amount.

Fortum's share in the Finnish Nuclear Waste Fund

According to Nuclear Energy Act, Fortum is obligated to contribute funds in full to the State Nuclear Waste Management Fund to cover the legal liability. Fortum contributes funds to the Finnish State Nuclear Waste Management Fund based on the yearly funding obligation target decided by the governmental authorities in connection with the decision of size of the legal liability. The current funding obligation target decided in December 2021 is EUR 1,148 million.

Nuclear provisions

EUR million	2021	2020
1 January	3,866	813
Increase in provisions	211	476
Acquisition of subsidiary companies	-	2,412
Provision used	-189	-155
Unwinding of discount	65	62
Exchange rate differences	-62	258
BS 31 December	**3,891**	**3,866**
BS Fortum's share in the Nuclear Waste Funds	3,515	3,445

Borrowing from the State Nuclear Waste Management Fund

Participants in the Finnish State Nuclear Waste Management Fund are allowed to borrow from the fund according to certain rules. Fortum uses the right to borrow back and has pledged shares in Kemijoki Oy as security for the loans. The loans are renewed yearly. See Note 27 Interest-bearing liabilities and Note 36 Pledged assets and contingent liabilities.

OKG and Barsebäck nuclear power plants in Sweden

In Sweden, Svensk Kärnbränslehantering AB (SKB), a company owned by the nuclear operators, takes care of all nuclear waste management related activities on behalf of nuclear operators. SKB receives its funding from the Swedish Nuclear Waste Fund, which in turn is financed by the nuclear operators.

Nuclear waste fees and guarantees are normally updated every three years by governmental decision after a proposal from the Swedish Radiation Safety Authority (SSM). From September 2018, the proposal is prepared by the National Debt Office. The proposal is based on cost estimates done by SKB and the license holders. An updated technical plan for nuclear waste management was decided by SKB in September 2019 and was handed in to SSM in the end of 2019. In December 2020 the Swedish government decided the waste fees and guarantees for 2021 only. Nuclear waste fees paid by licensees with a unit/units that are still in operation are currently based on future costs with the assumed lifetime of 50 years for each unit of a nuclear power plant. The fee is calculated in relation to the energy delivered and set as an amount of öre (1 öre = SEK 0,01) per kWh delivered. For Barsebäck, which have no units in operation, the fee is determined as a fixed fee in SEK per year.

29.2 Nuclear power plants in associated companies and joint ventures

Forsmark and TVO are non-profit making companies, i.e. electricity production is invoiced to the owners at cost. Invoiced cost is accounted for according to local GAAP. In addition to the invoiced electricity production cost, Fortum makes IFRS adjustments to comply with Fortum's accounting principles. These adjustments include also Fortum's share of the companies' nuclear waste funds and nuclear provisions.

The tables below present the 100% figures relating to nuclear funds and provisions for the companies as well as Fortum's net share.

Nuclear-related assets and liabilities relating to associated companies (100%)

EUR million	2021	2020
Carrying values with Fortum assumptions [1]		
Nuclear provisions	4,347	3,674
Share of the State Nuclear Waste Management Fund	3,556	3,406
of which Fortum's net share consolidated with equity method	**-215**	**-59**
Fortum's share of the fair value of the net assets in the Nuclear Waste Funds	1,150	880
Receivables from the waste fund that are overfunded (underfunded) from an IFRS perspective	-	14
TVO's share of the fund not recognised in the balance sheet	-	73

1) Accounted for according to Fortum's accounting principles.

TVO's legal liability, provision and share of the fund are based on the same principles as described above for Loviisa nuclear power plant.

Participants in the Finnish State Nuclear Waste Management Fund are allowed to borrow from the fund according to certain rules. Fortum is using the right to reborrow funds through TVO based on its ownership. See more information in Note 27 Interest-bearing liabilities.

Forsmark's provision and share of the fund are based on same principles as described above for OKG and Barsebäck nuclear power plants.

Status of TVO's Olkiluoto 3 project

In Finland, Fortum is participating in the country's fifth nuclear power plant unit, Olkiluoto 3 (OL3), through the shareholding in Teollisuuden Voima Oyj (TVO) with an approximately 25% share representing some 400 MW in capacity. Olkiluoto 3 (OL3), currently under test production phase, was procured as a fixed-price turnkey project from a consortium (Plant Supplier) formed by Areva GmbH, Areva NP SAS and Siemens AG. As stipulated in the plant contract, the consortium companies have joint and several liability for the contractual obligations.

In March 2018, TVO signed a comprehensive settlement agreement with the plant supplier consortium companies Areva NP, Areva GmbH, and Siemens AG as well as with Areva Group parent company Areva SA, a company wholly owned by the French State. The settlement agreement concerned the completion of the OL3 project and related disputes, and it entered into force in late March 2018. The supplier consortium companies committed to ensuring that the funds dedicated to the completion of the OL3 project will be adequate and will cover all applicable guarantee periods, including setting up a trust mechanism funded by Areva companies to secure the financing of the costs of completing the OL3 project. During the period under review, replenishing the trust was finished according to the terms of the 2018 Global Settlement Agreement (GSA), but it was replenished according to the amendment agreement which entered into force in July 2021.

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TVO and the Areva−Siemens consortium negotiated since summer 2020 on the terms of the OL3 project completion. In addition, the Areva companies were preparing a financial solution which ensure the necessary funding for the companies to complete the OL3 project. The parties reached a consensus in their negotiations regarding the main principles of the OL3 project completion in May 2021, and the agreements regarding the amendments to the OL3 project 2018 Global Settlement Agreement (GSA) were signed in June 2021. Certain conditions had to be fulfilled in order for the agreements to enter into force, and all conditions were fulfilled on 13 July 2021.
Key matters of the agreement were:

- The Areva companies' trust mechanism, established in the GSA of 2018 was replenished in July with EUR 432.3 million
- Both parties are to cover their own costs as of July 2021 until end of February 2022.
- In the case that the plant supplier consortium companies would not complete the OL3 project until the end of February 2022, they would pay an additional compensation for delays, depending on the date of completion.
- In connection with the agreement entering into force, the plant supplier paid EUR 206.9 million of the EUR 400.0 million delay compensation as agreed in the GSA 2018.

The Radiation and Nuclear Safety Authority (STUK) granted a fuel loading permit for the OL3 plant unit in March 2021, and the fuel loading was completed in April 2021. The completion of fuel loading meant that OL3 is now a nuclear power plant in use. On 16 December 2021, STUK granted TVO permission for making the reactor critical and conducting low power tests. The first criticality of OL3 was reached on 21 December 2021. OL3's electricity production starts in March 2022, once the plant unit has been connected to the national grid. Regular electricity production starts in July 2022.

Nuclear-related guarantees

In addition to nuclear waste fees nuclear power companies provide guarantees for any uncovered liability and unexpected events.

For more information regarding Fortum's guarantees given on behalf of nuclear companies, see Note 36 Pledged assets and contingent liabilities.

30 Other provisions

ACCOUNTING POLICIES

Provisions are recognised when the Group has a present legal or constructive obligation to a third party as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated.

Provisions are measured at the present value of the expenditures expected to be required to settle the obligation at the reporting date using a discount rate that reflects current market assessment of the time value of money. When risk is not covered in the estimated cash flows, the discount rate also includes the risks specific to the obligation.

Increase in the provision due to the passage of time and changes in provisions due to changes in discount rates are recognised as interest expense in the consolidated income statement. Changes in provisions, except for changes in asset retirement obligations, are recognised in the consolidated income statement.

ASSET RETIREMENT OBLIGATIONS

Asset retirement obligations for the decommissioning or dismantling of property, plant and equipment are recognised either when there is a contractual obligation towards a third party or a legal obligation. The obligation is generally based on detailed cost estimates validated by external experts.

The asset retirement obligation is recognised as part of the cost of an item of property, plant and equipment when the asset is put in service. Costs are depreciated over the remainder of the asset's useful life. Changes in asset retirement obligations are recognised in property, plant and equipment on the consolidated balance sheet; unless the item of property, plant and equipment has already been fully depreciated when changes are recognised in the consolidated income statement.

ONEROUS CONTRACT PROVISIONS

An onerous contract provision is recognised for a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. Unavoidable costs is the lower of the excess obligation from the performance under the contract, and any potential penalties or compensation arising in the event of non-performance.

ENVIRONMENTAL PROVISIONS

Environmental provisions are recognised based on the current interpretation of environmental laws and regulations when it is probable that a present obligation has arisen, and the amount of such liability can be reliably estimated. The obligation is generally based on detailed cost estimates validated by external experts.

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CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS MADE WHEN ESTIMATING PROVISIONS

Provisions for present obligations require management judgment in determining whether it is probable that an outflow of economic benefits will be required to settle the obligation. Estimation is required in determining the value of the obligation as the amount recognised as a provision is based on the best estimate of unavoidable costs required to settle the obligation at the end of the reporting period. When estimating unavoidable costs, management may be required to consider a range of possible outcomes and their associated probabilities, risks and uncertainties surrounding the events and circumstances, as well as making assumptions of the timing of payment. Estimation is also required in determining the rate used to discount provisions to present value. Changes in estimates of timing or amounts of costs required to settle the obligation may become necessary as time passes and/or more accurate information becomes available.

EUR million	Supplier- and customer-related	Asset retirement	Power production-related	Gas distribution-related	Environmental remediation and similar	Personnel-related	Other	Total
1 January 2021	**948**	**821**	**643**	**378**	**261**	**247**	**933**	**4,232**
Increase in provisions	2,355	50	15	142	10	216	163	2,950
Provisions used	-159	-6	-1	-107	-16	-72	-80	-441
Unused provisions reversed	-182	-	-	-56	-2	-20	-68	-328
Exchange rate differences and other changes	-66	9	-	-	-	1	66	10
Unwinding of discounting	-2	-2	-4	-2	-	-4	-1	-14
31 December 2021	**2,893**	**872**	**653**	**354**	**253**	**368**	**1,013**	**6,406**
BS Of which current provisions	1,836	29	-	-	11	149	274	2,299
BS Of which non-current provisions	1,057	843	653	354	242	219	739	4,108

Provisions for asset retirement obligations consist of obligations for conventional and renewable energy power plants, including the conventional plant components in the nuclear power segment, that are based on legally binding civil agreements and public regulations; as well as provisions for environmental improvements at gas storage facilities. The majority of the provision is estimated to be used within 45 years.

Provisions for supplier- and customer-related obligations include EUR 2.6 billion (2020: 0.5) of onerous contract provisions for procurement of electricity sales contracts for which the own-use exemption under IFRS 9 is applied, and to long-term infrastructure purchase contracts used in the gas storage business. See Note 35 Capital and other commitments. Additions to supplier-related provisions mainly relate to Uniper segment's electricity sales contracts for which the own-use exemption under IFRS 9 is applied. The provision increased to account for increased electricity prices and the associated higher purchasing costs. Purchases are, however, hedged using derivative financial instruments whose fair value measurement has offsetting effects recognised in items affecting comparability (see Note 7 Comparable operating profit and comparable net profit). Future cash outflows from the utilisation of the provision are offset by cash inflows from the hedges.

Power production-related provisions consist mainly of provisions from the hydroelectric power business. The majority of the provision is estimated to be used within 60 years.

Gas distribution-related provisions consist mainly of onerous contract provisions for gas transportation and regasification. The majority of the provision is estimated to be used within 13 years.

Environmental provisions mainly include provisions for redevelopment and water protection measures, the rehabilitation of contaminated sites, and other environmental improvement measures. The majority of the provision is estimated to be used within 22 years.

Personnel-related provisions mainly include provisions for performance-based compensation components, long-service bonus obligations, in-kind obligations, restructuring and other deferred personnel costs. The majority of the provision is estimated to be used within 42 years.

Other provisions include EUR 0.3 billion (2020: 0.3) provisions for risk-related contingencies, as well as a number of individually immaterial items.

For provisions for decommissioning, and provision for disposal of spent fuel for nuclear production, see Note 29 Nuclear-related assets and liabilities.

31 Pension obligations

ACCOUNTING POLICIES

The Group companies have various pension schemes in accordance with the local conditions and practices in the countries in which they operate. The schemes are generally funded through various pension vehicles including payments to insurance companies, Group's pension funds and other separate arrangements. The Group has both defined benefit and defined contribution plans.

For defined benefit plans, pension costs are assessed using the projected unit credit method. The cost of providing pensions is charged to the income statement as to spread the service cost over the service lives of employees. Current and past service cost, as well as gains or losses from settlements are reported under personnel costs. The net interest is reported in financial items.

The defined benefit obligation is calculated annually on the balance sheet date and is measured as the present value of the estimated future cash flows using interest rates of high-quality corporate bonds, or similar, that have terms to maturity approximating to the terms of the related pension liability. The plan assets for pensions are valued at market value. The net liability recognised on the balance sheet is the defined benefit obligation at the closing date less the fair value of plan assets.

Any net asset position that might arise from offsetting the present value of the defined benefit obligations against the corresponding fair value of plan assets is recognised taking into account the applicable asset restrictions. Such an asset position is reported in Other non-current assets on the balance sheet.

In the case of a plan amendment, curtailment or settlement (each a "plan event") occurring in a defined benefit plan during an annual reporting period, the current service cost and the net interest on the net liability or asset are remeasured for the remainder of the reporting period after the plan event. The actuarial assumptions applicable as of the date of the plan event are to be used as the basis for such remeasurement. When the benefits of a plan are changed, or when a plan is curtailed, the resulting change in the present value of the defined benefit obligation that relates to past service, or the gain or loss related to a curtailment is recognised immediately in profit or loss. Gains or losses on settlements of defined benefit plans are recognised when the settlement occurs.

Remeasurements of the net defined benefit liability or asset include actuarial gains and losses that may arise especially from differences between estimated and actual variations in underlying assumptions about demographic and financial variables; and, additionally, from developments in these assumptions as of each reporting date. Additionally included is the difference between the actual return on plan assets and the interest income on plan assets contained in the net interest result, as well as any change in the effect of the asset ceiling, excluding amounts already included in net interest. Remeasurement results and related deferred taxes are recognised in full in the period in which they occur and are reported in the statement of comprehensive income.

The Group's contributions to defined contribution plans are charged to the income statement in the period to which the contributions relate.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS USED TO DETERMINE FUTURE PENSION OBLIGATIONS

The present value of the pension obligations is based on actuarial calculations that use several assumptions. Any changes in these assumptions will impact the carrying amount of pension obligations.

Fortum's pension arrangements

Finland

The statutory pension benefits (as determined in Employee's Pension Act /TyEL) in Finland provide the employees pension coverage for old age, disability and death of a family provider. The benefits are insured with an insurance company, and determined to be defined contribution plans.

In addition, the Group has historical old-age and survivor pension benefits with the Fortum Pension Fund covering a limited number of people. The Fortum Pension Fund is a closed fund managed by a Board, consisting of both employers' and employees' representatives. The promised benefit is defined in the rules of the Fund, mostly at a maximum of 66% of the salary basis. The salary basis is an average of the ten last years' salaries, which are indexed by a common salary index to the accounting year. After retirement the benefits payable are indexed yearly with the TyEL-index.

The Fund is operating under the regulation from the Financial Supervisory Authority (FSA). The liability has to be fully covered according to the regulations. The national benefit obligation related to the defined benefit plans is calculated so that the promised benefit is fully funded until retirement.

Germany

The majority of active and former employees are covered by occupational benefit plans in addition to the state retirement benefits. The benefits offered under these plans primarily include retirement, disability and survivor benefits.

The majority of the reported pension obligation for the active employees arises from the ”BAS Plan” and from the ”Zukunftssicherung” plan, that have been closed to the new hires since 2008. The only plan open to new hires is a defined contribution-oriented benefit plan, which is based on “units of capital”.

The benefit expense for all these plans is dependent on compensation, and is determined at different percentage rates based on the ratio between compensation and the contribution limit in the statutory retirement pension system. The plans contain different interest rate assumptions. Up to, and including 31 December 2018, fixed interest rate assumptions had applied for both the “BAS-Plan” and the “Zukunftssicherung” plan. From 1 January 2019, the pension units established have earned interest at a rate that is linked to market rates and hedged by applying guaranteed minimum interest rates. An annual review is performed, taking market developments into account, to determine whether the pension units should be formed based on the guaranteed minimum interest rates or by applying a higher rate. The interest rate can be increased to a maximum of 6.0% per year. Pension units granted through 31 December 2018 remain unchanged by this adjusted interest calculation. The units of capital established under the open defined contribution-oriented benefit plan earn interest at the average yield of long-term government bonds of the Federal Republic of Germany observed in the fiscal year.

Future pension increases at a rate of 1% per year are guaranteed for certain individuals including a large number of active employees. For the remaining eligible individuals, pensions are adjusted mostly in line with the rate of inflation, usually in a three-year cycle.

Pension plans are funded through designated pension vehicles that are legally distinct from the company. In addition, plan assets are funded in form of “Pensionskassen” and a Group-wide pension fund as well as in the form of a Contractual Trust Arrangement (CTA). Only the “Pensionskassen” vehicles and the pension fund are subject to regulatory provisions in relation to the investment of capital and funding requirements. For the CTA, there are only funding rules stipulated in corporate agreements.

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United Kingdom

The Group operates three pension plans in the United Kingdom, one defined contribution plan and two defined benefit plans. The defined benefit plans were closed for new hires from 2005 and 2008, respectively. Since the closure of these plans, new hires have been joining the open defined contribution plan.

Benefit payments under the existing defined benefit pension plans are adjusted either by fixed increases or by reference to an index, as measured by the United Kingdom Retail Price Index ("RPI") or the Consumer Price Index ("CPI") (the increases are limited to a fixed maximum amount).

Plan assets are administered by a trust which is independent from the group and wholly responsible for the investment of the plan assets.

The Pension Regulator in the United Kingdom requires a valuation of the funding of pension plans in the United Kingdom to be performed at least once every three years. The last valuation was made on 31 March 2019.

Main risks relating to defined benefit plans

Typical risk factors for defined benefit plans are changes in discount rates, risks related to other actuarial assumptions, as well as investment and volatility risks.

Change in discount rate

The discount rate used to calculate the defined benefit obligation (according to IFRS) depends on the value of corporate bond yields as at the reporting date. A decrease in yields increases the benefit obligation that is often only partially offset by an increase in the value of fixed income holdings.

Risk related to other actuarial assumptions

Assumptions for future inflation, salary levels and mortality are used for actuarial calculations. Should the actual outcome differ from these assumptions, the liability may increase.

Investment and volatility risk

Pension plan assets are allocated to different asset classes based on the statutory legislation or investment strategy of the corresponding pension plan. Depending on the pension plan, underlying investment management plans are updated on a regular basis. If the return of the fund's assets is not enough to cover the raise in liability and benefit payments over the financial year, then, in certain legislations, the employer has to fund the deficit with contributions, unless the fund has sufficient covering.

Movement in the net defined benefit liability

	Defined benefit obligation		Fair value of plan assets		Net defined benefit asset(-)/liability(+)	
EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
1 January	**4,636**	**529**	**-3,117**	**-406**	**1,519**	**123**
Included in consolidated income statement [1]						
Current service cost	73	52	-	-	73	53
Past service cost	30	11	-	-	30	11
Settlements	-4	-	1	-	-3	-
Net interest	43	50	-31	-36	12	14
	142	112	-28	-35	113	77
Included in OCI						
Remeasurement gains(-)/losses(+)	-297	820	-121	-366	-418	454
Actuarial gains/losses arising from changes in financial assumptions	-279	835	-	-	-279	835
Actuarial gains/losses arising from experience adjustments	-18	-16	-	-	-18	-16
Return on plan assets (excluding amounts included in net interest expense)	-	-	-122	-366	-122	-366
Exchange rate differences and other changes	52	-9	-50	8	2	-1
	-245	811	-171	-358	-416	453
Other						
Contributions paid by the employer	-	-	-64	-59	-64	-59
Benefits paid	-95	-66	90	61	-5	-5
Acquisitions of subsidiary companies	-	3,288	-	-2,343	-	944
Transfer to assets held for sale	-	-38	-	22	-	-15
31 December	**4,437**	**4,636**	**-3,290**	**-3,117**	**1,146**	**1,518**
Present value of funded defined obligation					4,405	4,600
Fair value of plan assets					-3,290	-3,117
Funded status					**1,115**	**1,483**
Present value of unfunded obligation [2]					32	35
Net liability arising from defined benefit obligation					1,146	1,518
Pension assets included in other non-current assets on the balance sheet					44	2
BS Pension obligations on the balance sheet					1,190	1,520

1) Net interest is presented in financial items in the income statement. The rest of costs related to defined benefit plans are included in staff costs (row defined benefits plans in the staff cost specification in Note 10 Employee benefits and Board remuneration) and in Items affecting comparability.
2) The unfunded obligation mainly relates to Germany.

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Contributions expected to be paid during 2022 total EUR 70 million.

Fair value of plan assets

	2021			2020		
EUR million	**Quoted**	**Unquoted**	**Total**	**Quoted**	**Unquoted**	**Total**
Equity instruments	1,327	8	1,335	972	177	1,149
Debt instruments	1,025	183	1,208	947	174	1,120
Cash and cash equivalents	-	104	104	-	156	156
Real estate	-	234	234	-	228	228
Investment funds	396	-	396	105	-	105
Other assets	0	14	14	0	359	359
Total	**2,748**	**543**	**3,290**	**2,023**	**1,094**	**3,117**

A specification of plan assets has not been available for pension plans financed through an insurance company. In these cases, the fair value of plan assets has been included in other assets.

In 2021 plan assets in the United Kingdom were partly transferred from unquoted to quoted.

Derivatives used to hedge the risks have been allocated to the respective asset classes.

The actual return on plan assets totalled EUR 145 million (2020: 405).

Amounts recognised on the balance sheet by country 2021

EUR million	Finland	Germany	United Kingdom	Other countries	Total
Present value of funded obligations	283	3,147	719	256	4,405
Fair value of plan assets	-251	-2,122	-756	-161	-3,290
Deficit(+)/surplus(-)	**32**	**1,025**	**-36**	**93**	**1,115**
Present value of unfunded obligations	-	26	-	6	32
Net asset(-)/liability(+) on the balance sheet	**32**	**1,051**	**-36**	**99**	**1,146**
Pension asset included in non-current assets	-	7	36	1	44
BS Pension obligations on the balance sheet	32	1,058	-	100	1,190

Amounts recognised on the balance sheet by country 2020

EUR million	Finland	Germany	United Kingdom	Other countries	Total
Present value of funded obligations	294	3,396	655	256	4,600
Fair value of plan assets	-242	-2,074	-642	-159	-3,117
Deficit(+)/surplus(-)	**51**	**1,322**	**12**	**98**	**1,483**
Present value of unfunded obligations	-	28	-	7	35
Net asset(-)/liability(+) on the balance sheet	**51**	**1,350**	**12**	**105**	**1,518**
Pension asset included in non-current assets	-	-	-	2	2
BS Pension obligations on the balance sheet	51	1,350	12	106	1,520

The principal actuarial assumptions used

	2021			2020		
%	**Finland**	**Germany**	**United Kingdom**	**Finland**	**Germany**	**United Kingdom**
Discount rate	1.00	1.20	2.00	0.30	0.80	1.50
Future salary increases	2.30	2.30	3.00	1.50	2.30	2.60
Future pension increases	2.40	1.80	3.10	1.60	1.80	2.70
Rate of inflation	2.10	1.80	3.20	1.30	1.80	2.80

The discount rate in Finland is based on high quality European corporate bonds with maturity that best reflects the estimated term of the defined benefit pension plans. The discount rate in Germany is based on the returns on high-quality EURO corporate bonds available at the end of the respective fiscal year, and take into account the average duration of the respective underlying benefit obligations. The United Kingdom discount rate is based on currency-specific returns on high-quality corporate bonds available at the end of the respective fiscal year and takes into account the average duration of the respective underlying obligations.

The discount, inflation, salary growth and pension growth rates, as well as mortality are the key assumptions when calculating defined benefit obligations. Changes in the key actuarial assumptions would lead to the following changes in the present value of the defined benefit obligations:

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Sensitivity of defined benefit obligation to changes in assumptions

Change in the assumption	Impact to the pension obligation increase(+)/ decrease(-)
0.5% increase in discount rate	-9.1%
0.5% decrease in discount rate	10.5%
0.5% increase in benefit	3.2%
0.5% decrease in benefit	-2.8%
0.5% increase in salary growth rate	1.0%
0.5% decrease in salary growth rate	-0.9%
10% increase in mortality	-2.9%
10% decrease in mortality	3.3%

A 10% decrease in mortality would result in higher life expectancy of beneficiaries, depending of the age of each individual beneficiary. At the end of 2021, the life expectancy of a 63-year-old male retiree would increase by approximately one year, if mortality were to decrease by 10%.

The sensitivities indicated are computed based on the same methods and assumptions used to determine the present value of the defined benefit obligations. If one of the actuarial assumptions is changed for the purpose of computing the sensitivity of results to changes in that assumption, all other actuarial assumptions are included in the computation unchanged. Potential correlation effects between the individual actuarial assumptions are not taken into account when computing sensitivities. When considering sensitivities, it must be noted that the change in the present value of the defined benefit obligations resulting from changing multiple actuarial assumptions simultaneously is not necessarily equivalent to the cumulative effect of the individual sensitivities.

Maturity profile of the undiscounted defined benefit obligation on 31 December 2021

EUR million	Future benefit payments
Maturity under 1 year	97
Maturity between 1 and 5 years	428
Maturity between 5 and 10 years	668
Maturity between 10 and 20 years	1,563
Maturity between 20 and 30 years	1,448
Maturity over 30 years	1,563

The weighted average duration of defined benefit obligation at 31 December 2021 is 21 years.

32 Other non-current liabilities

EUR million	2021	2020
Contract liabilities	95	101
Connection fees	70	71
Other	232	172
BS **Total**	**397**	**344**

Connection fees include refundable fees paid by the customer when connected to district heating network in Finland. Connection fees were refundable until 2013.

33 Trade and other payables

EUR million	2021	2020
Trade payables	12,152	7,126
Accrued expenses and deferred income		
Accrued personnel expenses	256	218
Accrued interest expenses	72	85
Contract liabilities	754	557
Other accrued expenses and deferred income	144	215
Other liabilities		
Liability to return emission rights [1]	1,938	522
Current tax liability	735	307
Other	425	495
BS **Total**	**16,477**	**9,525**

1) For additional information see Note 22 Inventories.

Contract liabilities comprise mainly of project and waste management services that are invoiced but not delivered at the reporting date.

The management considers that the amount of trade and other payables approximates fair value.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

34 Leases

ACCOUNTING POLICIES

LESSEE ACCOUNTING

The Group leases mainly gas storage facilities, office buildings and land areas. The Group recognises all leases, with the exception of short-term (i.e. lease term less than 12 months) and low value leases as right-of-use assets with a corresponding lease liability at the date at which the leased asset is available for use by the Group.

Right-of-use assets and lease liabilities are initially recognised on the consolidated balance sheet at future fixed lease payments over the lease term. Lease payments are discounted to present value. Right-of-use assets are depreciated on a straight-line basis over the lease term, or the useful life of the leased asset if shorter; and reviewed periodically for indication of impairment.

When the future lease payments are revised due to changes in index-linked considerations or the lease term changes, the right-of-use asset and the corresponding lease liability is remeasured. Any differences arising on reassessments are recognised in the consolidated income statement.

Interest expense on lease liabilities is presented within Interest expense in the consolidated income statement. In the consolidated cash flow statement, the principal portion of the lease payment is presented under Payments of long-term liabilities, and the interest portion as Interest paid under Funds from operations. Variable lease payments, as well as costs for leases not capitalised due to exemptions in the standard, are expensed to consolidated income statement.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS:

ESTIMATES TO DETERMINE LEASE LIABILITY

Calculation of the lease liability requires certain assumption based input factors. The main estimates are related to the lease term, the discount rate, as well as the determination whether a contract contains a lease.

In determining the lease term, management considers all facts and circumstances that create an economic incentive to exercise an extension option, or not to exercise a termination option. Extension options are only included in the lease term if the lease is reasonably certain to be extended. The lease term is reassessed if underlying circumstances are significantly changing.

Lease payments are discounted to present value using an incremental borrowing rate. The incremental borrowing rate is determined based on reasonable third party financing conditions considering the length of the lease term and the currency of cash flows.

A contract is or contains a lease if the Group has the right to control the use of an identified asset for a period of time in exchange for a consideration. A capacity portion of an asset is an identified asset if it is physically distinct, or if the Group has the right to use substantially all the capacity of the asset during the lease term.

LESSOR ACCOUNTING

Leases in which the Group acts as the lessor and substantially all the risks and rewards arising from the use of the leased asset are transferred to the lessee are classified as finance leases. Finance lease receivables mainly relate to certain electricity delivery contracts.

In this type of lease, the present value of the minimum lease payments is recorded as a receivable. Interest income from such arrangements is recognised over the lease term, using the effective interest method.

34.1 Amounts recognised in consolidated financial statements

Lessee

EUR million	2021	2020
In consolidated income statement		
Depreciation, of which	-139	-123
Land	-5	-4
Buildings and structures	-75	-68
Machinery and equipment	-59	-52
Interest expense on lease liabilities [1]	-32	-21
Expense relating to short-term leases within Other expenses	-218	-92
Income from subleasing right-of-use assets	46	17
On consolidated balance sheet		
Additions to right-of-use assets, of which	173	154
Land	35	1
Buildings and structures	41	97
Machinery and equipment	97	57
Acquisition of subsidiary companies, of which	-	645
Land	-	42
Buildings and structures	-	512
Machinery and equipment	-	91
Carrying amount of right-of-use assets, of which	730	726
Land	93	69
Buildings and structures	536	573
Machinery and equipment	101	84
Lease liabilities	1,075	1,055
In consolidated cash flow statement		
Cash outflow for leases	-405	-257

1) In 2021, 2020 comparatives were revised due to a revision of the lease adjustment following the finalisation of the purchase price allocation for the Uniper acquisition.

Maturity of undiscounted lease liabilities

EUR million	2021
Due within one year	154
Due after one year and within five years	433
Due after five years	758
Total	**1,344**

See Note 4 Financial risk management, Note 17 Property, plant and equipment and right-of-use assets, and Note 27 Interest-bearing liabilities for more information.

Lessor

EUR million	2021	2020
In consolidated income statement		
Interest income from finance lease	15	12
Rental income from operating lease	30	24
On consolidated balance sheet		
Lease receivables	**136**	**196**
Current	17	16
Non-current	119	181
Maturity analysis of undiscounted lease payments - Finance leases		
Due within 1 year	26	28
Due in 1 to 2 years	23	28
Due in 2 to 3 years	23	28
Due in 3 to 4 years	23	27
Due in 4 to 5 years	22	27
Due in more than 5 years	92	175
Total undiscounted lease payments	**209**	**314**
Interest component	73	116

34.2 Lease commitments

Possible additional lease payments amounting to EUR 128 million were not included in the measurement of lease liabilities on 31 December 2021.

35 Capital and other commitments

Capital and other commitments are contractual or regulatory obligations that are not recognised as liabilities on the consolidated balance sheet, or disclosed as contingent liabilities.

35.1 Capital commitments

EUR billion	2021	2020
Property, plant and equipment and intangible assets	1.0	0.8

Capital commitments at 31 December 2021 include Uniper segment's commitments of EUR 0.5 billion, mainly related to outstanding investments in connection with the expansion and modernisation of existing generation assets.

35.2 Long-term purchase commitments

EUR billion	Due within one year	Due after one year	Total
Gas	15.0	66.4	81.4
Electricity	0.2	0.2	0.4
Transportation and storage	0.8	5.5	6.3
Other	0.3	0.5	0.8

Gas

Gas for supplying industrial customers is usually procured by means of long-term purchase contracts with major international producers of natural gas. Such contracts are generally take-or-pay in nature. The prices paid for natural gas are normally tied to market reference prices, as dictated by market conditions and the procurement behaviour of wholesale market customers. The conditions of these long-term contracts are reviewed at certain specific intervals (usually every three years) as part of contract negotiations and may change accordingly. In the absence of agreement on a pricing review, a neutral board of arbitration makes the final binding decision. Financial obligations arising from these contracts are calculated based on the same principles that govern internal budgeting. Further, the take-or-pay conditions in the individual contracts are also considered in the calculations.

Electricity

Contractual obligations for the purchase of electricity relate in part to purchases from resellers and energy utilities, especially those under procurement contracts for the wholesale portfolio.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

Transportation and storage

Purchase commitments for transportation and storage are for long-term commitments for contracts that are not capitalised on the balance sheet as they do not meet the definition of a lease. Purchase commitments exclude any onerous part of the commitment that is included in provisions. See ▸ Note 30 Other provisions.

35.3 Other commitments to associates and joint ventures

Teollisuuden Voima Oyj (TVO) is building Olkiluoto 3, the nuclear power plant, which is funded through external loans, share issues and shareholder loans according to shareholders' agreement between the owners of TVO. At end of December 2021, Fortum had EUR 232 million (2020: 232) outstanding receivables regarding Olkiluoto 3 and is additionally committed to providing at maximum EUR 100 million. TVO shareholder loan is classified as participation in joint ventures. For more information, see ▸ Note 29 Nuclear-related assets and liabilities.

35.4 Other commitments

Fortum has committed to providing financing to Voimaosakeyhtiö SF for its participation in the Fennovoima nuclear power project in Finland. Remaining commitment is EUR 69 million.

In June 2018, the Swedish Government approved the legislation regarding Sweden's national strategy for implementation of the EU's Water Framework Directive. The largest hydro industry companies will create a common hydro-power fund to finance large parts of the environmental actions needed. The fund will have a total financial cap of SEK 10 billion to be paid over a 20-year period, and the largest operators will contribute to the fund proportionately based on their respective market share of hydro-power production. Fortum's share is 31% of the funds' total financing.

36 Pledged assets and contingent liabilities

ACCOUNTING POLICIES

PLEDGED ASSETS

Pledged assets are given to a lender as security for a loan, trading or other commitment. If the borrower or trading party is unable to make the agreed payments, the lender can use the pledged assets to mitigate its losses. Pledged assets at Fortum mostly consist of securities and real estate mortgages.

CONTINGENT LIABILITIES

A contingent liability is disclosed when there is a possible obligation that arises from past events and whose existence is only confirmed by one or more doubtful future events; or when there is an obligation that is not recognised as a liability or provision because it is not probable that an outflow of resources will be required, or the amount of the obligation cannot be reliably estimated.

36.1 Pledged assets

For debt

Pledges at 31 December 2021 total EUR 269 million (2020: 291), including EUR 269 million (2020: 269) of shares in Kemijoki Oy pledged as a security for borrowing from the Finnish State Nuclear Waste Management Fund.

Real estate mortgages at 31 December 2021 total EUR 41 million (2020: 275). 2020 mainly included mortgages given for Solar operations in India amounting to EUR 139 million and mortgages given for Fortum Tartu in Estonia amounting to EUR 96 million. These operations were disposed during 2021.

For other commitments

Real estate mortgages at 31 December 2021 total EUR 81 million (2020: 105) being real estate mortgages for the liability to the Finnish State Nuclear Waste Management Fund. These are given as a security for the uncovered part of the legal liability and unexpected events relating to future costs for decommissioning and disposal of spent fuel in Loviisa nuclear power plant. According to the Nuclear Energy Act, Fortum is obligated to contribute the funds in full to the State Nuclear Waste Management Fund to cover the legal liability. Any uncovered legal liability relates to periodising of the payments to the fund. The size of the securities given is updated yearly in the second quarter based on the decisions regarding the legal liabilities and the funding target which are determined at the end of the previous year. See ▸ Note 29 Nuclear-related assets and liabilities.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

36.2 Contingent liabilities

In relation to divestment of shareholdings, Fortum has entered into indemnification agreements, which cover the customary representations and warranties, as well as environmental damage and tax contingencies. Any obligations that may exist are covered in the first instance by provisions of the companies sold before Fortum itself is required to make any payments. Moreover, the Fortum Group has commitments under which it assumes joint and several liability arising from its interests in civil-law companies, non-corporate commercial partnerships and consortia in which it participates.

Fortum's 100% owned subsidiary Fortum Heat and Gas Oy has a contingent liability, based on the Finnish Companies Act's (734/1978) Chapter 14a Paragraph 6, with Neste Oyj following the demerger of Fortum Oil and Gas Oy in 2004.

36.3 Guarantees relating to Nuclear operations

With respect to the activities of the Swedish nuclear power plants, the companies of the Swedish nuclear units have issued guarantees for OKG, Forsmark and Barsebäck to governmental authorities in accordance with the Swedish law. There are two types of guarantees given. The Financing Amount is given to cover Fortum's share of the uncovered part in the Nuclear Waste Fund, assuming no further production and that no further nuclear waste fees are paid in. The uncovered amount is calculated by the authorities and is based on the difference between the expected costs and the funds to cover these costs at the time of the calculation. The Supplementary Amount constitutes a guarantee for deficits that can arise as a result of unplanned events. The amounts for the guarantees are normally updated every third year by governmental decision. In addition, the licensees are responsible for all costs related to the disposal of low-level radioactive waste.

Owners of nuclear facilities in Finland and Sweden have statutory liabilities for damages resulting from accidents occurring in those nuclear facilities and for accidents involving any radioactive substance connected to the operation of those facilities. Third-party liability relating to nuclear accidents is strictly under the plant operator's responsibility.

In Finland, as the operator of the Loviisa power plant, Fortum has a statutory liability insurance policy of SDR 600 million, approximately EUR 700 million (Special Drawing Right). The liability in Finland will increase to EUR 1.2 billion from 1 January 2022 due to updated law on third-party liability.

In Sweden, the Swedish Parliament passed a law on 1 July 2010 that requires the operator of a nuclear power plant in operation to have a liability insurance or other financial cover in the amount equivalent to EUR 1.2 billion per incident. The conditions enabling this new law took effect 1 January 2022 and were thus not yet in place at 31 December 2021. Nevertheless, the Swedish government decided to increase the insured amount from 1 January 2019 by amending the existing legislation. Accordingly, the liability per incident at 31 December 2021 is henceforth limited to SDR 1,000 million, approximately EUR 1.2 billion.

The necessary insurances for the affected nuclear power plants have been purchased. Same type of insurance policies are in place also for the operators where Fortum has minority interest.

The guarantee given on behalf of Teollisuuden Voima Oyj to the Finnish State Nuclear Waste Management Fund increased following the fuel loading in Olkiluoto 3, and amounts to EUR 122 million (2020: 26). The guarantee covers the unpaid legal liability due to periodisation as well as risks for unexpected future costs.

For information regarding nuclear-related assets and liabilities see Note 29 Nuclear-related assets and liabilities.

37 Legal actions and official proceedings

Various routine court actions, arbitration proceedings, tax and regulatory investigations and proceedings are currently pending against entities of the Group, and further actions or proceedings may be instituted or asserted in the future. In addition to disputes under public law, this in particular includes legal actions and proceedings on contract amendments and price adjustments initiated in response to market upheavals and the changed economic situation in the gas and electricity sectors (also as a consequence of the energy transition) and concerning anticompetitive and fraudulent practices, as well as general commercial contract disputes.

The aforementioned proceedings include several court and arbitration proceedings with major customers and major suppliers, also initiated in some instances by the Group, concerning contract amendments and price adjustments in long-term supply contracts and procurement options for electricity and gas, as well as long-term contracts for storage capacity in response to the altered situation brought about by market upheavals, and also reimbursements of costs. In some of these cases, the validity of the price-adjustment clauses applied, and of the contracts in their entirety is in dispute. Long-term LNG and gas procurement contracts generally include the option for producers and importers to adjust the terms in line with changed market conditions. On this basis, the Group is currently involved in court and arbitration proceedings and continuously conducts extensive negotiations with producers. The possibility of further legal disputes cannot be excluded. Applying the provisions of IAS 37.92, Fortum is making no additional disclosures on the proceedings presented or on the associated risks or measures taken, particularly because such disclosure could prejudice their outcome.

Furthermore, proceedings are pending concerning the clarification of regulatory requirements. Applying the provisions of IAS 37.92, Fortum is making no additional disclosures on the proceedings presented or on the associated risks or measures taken, particularly because such disclosure could prejudice their outcome.

Public-law disputes are pending, in particular, in connection with the operating license and the planning basis for the hard-coal power plant in Datteln, Germany. Applying the provisions of IAS 37.92, Fortum is making no additional disclosures on the proceedings presented or on the associated risks or measures taken, particularly because such disclosure could prejudice their outcome.

Tax cases

On 16 June 2020, the Court of Appeal of Ghent, Belgium, ruled in favour of Fortum on Fortum's income tax assessments in Belgium for the year 2008. The decision concerns Fortum's Belgian financing company, Fortum EIF NV, which granted internal financing to a Swedish group company for financing of an acquisition in Russia. The Belgian tax authorities argued that Fortum EIF should not benefit from the notional interest deduction regime in Belgium and disagreed with the Court of Appeal ruling. In September 2020, the Belgian tax authorities filed an appeal to the Supreme Court.

The additional taxes claimed for 2008 amount to EUR 36 million. Fortum has similar tax cases pending for the years 2009-2012 and expects the remaining years to follow the decisions for 2008. The disputed amount for years 2008-2012 totals EUR 113 million. All taxes have been paid and recognised as income tax receivables. Should the decision from the Court of Appeal of Ghent become final, the possible repayment of the disputed amounts of EUR 113 million would have a positive cash flow effect for Fortum.

For critical accounting estimates regarding uncertain tax positions, Note 28 Income taxes on the balance sheet. See also Note 12 Income tax expense.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

38 Related party transactions

38.1 The Finnish State and companies owned by the Finnish State

At the end of 2021, the Finnish State owned 50.76% of the company's shares (2020: 50.76%). The Finnish Parliament has authorised the Government to reduce the Finnish State's holding in Fortum Corporation to no less than 50.1% of the share capital and voting rights.

All transactions between Fortum and other companies owned by the Finnish State are on arm's length basis.

38.2 Board of Directors and Fortum Executive Management

The key management personnel of the Fortum Group are the members of Fortum Executive Management and the Board of Directors.

Fortum has not been involved in any material transactions with members of the Board of Directors or Fortum Executive Management. No loans exist to any member of the Board of Directors or Fortum Executive Management at 31 December 2021.

The total compensation (including pension benefits and social costs) for the key management personnel for 2021 was EUR 13 million (2020: 11). See Note 10 Employee benefits and Board remuneration for further information on the Board of Directors and Fortum Executive Management remuneration and shareholdings.

38.3 Associated companies and joint ventures

In the ordinary course of business, Fortum engages in transactions with associated companies, joint ventures, and other related parties. These transactions are on the same commercial terms as they would be with third parties, except for some associates and joint ventures, as noted below.

Fortum owns shareholdings in associated companies and joint ventures which own hydro and nuclear power plants. Under consortium agreements, each owner is entitled to electricity in proportion to its share of ownership, or based on other agreement. In turn, each owner is liable for an equivalent portion of costs, regardless of output. These associated companies and joint ventures are not profit making since the owners purchase electricity at production cost, including interest costs and production taxes. See Note 18 Participations in associated companies and joint ventures.

Uniper

On 31 March 2020, Uniper SE was reclassified from an associated company to a subsidiary. Transactions with Uniper Group companies are presented until 31 March 2020, but balances with Uniper Group companies were excluded from 31 March 2020 since Uniper was consolidated as a subsidiary. In addition, balances with any Uniper Group's related parties that have become Fortum Group's related parties through the acquisition are disclosed from 31 March 2020. See Note 3 Acquisitions, disposals and assets held for sale.

38.4 Balances and transactions with related parties

Transactions with associates, joint ventures and other related parties

	Associated Companies 1)		Joint Ventures		Other related parties 1)		Total	
EUR million	2021	2020	2021	2020	2021	2020	2021	2020
Sales	188	147	28	51	14	3	230	201
Interest income on loan receivables and other income	328	94	22	3	17	7	367	104
Purchases	568	478	185	130	20	16	773	624

Balances with associates, joint ventures and other related parties

	Associated Companies 1)		Joint Ventures		Other related parties 1)		Total	
EUR million	2021	2020	2021	2020	2021	2020	2021	2020
Receivables								
Long-term interest-bearing loan receivables	1,009	1,031	129	82	-	-	1,138	1,113
Trade and other receivables	4	98	70	183	36	26	110	307
Liabilities								
Long-term loan payables	-	-	228	293	-	-	228	293
Trade and other payables	12	94	138	150	95	96	245	340

1) A related party was in 2020 classified as Other related party instead of Associated Company. Comparatives have been corrected accordingly.

Other related parties are entities that are not consolidated on materiality grounds. For more information see Note 1 Significant accounting policies.

In addition, Fortum has long-term purchase commitments of approximately EUR 1.9 billion at 31 December 2021 from associates and joint ventures.

See also Note 29 Nuclear-related assets and liabilities and Note 36 Pledged assets and contingent liabilities for details on commitments related to associates and joint ventures.

Transactions with Russian joint ventures

In June 2021, the Fortum-Rusnano wind investment fund sold the 200-MW Kalmykia wind parks to the Fortum-Russian Direct Investment Fund (RDIF) joint venture. Fortum recorded a gain of EUR 11 million from the transfer in the share of profits from associates and joint ventures.

On 2 March 2021, Fortum announced it had decided to construct the largest solar power plant in Russia through a joint venture established with RDIF. The power plant is based on capacities won by Fortum in CSA auctions in 2018 and 2019. In March 2021, Fortum sold the CSA-backed solar power project to the joint venture with RDIF.

During 2020, Fortum's joint venture, the Fortum-Rusnano wind investment fund, sold the 50-MW Ulyanovsk 2 and the 300-MW Rostov wind farms to a new joint venture established with RDIF aimed at the operation of renewable power plants in Russia. Fortum recorded a gain of EUR 9 million from the transfer of the Rostov wind farm in the share of profits from associates and joint ventures.

38.5 Pension funds

The Fortum pension funds in Finland, Germany, Russia, Sweden and the United Kingdom are stand-alone legal entities which manage pension assets related to part of the pension coverage in these countries. In 2021, Fortum paid a total of EUR 64 million (2020: 59) direct contribution to these pension plans. See Note 31 Pension obligations.

The assets in the pension fund in Finland include Fortum shares representing 0.04% (2020: 0.04%) of the company's outstanding shares. The loan granted by Fortum's Finnish pension fund has been secured by real estate mortgages of EUR 41 million (2020: 41).

39 Events after the balance sheet date

On 24 February 2022, Russia started a widespread invasion into Ukraine. As a consequence, the US, the EU and the UK amongst others have imposed sanctions targeting Russia's ability to access capital and financial markets, sanctioning numerous individuals and banks; as well as trading in general. These sanctions and possible counter sanctions as well as further reactions by the US, the EU and the UK could impact Fortum's operations in Russia.

Meanwhile, uninterrupted gas supply from Russia to Europe has continued. Fortum's Russian operations are also running normally.

Given the uncertainty and risks arising from the geopolitical situation, including imposed sanctions and possible future sanctions and counter sanctions and their consequences, there may be significant impact to the fair values and economic lives of assets; as well as on the commodity prices and related margining requirements in Europe. The book value of Fortum's Russian assets, including the exposure in the Nord Stream 2 pipeline project, was approximately EUR 5.5 billion as of 31 December 2021. Fortum is currently assessing the impact of recent developments and mitigating measures, and specifically the following:

- Germany has halted the certification of the gas pipeline Nord Stream 2, while the US has sanctioned Nord Stream 2 AG, its subsidiaries and the CEO. Fortum has, within its Uniper segment, a financial receivable of approximately EUR 1 billion related to the Nord Stream 2 pipeline project.
- The Russian rouble (RUB) has depreciated significantly from the closing rate as of 31 December 2021. If this prevails, it has a negative translation impact on Fortum Group's earnings, assets and liabilities denominated in RUB.
- The above-mentioned events have led to an increase in European commodity prices and corresponding margining outflows for the Fortum Group. Due to the de-risking and financing measures taken, this has not materially deteriorated Fortum's overall liquidity situation.

Fortum actively monitors the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws.

See the Risk management section in the Operating and financial review.

On 18 January 2022, Fortum announced that 1.3 GW portfolio of wind projects is being transferred from the Fortum-Rusnano wind investment fund (50/50 joint venture) to a joint venture recently established with Bank GPB. Upon the transfer, the joint venture of Fortum-Rusnano wind investment fund will be dissolved.

40 Group companies by segment

G = Generation
R = Russia
C = City Solutions
CS = Consumer Solutions
U = Uniper
O = Other Operations

1) Shares held by the parent company
2) Subsidiary not consolidated due to materiality grounds (valued at cost)
3) Associated company or joint venture valued at cost due to materiality grounds

Group holding % for companies owned via subsidiaries is based on the Fortum Corporation ownership % in the direct subsidiary times the ownership % of the direct subsidiary in the indirect subsidiary/associate/joint venture as of 31 December 2021.

Subsidiaries by segment

Entity Name	Domicile	Segment	Group holding, %
Böle Vindkraft Ab/Oy	Finland	G	60.0
Brändskogen Vindkraft Ab Oy	Finland	G	100.0
CrisolteQ Oy	Finland	C	100.0
Ekopartnerit Turku Oy	Finland	C	51.0
Fincumet Oy	Finland	C	100.0
Fortum Alku Oy	Finland	O	100.0
Fortum Asiakaspalvelu Oy	Finland	CS	100.0
Fortum Assets Oy	Finland	O	100.0
Fortum Clean Oy	Finland	O	100.0 1)
Fortum CS Oy	Finland	CS	100.0
Fortum Growth Oy	Finland	C, G, R	100.0
Fortum Heat and Gas Oy	Finland	C, O	100.0 1)
Fortum Markets Oy	Finland	CS	100.0
Fortum Norm Oy	Finland	O	100.0 1)
Fortum Oyj	Finland	O	100.0
Fortum Power and Heat Holding Oy	Finland	G	100.0
Fortum Power and Heat Oy	Finland	C, CS, G, O, R	100.0 1)
Fortum Real Estate Oy	Finland	O	100.0 1)
Fortum RES Oy	Finland	O	100.0
Fortum Waste Solutions Oy	Finland	C	100.0 1)
Katajamäen Tuulivoima Oy	Finland	G	100.0
Koillis-Pohjan Energiantuotanto Oy	Finland	G	100.0
Kotimaan Energia Oy	Finland	CS	100.0
Kristinestad-Tjöck Vindpark Ab	Finland	G	60.0
Molpe Vindkraft Ab/Oy	Finland	G	100.0
Närpes Vindkraft Ab/Oy	Finland	G	100.0
Oy Pauken Ab	Finland	O	100.0
Oy Tersil Ab	Finland	O	100.0
Oy Tertrade Ab	Finland	O	100.0
Penkkisuon Tuulivoima Oy	Finland	G	100.0
Pjelax Vindkraft Ab/Oy	Finland	G	60.0
Poikel Vindkraft Ab/Oy	Finland	G	100.0
Uniper Global Commodities Canada Inc.	Canada	U	78.0 2)
Uniper Trading Canada Ltd.	Canada	U	78.0
Barry Danmark ApS	Denmark	O	100.0
Fortum Waste Solutions A/S	Denmark	C	100.0
Fortum CFS Eesti OU	Estonia	O	100.0
Barry France SAS	France	O	100.0
Fortum France S.A.S	France	G	100.0
Liqvis France SASU	France	U	78.0 2)
BauMineral GmbH	Germany	U	78.0
Deutsche Flüssigerdgas Terminal beschränkt haftende oHG	Germany	U	70.2 2)
DFTG-Deutsche Flüssigerdgas Terminal Gesellschaft mit beschränkter Haftung	Germany	U	70.2 2)
Donau-Wasserkraft Aktiengesellschaft	Germany	U	60.5
Fortum Deutschland SE	Germany	O	100.0
Fortum Service Deutschland GmbH	Germany	C, G	100.0
Freya Bunde-Etzel GmbH & Co. KG	Germany	U	46.8
Freya Bunde-Etzel Verwaltungsgesellschaft mbH	Germany	U	46.8 3)
Gemeinschaftskraftwerk Irsching GmbH	Germany	U	39.1
Hydropower Evolutions GmbH	Germany	U	78.0 2)
Induboden GmbH & Co. Industriewerte OHG	Germany	U	78.0 2)
Kokereigasnetz Ruhr GmbH	Germany	U	78.0
Liqvis GmbH	Germany	U	78.0 2)
Lubmin-Brandov Gastransport GmbH	Germany	U	78.0
Mainkraftwerk Schweinfurt Gesellschaft mit beschränkter Haftung	Germany	U	45.3 2)
METHA-Methanhandel GmbH	Germany	U	78.0
Mittlere Donau Kraftwerke Aktiengesellschaft	Germany	U	36.3 2)
Obere Donau Kraftwerke Aktiengesellschaft	Germany	U	36.3 2)
Plugsurfing GmbH	Germany	O	100.0
RGE Holding GmbH	Germany	U	78.0
Rhein-Main-Donau GmbH	Germany	U	60.4
Rheinsee 875. V V GmbH	Germany	U	78.0 2)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

RMD-Consult GmbH Wasserbau und Energie	Germany	U	78.0
RuhrEnergie GmbH, EVR	Germany	U	78.0
traconn GmbH	Germany	U	78.0[2)]
Uniper Anlagenservice GmbH	Germany	U	78.0
Uniper Beteiligungs GmbH	Germany	U	78.0
Uniper BioMethan GmbH	Germany	U	78.0
Uniper Energy Sales GmbH	Germany	U	78.0
Uniper Energy Storage GmbH	Germany	U	78.0
Uniper Exploration & Production GmbH	Germany	U	78.0
Uniper Financial Services GmbH	Germany	U	78.0
Uniper Global Commodities SE	Germany	U	78.0
Uniper Holding GmbH	Germany	U	78.0
Uniper HR Services Hannover GmbH	Germany	U	78.0
Uniper Hydrogen GmbH	Germany	U	78.0
Uniper International Holding GmbH	Germany	U	78.0
Uniper IT GmbH	Germany	U	78.0
Uniper Kraftwerke GmbH	Germany	U	78.0
Uniper Market Solutions GmbH	Germany	U	78.0[2)]
Uniper Renewables GmbH	Germany	U	78.0[2)]
Uniper Risk Consulting GmbH	Germany	U	78.0
Uniper Ruhrgas International GmbH	Germany	U	78.0
Uniper SE	Germany	O, U	78.0
Uniper Solar 1 WHV GmbH	Germany	U	78.0[2)]
Uniper Systemstabilität GmbH	Germany	U	78.0
Uniper Technologies GmbH	Germany	U	78.0
Uniper Wärme GmbH	Germany	U	78.0
Untere Iller GmbH	Germany	U	46.8[2)]
Fortum Insurance Ltd	Guernsey	O	100.0
Uniper Hungary Energetikai Kft.	Hungary	U	78.0
Fortum Charge & Drive India Private Limited	India	O	73.1
Fortum India Private Limited	India	C	100.0[1)]
Solar One Energy Private Limited	India	C	100.0
SolarXL Alpha Energy Private Limited	India	C	100.0
SolarXL Beta Energy Private Limited	India	C	100.0
SolarXL Gamma Energy Private Limited	India	C	100.0
Uniper India Private Ltd.	India	U	78.0[2)]
PT Fortum Energy Solution	Indonesia	C	95.0
Fortum eNext Ireland Ltd	Ireland	C	100.0
Fortum Finance Ireland Designated Activity Company	Ireland	O, C, G	100.0[1)]
Fortum Global Finance Designated Activity Company	Ireland	O	100.0

Fortum P&H Ireland Limited	Ireland	O	100.0
Fortum Participation Ltd	Ireland	O, C	100.0
Uniper Renewables Italy S.r.l.	Italy	U	78.0[2)]
UPT Global Alternatives S.C.S. SICAV-SIF	Luxembourg	U	74.3
Ergon Holdings Ltd	Malta	U	78.0
Ergon Insurance Ltd	Malta	U	78.0
E.ON Benelux Geothermie B.V. (in liquidation)	Netherlands	U	78.0[2)]
Fortum 2 B.V.	Netherlands	O	100.0
Fortum 3 B.V.	Netherlands	C	100.0
Fortum Finance B.V.	Netherlands	O	100.0
Fortum H&C B.V.	Netherlands	C	100.0
Fortum Holding B.V.	Netherlands	C, CS, G, O	100.0[1)]
Fortum Hydro B.V.	Netherlands	O	100.0
Fortum Power Holding B.V.	Netherlands	O	100.0
Fortum Russia B.V.	Netherlands	R	100.0
Fortum SAR B.V.	Netherlands	C	100.0
Fortum Star B.V.	Netherlands	O	100.0
Plugsurfing B.V	Netherlands	O	100.0
PolarSolar B.V.	Netherlands	C	100.0
Uniper Benelux Holding B.V.	Netherlands	U	78.0
Uniper Benelux N.V.	Netherlands	U	78.0
Uniper Energy Trading NL Staff Company B.V.	Netherlands	U	78.0[2)]
Uniper Gas Transportation and Finance B.V.	Netherlands	U	78.0
Uniper Hydrogen Netherlands B.V.	Netherlands	U	78.0
Uniper Infrastructure Asset Management B.V.	Netherlands	U	78.0
Uniper Ruhrgas BBL B.V.	Netherlands	U	78.0
Uniper Technologies B.V.	Netherlands	U	78.0[2)]
Utilities Center Maasvlakte Leftbank b.v.	Netherlands	U	78.0
E.ON Ruhrgas Nigeria Limited	Nigeria	U	78.0[2)]
Fortum Consumer Solutions AS	Norway	CS	100.0
Fortum Fiber AS	Norway	C	30.0
Fortum Forvaltning AS	Norway	CS, G, O	100.0
Fortum Hedging AS	Norway	G	100.0
Fortum Kundesenter AS	Norway	CS	100.0
Fortum Markets AS	Norway	CS	100.0
Fortum Oslo Varme AS	Norway	C	50.0
Fortum Plastics Recycling Norway AS	Norway	C	100.0
Fortum Strøm AS	Norway	CS	100.0
Fortum Tellier AS	Norway	CS	100.0
Fortum Waste Solutions Norway AS	Norway	C	100.0

Hallingkraft AS	Norway	CS	100.0
NorgesEnergi AS	Norway	CS	100.0
Fortum Marketing and Sales Polska S.A.	Poland	CS	100.0
Fortum Network Częstochowa Sp. z o.o.	Poland	C	100.0
Fortum Network Płock Sp. z o.o.	Poland	C	100.0
Fortum Network Wrocław Sp. z o.o.	Poland	C	100.0
Fortum Power and Heat Polska Sp. z o.o.	Poland	C, O	100.0
Fortum Service Poland Sp. z o.o.	Poland	O	100.0
Fortum Silesia SA	Poland	C	100.0
Fortum Sprzedaż Sp. z o.o.	Poland	CS	100.0
Uniper Renewables Poland sp. z o.o.	Poland	U	78.0 [2)]
Fortum-New G 3 Limited Liability Company	Russia	R	100.0
Fortum-New G 5 Limited Liability Company	Russia	R	98.2
Joint Stock Company Chelyabenergoremont	Russia	R	100.0
LLC Bugulchanskaya Solar power station	Russia	R	98.2
OOO Agro-industrial Park «Siberia»	Russia	U	65.3 [2)]
OOO Unipro Engineering	Russia	U	65.3 [2)]
PAO Fortum	Russia	R	98.2
PAO Unipro	Russia	U	65.3
Uniper NefteGaz LLC	Russia	U	65.3 [2)]
Ural Heat Networks Company Joint Stock Company	Russia	R	98.2
HQ Services Limited	Rwanda	C	49.0
Uniper Energy Asia Pacific Pte. Ltd.	Singapore	U	78.0 [2)]
Uniper Energy Southern Africa (Pty) Ltd.	South Africa	U	78.0 [2)]
Escandinava de Electricidad S.L.U	Spain	CS	100.0
Barsebäck Kraft AB	Sweden	U	78.0 [2)]
Blåsjön Kraft AB	Sweden	G, U	89.0
Blåsjön Nät AB	Sweden	G, U	89.0
Blybergs Kraftaktiebolag	Sweden	G	66.7
Brännälven Kraft AB	Sweden	G, U	81.9
Bullerforsens Kraft Aktiebolag	Sweden	G	88.0
Energikundservice Sverige AB	Sweden	CS	100.0
Fortum 1 AB	Sweden	R	100.0
Fortum Energy AB	Sweden	CS	100.0
Fortum Fastigheter AB	Sweden	O	100.0
Fortum Markets AB	Sweden	CS	100.0
Fortum Produktionsnät AB	Sweden	G	100.0
Fortum Ren AB	Sweden	O	100.0
Fortum Skott AB	Sweden	O	100.0
Fortum Sverige AB	Sweden	C, G, O	100.0
Fortum Sweden AB	Sweden	O	100.0 [1)]
Fortum Vindkraft Sverige 1 AB	Sweden	G	100.0
Fortum Vindkraft Sverige 2 AB	Sweden	G	100.0
Fortum Vindkraft Sverige 3 AB	Sweden	G	100.0
Fortum Waste Solutions AB	Sweden	C	100.0
Fortum Waste Solutions Holding AB	Sweden	C	100.0
Göta Energi AB	Sweden	CS	100.0
Kolbäckens Kraft KB	Sweden	U	78.0
Mellansvensk Kraftgrupp Aktiebolag	Sweden	G, U	91.1
Nordgroup Waste Management AB	Sweden	C	100.0
OKG Aktiebolag	Sweden	G, U	85.9
Oreälvens Kraftaktiebolag	Sweden	G	65.0
Sävar Vindkraft AB	Sweden	G	100.0
Stensjön Kraft AB	Sweden	G, U	89.0
Sydkraft AB	Sweden	U	78.0
Sydkraft Försäkring AB	Sweden	U	78.0
Sydkraft Hydropower AB	Sweden	U	78.0
Sydkraft Nuclear Power AB	Sweden	U	78.0
Sydkraft Nuclear Services AB	Sweden	U	78.0 [2)]
Sydkraft Thermal Power AB	Sweden	U	78.0
Uddeholm Kraft Aktiebolag	Sweden	G	100.0
Värmlandskraft-OKG-delägarna Aktiebolag	Sweden	G	73.3
Uniper Energy DMCC	United Arab Emirates	U	78.0
Uniper Energy Fujairah FZE	United Arab Emirates	U	78.0 [2)]
Uniper Energy Services MENA DMCC	United Arab Emirates	U	78.0 [2)]
Fortum Carlisle Limited	United Kingdom	C	100.0
Fortum Energy Ltd	United Kingdom	O	100.0
Fortum Glasgow Limited	United Kingdom	C	100.0
Fortum O&M(UK) Limited	United Kingdom	C	100.0
Holford Gas Storage Limited	United Kingdom	U	78.0
IVO Energy Limited	United Kingdom	G, C	100.0
South Clyde Energy Recovery Holdings Ltd	United Kingdom	C	100.0
Uniper Energy Limited	United Kingdom	U	78.0 [2)]
Uniper Energy Trading UK Staff Company Limited	United Kingdom	U	78.0
Uniper Global Commodities London Ltd.	United Kingdom	U	78.0
Uniper Global Commodities UK Limited	United Kingdom	U	78.0
Uniper Holdings Limited	United Kingdom	U	78.0 [2)]
Uniper Hydrogen UK Limited	United Kingdom	U	78.0
Uniper Technologies Limited	United Kingdom	U	78.0
Uniper UK Corby Limited	United Kingdom	U	78.0

Uniper UK Cottam Limited	United Kingdom	U	78.0[2)]
Uniper UK Gas Limited	United Kingdom	U	78.0
Uniper UK Ironbridge Limited	United Kingdom	U	78.0
Uniper UK Limited	United Kingdom	U	78.0
Uniper UK Trustees Limited	United Kingdom	U	78.0[2)]
Uniper Global Commodities North America LLC	USA	U	78.0
Valo Ventures I LP Fund	USA	O	99.0

Associated companies and joint ventures by segment

Entity Name	Country	Segment	Group holding %
Battery Intelligence Oy	Finland	C	33.1
Chempolis Oy	Finland	C	33.9
Kemijoki Oy	Finland	G	28.3
Posiva Oy	Finland	G	40.0
Puro.earth Oy	Finland	O	19.1
Sallila Energia Oy	Finland	O	46.0
Teollisuuden Voima Oyj	Finland	G	25.8
Turun Seudun Energiantuotanto Oy	Finland	C	53.5
Turun Seudun Kaukolämpö Oy	Finland	C	30.0
Wello Oy	Finland	O	18.6[1)]
RAG-Beteiligungs-Aktiengesellschaft	Austria	U	23.4
SOCAR-UNIPER LLC	Azerbaijan	U	38.2[3)]
BIOPLYN Třeboň spol. s r.o.	Czech Republic	U	19.2[3)]
Solar Energy s.r.o.	Czech Republic	U	19.5[3)]
E.ON Perspekt GmbH	Germany	U	23.4[3)]
Energie-Pensions-Management GmbH	Germany	U	23.4[3)]
Etzel Gas-Lager GmbH & Co. KG	Germany	U	58.6
Gemeinschaftskraftwerk Kiel Gesellschaft mit beschränkter Haftung	Germany	U	39.0[3)]
Grüne Quartiere GmbH	Germany	U	39.0[3)]
Kraftwerk Buer GbR	Germany	U	39.0[3)]
Assam Bio Refinery Private Limited	India	C	49.6
Fortum Solar Plus Private Limited	India	C	51.0
India Uniper Power Services Private Limited	India	U	39.0[3)]
B.V. NEA	Netherlands	U	19.5[3)]
BBL Company V.O.F.	Netherlands	U	15.6
India Sun B.V.	Netherlands	C	43.8
Nordic Wind B.V.	Netherlands	G	20.0
PRY B.V.	Netherlands	O	12.7
Yustek Holding B.V.	Netherlands	R	50.0
Fortum Nordkraft Vind DA	Norway	G	50.0
Linnvasselv Kraftlag SA	Norway	G	41.0
OF Energi AS	Norway	C	25.0
Recharge AS	Norway	O	32.3
Fortum Wind Energy Joint Stock Company, AO FEW	Russia	R	63.8
Fortum-New G 4 Limited Liability Company	Russia	R	48.1
Kurgan Plant of Energy Technologies Limited Liability	Russia	R	50.0
OOO E.ON Connecting Energies	Russia	U	32.6[3)]
TGC1 Territorial Generating Company 1	Russia	R	29.99
Ural energy retail LLC	Russia	R	49.1
Wind Power Assets Management LLC	Russia	R	49.1
AB Svafo	Sweden	G, U	38.9[3)]
Ångefallen Kraft AB	Sweden	G	50.0
Bergeforsens Kraftaktiebolag	Sweden	U	31.2
Forsmarks Kraftgrupp Aktiebolag	Sweden	G, U	29.9
Horrmundsvalla Kraftaktiebolag	Sweden	G	50.0
Kärnkraftsäkerhet & Utbildning AB	Sweden	G, U	46.0[3)]
Klåvbens AB	Sweden	U	39.0[3)]
Ringhals AB	Sweden	U	23.0
Ringhals AB	Sweden	U	23.0
SQC Swedish Qualification Centre AB	Sweden	G, U	46.3[3)]
Svensk Kärnbränslehantering AB	Sweden	G, U	37.2[3)]
Swedish Modular Reactors AB	Sweden	U	40.9[3)]
Tåsans Kraftaktiebolag	Sweden	G	40.0
Väsa Kraftaktiebolag	Sweden	G	50.0
Vattenkraftens Miljöfond Sverige AB	Sweden	G, U	31.5
Vaultige AB	Sweden	U	40.0[3)]

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Financial key figures

For information of Alternative Performance Measures used by Fortum, see Definitions and reconciliations of key figures and Note 1 Significant accounting policies.

In 2021, Fortum introduced two new Alternative Performance Measures (APM) to provide additional financial performance indicators to support meaningful comparison of underlying net profitability between periods: Comparable net profit, and Comparable earnings per share. Comparable net profit is shown after non-controlling interest and adjusted for items affecting comparability, as well as adjustments to share of profit of associates and joint ventures, net finance costs, income tax expenses, and non-controlling interest. Comparable earnings per share is calculated from comparable net profit. For more information, see Definitions and reconciliations of key figures and Note 7 Comparable operating profit and comparable net profit.

Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from the second quarter of 2020, consolidated Uniper's results into its income statement. In the first quarter of 2020, Uniper was consolidated as an associated company into Fortum's income statement. The main reason for the change in cumulative figures and in the comparison to the year 2020 is thus the consolidation of Uniper.

EUR million or as indicated	2021	2020	Change 21/20 %
Income statement			
Reported			
Sales	112,400	49,015	129
EBITDA	693	2,688	-74
Operating profit	-588	1,599	-137
- of sales %	-0.5	3.3	
Share of profit/loss of associates and joint ventures	192	656	-71
Profit before income tax	-289	2,199	-113
- of sales %	-0.3	4.5	
Profit for the period	-114	1,855	-106
- of which attributable to owners of the parent	739	1,823	-59
Comparable			
EBITDA	3,817	2,434	57
Operating profit	2,536	1,344	89
Share of profit/loss of associates and joint ventures	154	656	-77
Net profit (after non-controlling interests)	1,778	1,483	20
Financial position and cash flow			
Capital employed	30,885	26,239	
Financial net debt	789	7,023	-89
Adjusted net debt	3,227	9,784	-67
Capital expenditure and gross investments in shares	1,407	4,953	-72
- of sales %	1.3	10.1	
Capital expenditure	1,116	1,146	-3
Net cash from operating activities	4,970	2,555	95

EUR million or as indicated	2021	2020	Change 21/20 %
Key ratios			
Return on shareholders' equity, %	-0.8	12.9	
Interest coverage	-12.7	27.3	
Interest coverage including capitalised borrowing costs	-9.4	18.6	
Gearing, %	6	45	
Equity-to-assets ratio, %	9	27	
Financial net debt/comparable EBITDA	0.2	2.9	
Other data			
Dividends	1,013 1)	995	2
Research and development expenditure	61	56	9
- of sales %	0.1	0.1	
Average number of employees 2)	19,796	17,304	

1) Board of Directors' proposal for the planned Annual General Meeting on 28 March 2022.
2) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31, 2020.

See Definitions and reconciliations of key figures.

Share key figures

EUR or as indicated	2021	2020	Change 21/20 %
Data per share			
Earnings per share	0.83	2.05	-60
Comparable earnings per share	2.00	1.67	20
Cash flow per share	5.60	2.88	94
Equity per share	13.66	14.58	-6
Dividend per share	1.14[1)]	1.12	2
Payout ratio, %	137.3[1)]	54.6	
Dividend yield, %	4.2[1)]	5.7	
Price/earnings ratio (P/E)	32.5	9.6	
Share prices			
At the end of the period	26.99	19.70	
Average	23.65	17.20	
Lowest	19.72	12.25	
Highest	27.96	23.46	
Other data			
Market capitalisation at the end of the period, EUR million	23,975	17,499	
Trading volumes[2)]			
Number of shares, 1,000 shares	351,450	647,869	
In relation to weighted average number of shares, %	39.6	72.9	
Average number of shares, 1,000 shares	888,294	888,294	
Diluted adjusted average number of shares, 1,000 shares	888,294	888,294	
Number of registered shares, 1,000 shares	888,294	888,294	

1) Board of Directors' proposal for the planned Annual General Meeting on 28 March 2022.
2) Trading volumes in the table represent volumes traded on Nasdaq Helsinki. In addition to the Nasdaq Helsinki, Fortum shares were traded on several alternative market places, for example at Boat, Cboe and Turquoise, and on the OTC market as well. During 2021, approximately 70% (2020: 68%) of Fortum's shares were traded on markets other than the Nasdaq Helsinki Ltd.

See **Definitions and reconciliations of key figures**.

Segment key figures

Sales by segment, EUR million	2021	2020
Generation	2,899	2,006
- of which internal	143	421
Russia	906	929
- of which internal	3	2
City Solutions	1,302	1,075
- of which internal	39	64
Consumer Solutions	2,622	1,267
- of which internal	14	2
Uniper	105,992	44,514
- of which internal	29	0
Other Operations	138	140
- of which internal	104	110
Eliminations and Netting of Nord Pool transactions	-1,459	-916
Total	**112,400**	**49,015**

Comparable operating profit by segment, EUR million	2021	2020
Generation	1,110	722
Russia	261	251
City Solutions	135	47
Consumer Solutions	52	90
Uniper	1,120	363
Other Operations	-142	-129
Comparable operating profit	**2,536**	**1,344**
Impairment charges and reversals	-83	2
Capital gains and other related items	2,681	765
Impact from acquisition accounting	-	-222
Changes in fair values of derivatives hedging future cash flow	-5,424	-675
Other	-299	386
Operating profit	**-588**	**1,599**

Comparable EBITDA by segment, EUR million	2021	2020
Generation	1,299	886
Russia	404	394
City Solutions	317	239
Consumer Solutions	123	153
Uniper	1,789	856
Other Operations	-114	-94
Total	**3,817**	**2,434**

Depreciation and amortisation, EUR million	2021	2020
Generation	189	164
Russia	142	143
City Solutions	182	191
Consumer Solutions	71	63
Uniper	668	494
Other Operations	28	35
Total	**1,281**	**1,090**

Comparable share of profit of associates and joint ventures by segment, EUR million	2021	2020
Generation	11	13
Russia	62	47
City Solutions	42	57
Uniper	39	38
Other Operations	0	502
Total [1)]	**154**	**656**

1) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

Share of profit of associates and joint ventures by segment, EUR million	2021	2020
Generation	36	29
Russia	62	47
City Solutions	42	57
Uniper	51	54
Other Operations	0	470
Total	**192**	**656**

Capital expenditure by segment, EUR million	2021	2020
Generation	168	158
Russia	47	43
City Solutions	161	219
Consumer Solutions	68	57
Uniper	673	635
Other Operations	15	34
Total	**1,116**	**1,146**

Gross investments in shares by segment, EUR million	2021	2020
Generation	7	70
Russia	36	48
City Solutions	2	114
Consumer Solutions	-	0
Uniper	9	3
Other Operations	237	3,572
Total	**290**	**3,807**

Gross divestments of shares by segment, EUR million	2021	2020
Generation	129	171
Russia	18	0
City Solutions	3,870	895
Consumer Solutions	0	10
Uniper	88	69
Other Operations	19	81
Total	**4,122**	**1,226**

Comparable net assets by segment, EUR million	2021	2020
Generation	6,336	6,234
Russia	2,508	2,431
City Solutions	2,456	3,679
Consumer Solutions	1,125	565
Uniper	4,971	7,432
Other Operations	125	136
Total	**17,523**	**20,477**

Comparable return on net assets by segment, %	2021	2020
Generation	18.0	12.2
Russia	12.9	11.1
City Solutions	6.1	2.8
Consumer Solutions	6.9	15.9
Uniper [1)]	16.5	N/A

1) Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from the second quarter of 2020, consolidated Uniper's results into its income statement. Comparable return on net assets for the Uniper segment are presented from 2021 onwards as information for full 12 months is available.

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Average number of employees	2021	2020
Generation	1,153	1,163
Russia	2,862	2,969
City Solutions	1,964	2,051
Consumer Solutions	1,091	1,216
Uniper [1)]	11,751	8,945
Other Operations	976	959
Total [1)]	**19,796**	**17,304**

1) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31, 2020.

Definitions and reconciliations of key figures

Alternative performance measures

Business performance	Definition	Reason to use the measure	Reference to reconciliation
Comparable EBITDA	Operating profit + depreciations and amortisations - items affecting comparability	Comparable EBITDA is representing the underlying cash flow generated by the total Group and segments. Used as a component in the capital structure target of Financial net debt to Comparable EBITDA.	Note 5 Capital risk management
Comparable operating profit	Operating profit - items affecting comparability	Comparable operating profit is used in financial target setting and forecasting, management's follow up of financial performance and allocation of resources in the group's performance management process.	Income statement
Items affecting comparability	Impairment charges and reversals + capital gains and other related items + impact from acquisition accounting + changes in fair values of derivatives hedging future cash flow + other	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement
Impairment charges and reversals	Impairment charges and related provisions (mainly dismantling), as well as the reversal of previously recorded impairment charges. Impairment charges are adjusted from depreciation and amortization, and reversals from other income.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement
Capital gains and other related items	Capital gains and transaction costs from acquisitions, which are adjusted from other income and other expenses respectively. Profits are reported in comparable operating profit, if this reflects the business model.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement

Business performance	Definition	Reason to use the measure	Reference to reconciliation
Impact from acquisition accounting	Non-cash accounting impact resulting from reclassifying part of Uniper's other comprehensive income to the income statement when Uniper was consolidated as a subsidiary.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement
Changes in fair values of derivatives hedging future cash flow	Effects from financial derivatives hedging future cash flows where hedge accounting is not applied or own use exemption cannot be used according to IFRS 9 and are adjusted from other income or expenses to sales and materials and services respectively when calculating Fortum's alternative performance measures.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement
Other	Restructuring and cost management expenses, and other miscellaneous non-operating items, which are adjusted mainly from materials and services or employee benefits.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement
Comparable share of profit/loss of associates and joint ventures	Share of profit/loss of associates and joint ventures +/- significant adjustments for share of profit /loss in principal associates and joint ventures.	Component used in calculating comparable net profit and comparable return on net assets.	Note 7 Comparable operating profit and comparable net profit
Comparable finance-costs - net	Finance costs – net +/- return from nuclear funds, nuclear fund adjustment and unwinding of nuclear provisions +/- fair value changes on financial items +/- impairment charges and reversals of previously recorded impairment charges on financial items.	Component used in calculating comparable net profit.	Note 7 Comparable operating profit and comparable net profit

Business performance	Definition	Reason to use the measure	Reference to reconciliation
Comparable profit before income tax	Comparable operating profit +/- comparable share of profit/loss of associates and joint ventures +/- comparable finance costs – net.	Subtotal in comparable net profit calculation.	Note 7 Comparable operating profit and comparable net profit
Comparable income tax expense	Income tax expense excluding taxes on items affecting comparability, adjustments to finance costs – net, tax rate changes and other onetime adjustments.	Component used in calculating comparable net profit.	Note 7 Comparable operating profit and comparable net profit
Comparable net profit	Comparable operating profit +/- comparable share of profit/loss of associates and joint ventures +/- comparable finance costs - net +/- comparable income tax expense +/- comparable non-controlling interests.	Comparable net profit is used to provide additional financial performance indicators to support meaningful comparison of underlying net profitability between periods.	Note 7 Comparable operating profit and comparable net profit
Comparable return on net assets, %	$\frac{\text{Comparable operating profit + comparable share of profit/loss in associates and joint ventures}}{\text{Comparable net assets average}} \times 100$	Comparable return on net assets is used in financial target setting and forecasting, management's follow up of financial performance and allocation of resources in the group's performance management process.	Note 6 Segment reporting
Adjustment for Share of profit/loss in associates and joint ventures	Adjustment for material items affecting comparability.	Share of profit/loss in associates and joint ventures is included in profit component in the comparable return on net assets calculation and the adjustments are done based on similar components as in Items affecting comparability.	Note 6 Segment reporting

Capital structure	Definition	Reason to use the measure	Reconciliation
Comparable net assets	Non-interest-bearing assets - non-interest-bearing liabilities - provisions (non-interest-bearing assets and liabilities do not include finance-related items, tax and deferred tax and assets and liabilities from fair valuations of derivatives used for hedging future cash flows).	Comparable net assets is a component in Comparable return on net assets calculation where return on capital allocated directly to the businesses is measured.	Note 6 Segment reporting
Financial net debt / comparable EBITDA	$\frac{\text{Financial net debt}}{\text{Comparable EBITDA}}$	Financial net debt to comparable EBITDA is Fortum's long-term financial target for capital structure.	Note 5 Capital risk management
Comparable net debt / EBITDA	$\frac{\text{Interest-bearing net debt}}{\text{Comparable EBITDA}}$	Comparable net debt to EBITDA was the capital structure target of the Group until Q1 2020.	N/A
Financial net debt	Interest-bearing liabilities - liquid funds - securities in interest-bearing receivables +/- net margin liabilities/receivables	Financial net debt is used in the follow-up of the indebtedness of the group and it is a component in the capital structure target of Financial net debt to Comparable EBITDA.	Note 27 Interest-bearing liabilities
Adjusted net debt	Financial net debt + underfunded pension obligations and asset retirement obligations, net of share in nuclear waste funds	Adjusted net debt is used in the follow-up of the indebtedness of the group.	Note 27 Interest-bearing liabilities
Interest-bearing net debt	Interest-bearing liabilities - liquid funds	Until Q1 2020 interest-bearing net debt was used in the follow-up of the indebtedness of the group i.e. capital structure especially as a component in the long-term over-the-cycle financial target of Comparable net debt / EBITDA in the Group.	N/A

Capital structure	Definition	Reason to use the measure	Reconciliation
Return on capital employed (ROCE), %	(Profit before taxes + interest and other financial expenses) / Capital employed average x 100	Until Q1 2020 return on capital employed (ROCE) was a long-term over the cycle financial ratio target measuring the profitability and how efficiently invested capital was used.	N/A
Capital employed	Total assets - total non-interest bearing liabilities	Capital employed is the book value of the invested capital and it was used as a component when calculating the Return of capital employed in the group.	N/A

See Note 1.4 Measures for performance and Note 7 Comparable operating profit and comparable net profit.

Other key figures

Share based key figures

Earnings per share (EPS)	Profit for the period - non-controlling interests / Average number of shares during the period
Comparable earnings per share	Comparable net profit / Average number of shares during the period
Cash flow per share	Net cash from operating activities / Average number of shares during the period
Equity per share	Shareholders' equity / Number of shares at the end of the period
Payout ratio, %	Dividend per share / Earnings per share x 100
Dividend yield, %	Dividend per share / Share price at the end of the period x 100
Price/earnings (P/E) ratio	Share price at the end of the period / Earnings per share
Average share price	Amount traded in euros during the period / Number of shares traded during the period
Market capitalisation	Number of shares at the end of the period x share price at the end of the period
Trading volumes	Number of shares traded during the period in relation to the weighted average number of shares during the period

Other key figures

EBITDA	Operating profit + depreciations and amortisations
Funds from operations (FFO)	Net cash from operating activities before change in working capital
Capital expenditure	Capitalised investments in property, plant and equipment and intangible assets including maintenance, productivity, growth and investments required by legislation including borrowing costs capitalised during the construction period. Maintenance investments expand the lifetime of an existing asset, maintain usage/availability and/or maintains reliability. Productivity investments improve productivity in an existing asset. Growth investments' purpose is to build new assets and/or to increase customer base within existing businesses. Legislation investments are done at certain point of time due to legal requirements.
Gross investments in shares	Investments in subsidiary shares, shares in associated companies and joint ventures and other investments. Investments in subsidiary shares are net of liquid funds and grossed with interest-bearing liabilities and other items included in financial net debt in the acquired company.
Return on shareholders' equity (ROE), %	$\frac{\text{Profit for the year}}{\text{Total equity average}} \times 100$
Gearing, %	$\frac{\text{Financial net debt}}{\text{Total equity including non-controlling interests}} \times 100$
Equity-to-assets ratio, %	$\frac{\text{Total equity including non-controlling interests}}{\text{Total assets}} \times 100$
Interest coverage	$\frac{\text{Operating profit}}{\text{Net interest expenses}}$
Interest coverage including capitalised borrowing costs	$\frac{\text{Operating profit}}{\text{Net interest expenses - capitalised borrowing costs}}$
Average number of employees	Based on monthly average for the whole period

Tax key figures

Effective income tax rate,%	$\frac{\text{Income tax expense}}{\text{Profit before income tax}} \times 100$
Comparable effective income tax rate, %	$\frac{\text{Comparable income tax}}{\text{Comparable profit before income tax excluding share of profit/loss from associated companies and joint ventures}} \times 100$
Weighted average applicable income tax rate	Sum of the proportionately weighted share of profits before taxes of each of the group's operating country multiplied by an applicable nominal tax rate of the respective countries.

Reconciliations of alternative performance measures

Comparable EBITDA

EUR million	Note	2021	2020
IS Operating profit		-588	1,599
+ IS Depreciation and amortisation		1,281	1,090
EBITDA		693	2,688
- IS Items affecting comparability	7	3,124	-255
Comparable EBITDA		**3,817**	**2,434**

Comparable operating profit

EUR million	Note	2021	2020
IS Operating profit		-588	1,599
- IS Items affecting comparability	7	3,124	-255
IS **Comparable operating profit**	7	**2,536**	**1,344**

Items affecting comparability

EUR million	Note	2021	2020
Impairment charges and reversals		-83	2
Capital gains and other related items	3	2,681	765
Impact from acquisition accounting		-	-222
Changes in fair values of derivatives hedging future cash flow		-5,424	-675
Other		-299	386
IS **Items affecting comparability**	7	**-3,124**	**255**

Comparable net profit

EUR million	Note	2021	2020
IS Net profit		-114	1,855
- IS Items affecting comparability	7	3,124	-255
- Adjustments to share of profit/loss of associates and joint ventures	18	-38	0
- Adjustments to finance costs - net	11	-146	-48
- Adjustments to income tax expenses		-780	45
- IS Non-controlling interests		852	-32
- Adjustments to non-controlling interests		-1,121	-82
Comparable net profit	7	**1,778**	**1,483**

Comparable earnings per share

	Note	2021	2020
Comparable net profit, EUR million	7	1,778	1,483
Average number of shares during the period, 1 000 shares		888,294	888,294
Comparable earnings per share, EUR		**2.00**	**1.67**

Financial net debt and adjusted net debt

EUR million	Note	31 Dec 2021	31 Dec 2020
+ Interest-bearing liabilities		**17,220**	**10,662**
- BS Liquid funds		**7,592**	**2,308**
- Non-current securities		111	98
- Collateral arrangement securities		549	432
- Securities in interest-bearing receivables		**660**	**530**
- BS Margin receivables		9,163	1,132
+ BS Margin liabilities		985	331
+/- Net margin liabilities/receivables		**-8,179**	**-801**
Financial net debt	27	**789**	**7,023**
+ BS Pension obligations		**1,190**	**1,520**
+ Other asset retirement obligations		872	821
- BS Share of Finnish and Swedish Nuclear Waste Funds		3,515	3,445
+ BS Nuclear provisions		3,891	3,866
+ Nuclear provisions net of assets in Nuclear Waste Funds		375	421
+ Total provisions net of assets in Nuclear Waste Funds		**2,438**	**2,762**
Adjusted net debt		**3,227**	**9,784**

Financial net debt/comparable EBITDA

EUR million	Note	2021	2020
+ Interest-bearing liabilities		**17,220**	**10,662**
- BS Liquid funds		**7,592**	**2,308**
- Non-current securities		111	98
- Collateral arrangement securities		549	432
- Securities in interest-bearing receivables		**660**	**530**
- BS Margin receivables		9,163	1,132
+ BS Margin liabilities		985	331
+/- Net margin liabilities/receivables		**-8,179**	**-801**
Financial net debt	27	**789**	**7,023**
IS Operating profit		-588	1,599
+ IS Depreciation and amortisation		1,281	1,090
EBITDA		**693**	**2,689**
- IS Items affecting comparability		3,124	-255
Comparable EBITDA		**3,817**	**2,434**
Financial net debt/comparable EBITDA		**0.2**	**2.9**

Parent company financial statements, Finnish GAAP (FAS)

Income statement

EUR	Note	2021	2020
Sales	2	138,653,366	115,411,878
Other income	3	8,154,517	6,973,020
Employee benefits	4	-54,312,599	-44,908,024
Depreciation, amortisation and write-downs	8	-10,476,708	-8,582,395
Other expenses		-123,370,573	-107,095,843
Operating loss		**-41,351,995**	**-38,201,364**
Financial income and expenses	6	1,658,966,966	1,514,790,424
Profit before appropriations and income tax		**1,617,614,971**	**1,476,589,060**
Appropriations		-909,896	-
Group contributions received [1]		235,685,000	233,438,000
Profit before income tax		**1,852,390,074**	**1,710,027,060**
Income tax expense	7	-36,363,330	-31,505,510
Profit for the year		**1,816,026,744**	**1,678,521,550**

1) Taxable profits transferred from Finnish subsidiaries.

Balance sheet

EUR	Note	31 Dec 2021	31 Dec 2020
ASSETS			
Non-current assets			
Intangible assets	8	32,746,447	34,662,194
Property, plant and equipment	8	7,404,389	7,334,897
Shares in Group companies	8	16,176,622,539	16,201,939,149
Interest-bearing receivables from Group companies	8	7,050,724,884	5,045,167,286
Interest-bearing receivables from associated companies	8	1,503,943	1,415,476
Other non-current assets	8	161,547	110,000
Derivative financial instruments	13, 14	59,505,726	186,647,390
Deferred tax assets		3,661,428	6,348,686
Total non-current assets		**23,332,330,902**	**21,483,625,079**
Current assets			
Other current receivables from Group companies	9	377,081,611	248,621,578
Other current receivables from associated companies		513,126	40,920
Derivative financial instruments	13, 14	138,448,001	210,402,684
Other current receivables	9	18,236,847	22,182,143
Deposits and securities (maturity over three months)		-	363,372,670
Cash and cash equivalents		4,240,206,975	1,348,674,226
Liquid funds		4,240,206,975	1,712,046,896
Total current assets		**4,774,486,560**	**2,193,294,222**
Total assets		**28,106,817,462**	**23,676,919,300**
EQUITY			
Shareholders' equity	10		
Share capital		3,046,185,953	3,046,185,953
Share premium		2,821,690,902	2,821,690,902
Hedging reserve		-13,279,837	-24,202,381
Retained earnings		3,945,170,314	3,261,538,565
Profit for the year		1,816,026,744	1,678,521,550
Total equity		**11,615,794,077**	**10,783,734,590**
Accumulated appropriations		**909,896**	**-**
Provisions for liabilities and charges		**343,198**	**2,636,509**
LIABILITIES			
Non-current liabilities			
External interest-bearing liabilities	11, 13, 14	6,481,656,534	7,060,135,440
Interest-bearing liabilities to Group companies		5,567,468,774	4,334,630,712
Interest-bearing liabilities to associated companies		227,507,037	293,355,523
Derivative financial instruments	13, 14	37,050,594	71,935,077
Other non-current liabilities		27,589,524	27,936,234
Total non-current liabilities		**12,341,272,463**	**11,787,992,985**
Current liabilities			
External interest-bearing liabilities	11	3,837,837,491	818,108,111
Interest-bearing liabilities to associated companies		61,701,555	-
Trade and other payables to Group companies	12	34,846,355	31,346,824
Trade and other payables to associated companies	12	1,475,327	4,018,710
Derivative financial instruments	13, 14	123,639,596	114,628,492
Trade and other payables	12	88,997,502	134,453,079
Total current liabilities		**4,148,497,827**	**1,102,555,216**
Total liabilities		**16,489,770,290**	**12,890,548,202**
Total equity and liabilities		**28,106,817,462**	**23,676,919,300**

Cash flow statement

EUR 1,000	2021	2020
Cash flow from operating activities		
Profit for the year	1,816,027	1,678,522
Adjustments:		
Income tax expense	36,363	31,506
Group contributions	-235,685	-233,438
Finance costs - net	-1,658,967	-1,514,790
Depreciation, amortisation, write-downs and appropriations	11,320	8,582
Operating profit before depreciation (EBITDA)	**-30,942**	**-29,619**
Non-cash flow items	-2,975	2,623
Interest and other financial income received	34,307	34,970
Interest and other financial expenses paid	-72,118	-51,724
Dividends received	1,582,270	1,129,720
Group contributions received	233,438	286,059
Realised foreign exchange gains and losses	127,949	-75,092
Income taxes paid	-63,226	-35,403
Funds from operations	**1,808,703**	**1,261,534**
Other short-term receivables increase(-)/decrease(+)	1,664	-915
Other short-term payables increase(+)/decrease(-)	-460	19,729
Change in working capital	1,204	18,814
Net cash from operating activities	**1,809,907**	**1,280,348**
Cash flow from investing activities		
Capital expenditures	-12,027	-13,215
Acquisition of shares and capital contributions in subsidiaries	-	-8
Acquisition of other shares	-52	-
Proceeds from sales of shares	126,504	921,162
Proceeds from sales of property, plant and equipment	1,415	148
Change in interest-bearing receivables and other non-current assets	-2,129,895	-2,092,580
Net cash used in investing activities	**-2,014,054**	**-1,184,492**
Cash flow before financing activities	**-204,147**	**95,856**

EUR 1,000	2021	2020
Cash flow from financing activities		
Proceeds from long-term liabilities	2,674,819	2,455,419
Payment of long-term liabilities	-2,095,218	-366,156
Change in cashpool liabilities	1,232,838	-882,562
Change in short-term liabilities	1,915,137	222,360
Dividends paid	-995,268	-977,408
Net cash from financing activities	**2,732,307**	**451,653**
Net increase(+)/decrease(-) in liquid funds	**2,528,160**	**547,508**
Liquid funds at the beginning of the year	**1,712,047**	**1,164,539**
Liquid funds at the end of the year	**4,240,207**	**1,712,047**

Notes to the Parent Company Financial Statements, FAS

1 Accounting policies and principles

The financial statements of Fortum Oyj for the year ended 31 December 2021 are prepared in accordance with Finnish Accounting Standards (FAS).

1.1 Sales

Sales include sales revenue from actual operations and exchange rate differences on trade receivables, less discounts and indirect taxes such as value added tax.

1.2 Other income

Other income includes gains on the sales of property, plant and equipment and shareholdings, as well as all other operating income not related to the sales of products or services, such as rents.

1.3 Foreign currency items and derivative instruments

Transactions denominated in foreign currencies have been valued using the exchange rate at the date of the transaction. Receivables and liabilities denominated in foreign currencies outstanding on the balance sheet date have been valued using the exchange rate quoted on the balance sheet date. Exchange rate differences have been entered in the financial net in the income statement.

Fortum Oyj enters into derivative contracts mainly for hedging foreign exchange and interest rate exposures in Fortum Group.

Fortum Oyj applies IFRS 9 Financial Instruments standard for derivative instruments and hedge accounting in statutory financial statements. Accounting principles on financial derivatives, see Note 4 Financial risk management, Note 14 Financial assets and liabilities by categories and Note 15 Financial assets and liabilities by fair value hierarchy in the Consolidated financial statements.

1.4 Income taxes

Income taxes presented in the income statement consist of accrued taxes for the financial year and tax adjustments for prior years.

1.5 Shares in group companies

The balance sheet value of shares in group companies consists of historical costs less write-downs. If the estimated future cash flows generated by a non-current asset are expected to be permanently lower than the carrying amount, an adjustment to the value is made to write-down the difference as an expense. If the basis for the write-down can no longer be justified at the balance sheet date, it is reversed.

1.6 Intangible assets and Property, plant and equipment

The balance sheet value of intangible assets and property, plant and equipment consists of historical costs less depreciation and possible write-downs. Intangible assets and Property, plant and equipment are depreciated using straight-line depreciation based on the expected useful life of the asset.

The depreciation is based on the following expected useful lives:

Machinery and equipment	3 – 15 years
Intangible assets	5 – 10 years

1.7 Pension expenses

Statutory pension obligations are covered through a compulsory pension insurance policy or Group's own pension fund. Costs for pension fund are recorded in the income statement based on contributions paid pursuant to the Finnish pension laws and regulations.

1.8 Long-term incentive schemes

Costs related to the Fortum long-term incentive plans are accrued over the earnings period and the related liability is booked to the balance sheet.

1.9 Provisions

Foreseeable future expenses and losses that have no corresponding revenue to which Fortum is committed or obliged to settle, and whose monetary value can be reasonably assessed, are entered as expenses in the income statement and included as provisions on the balance sheet.

2 Sales by market area

EUR 1,000	2021	2020
Finland	66,021	56,758
Other countries	72,632	58,654
Total	**138,653**	**115,412**

3 Other income

EUR 1,000	2021	2020
Rental and other income	8,155	6,973
Total	**8,155**	**6,973**

4 Employee benefits

EUR 1,000	2021	2020
Personnel expenses		
Wages, salaries and remunerations	43,226	35,938
Indirect employee costs		
Pension costs	6,822	5,129
Other indirect employee costs	1,549	1,188
Other personnel expenses	2,715	2,654
Total	**54,313**	**44,908**

	2021	2020	
EUR 1,000	Markus Rauramo, President and CEO	Markus Rauramo, President and CEO from 1 July 2020	Pekka Lundmark, President and CEO until 1 July 2020
Compensation for the President and CEO			
Salaries and fringe benefits	1,559	808	521
Performance bonuses 1)	423	82	-
Share-based incentives 1)	1,006	249	94
Pensions (statutory)	311	140	82
Pensions (voluntary)	315	158	132
Social security expenses	69	31	18
Total	**3,683**	**1,467**	**848**

1) Based on estimated amounts.

EUR 1,000	2021	2020
Compensation for the Board of Directors	504	593

The compensation above is presented on accrual basis. Paid salaries and remunerations for the President and CEO Markus Rauramo were EUR 2,821 thousand (2020: 808).

For the President and CEO Markus Rauramo the retirement age is determined in accordance with the Finnish Employees' Pension Act. The pension obligations are covered through insurance company.

Board members are not in an employment relationship or service contract with Fortum, and they are not given the opportunity to participate in Fortum's STI or LTI programme, nor does Fortum have a pension plan that they can opt to take part in. The compensation of the board members is not tied to the sustainability performance of the Group.

See Note 10 Employee benefits and Board remuneration and Note 31 Pension obligations in the Consolidated financial statements.

	2021	2020
Average number of employees	374	329

5 Auditor's fees

EUR 1,000	2021	2020
Audit fees	833	687
Audit-related assignments	99	20
Tax assignments	-	30
Total	**932**	**738**

Deloitte Oy is the appointed auditor until the next Annual General Meeting, to be held in 2022. Audit fees include fees for the audit of the consolidated financial statements, review of the interim reports as well as the fees for the audit of Fortum Oyj. Audit-related assignments include fees for assurance of sustainability reporting and other assurance and associated services related to the audit. Tax assignments include fees for tax advice services.

6 Financial income and expenses

EUR 1,000	2021	2020
Dividend income from group companies	1,582,270	1,129,720
Interest and other financial income from group companies	42,957	39,768
Interest and other financial income from associated companies	7	10
Gains on sale of shares	101,187	420,701
Interest and other financial income	475	1,065
Exchange rate differences	-82	1,763
Changes in fair values of derivatives	9,686	-4,439
Interest and other financial expenses to group companies	-2,597	-2,699
Interest and other financial expenses	-74,937	-71,099
Total	**1,658,967**	**1,514,790**
Interest income	38,153	35,612
Interest expenses	-71,500	-68,213
Interest costs - net	**-33,347**	**-32,601**

7 Income tax expense

EUR 1,000	2021	2020
Taxes on regular business operations	-10,774	-15,182
Taxes on group contributions	47,137	46,688
Total	**36,363**	**31,506**
Current taxes for the period	36,421	32,116
Current taxes for prior periods	-15	-1
Changes in deferred tax	-43	-610
Total	**36,363**	**31,506**

8 Non-current assets

Intangible assets

EUR 1,000	Total
Cost 1 January 2021	**65,175**
Additions	12,148
Disposals	-9,218
Cost 31 December 2021	**68,104**
Accumulated depreciation 1 January 2021	**30,512**
Disposals	-4,050
Depreciation for the year	8,896
Accumulated depreciation 31 December 2021	**35,358**
Carrying amount 31 December 2021	**32,746**
Carrying amount 31 December 2020	34,662

Property, plant and equipment

EUR 1,000	Machinery and equipment	Advances paid and construction in progress	Total
Cost 1 January 2021	**10,502**	**3,335**	**13,837**
Additions and transfers between categories	511	2,258	2,768
Disposals	-1,123	-787	-1,910
Cost 31 December 2021	**9,890**	**4,806**	**14,696**
Accumulated depreciation 1 January 2021	**6,502**	**-**	**6,502**
Disposals	-727	-	-727
Depreciation for the year	1,516	-	1,516
Accumulated depreciation 31 December 2021	**7,292**	**-**	**7,292**
Carrying amount 31 December 2021	**2,598**	**4,806**	**7,404**
Carrying amount 31 December 2020	4,000	3,335	7,335

Investments

EUR 1,000	Shares in Group companies	Partici-pation in associated companies	Recei-vables from Group companies	Recei-vables from associated companies	Other non-current assets	Total
Cost 1 January 2021	**17,346,949**	**5,656**	**5,045,167**	**16,691**	**8,092**	**22,422,557**
Additions [1)]			2,005,558	88	52	2,005,698
Disposals	-25,317					-25,317
Cost 31 December 2021	**17,321,633**	**5,656**	**7,050,725**	**16,780**	**8,144**	**24,402,938**
Accumulated write-downs 1 January 2021	**1,145,010**	**5,656**	**-**	**15,276**	**7,982**	**1,173,925**
Accumulated write-downs 31 December 2021	**1,145,010**	**5,656**	**-**	**15,276**	**7,982**	**1,173,925**
Carrying amount 31 December 2021	**16,176,623**	**0**	**7,050,725**	**1,504**	**162**	**23,229,013**
Carrying amount 31 December 2020	16,201,940	-	5,045,168	1,415	110	21,248,632

1) Additions regarding shares comprise acquisitions of shares and capital contributions and reclassification between other non-current assets and shares in Group companies.

9 Other current receivables

EUR 1,000	2021	2020
Other current receivables from group companies		
Trade receivables	14,435	12,209
Group contribution and other receivables	359,560	233,438
Accrued income and prepaid expenses	3,086	2,974
Total	**377,082**	**248,621**
Other current receivables		
Trade receivables	719	79
Other receivables	3,236	3,289
Accrued income and prepaid expenses	14,282	18,814
Total	**18,237**	**22,182**

See Note 4.2 Liquidity and refinancing risk in the Consolidated financial statements.

10 Changes in shareholders' equity

EUR 1,000	Share capital	Share premium	Hedging reserve	Retained earnings	Total
1 January 2021	**3,046,186**	**2,821,691**	**-24,202**	**4,940,060**	**10,783,735**
Cash dividend				-994,890	-994,890
Change in hedging reserve			10,923		10,923
Profit for the year				1,816,027	1,816,027
31 December 2021	**3,046,186**	**2,821,691**	**-13,279**	**5,761,197**	**11,615,794**
1 January 2020	**3,046,186**	**2,821,691**	**-19,534**	**4,238,662**	**10,087,004**
Cash dividend				-977,124	-977,124
Change in hedging reserve			-4,668		-4,668
Profit for the year				1,678,522	1,678,522
31 December 2020	**3,046,186**	**2,821,691**	**-24,202**	**4,940,060**	**10,783,734**

EUR 1,000	2021	2020
Distributable funds		
Retained earnings 31 December	5,761,197	4,940,060
Hedging reserve	-13,280	-24,202
Total	**5,747,917**	**4,915,858**

11 Interest-bearing liabilities

EUR 1,000	2021	2020
External interest-bearing loans		
Bonds	2,706,115	3,758,061
Loans from financial institutions	3,086,153	2,450,263
Other long-term interest-bearing loans	689,389	851,812
Total long-term interest-bearing loans	**6,481,657**	**7,060,135**
Current portion of long-term bonds	999,152	499,689
Current portion of loans from financial institutions	462,908	13,695
Other short-term interest-bearing loans	2,375,777	304,725
Total short-term interest-bearing loans	**3,837,837**	**818,108**
Total 1)	**10,319,494**	**7,878,244**

Maturity of external interest-bearing loans

EUR 1,000	2021
2022	3,837,837
2023	3,373,685
2024	717,477
2025	17,581
2026	771,780
2027 and later	1,601,134
Total 1)	**10,319,494**

See Note 4.2 Liquidity and refinancing risk and Note 27 Interest-bearing liabilities in the Consolidated financial statements.

External interest-bearing loans due after five years 1)

EUR 1,000	2021	2020
Bonds	845,538	1,631,999
Other long-term loans	755,596	936,606
Total	**1,601,134**	**2,568,604**

1) Excludes loans to Group and associated companies.

Other interest-bearing loans due after five years

EUR 1,000	2021	2020
Interest-bearing loans to associated companies	227,507	293,356
Total	**227,507**	**293,356**

Non-discounted cash flows of interest-bearing loans and their maturities, see Note 13 Financial derivatives.

12 Trade and other payables

EUR 1,000	2021	2020
Trade and other payables to group companies		
Trade payables	5,273	1,615
Deposits from group companies and other liabilities	29,573	29,616
Accruals and deferred income	-	116
Total	**34,846**	**31,347**
Trade and other payables to associated companies		
Accruals and deferred income	1,475	4,019
Total	**1,475**	**4,019**
Trade and other payables		
Trade payables	23,098	25,370
Other liabilities	4,443	6,137
Accruals and deferred income	61,456	102,945
Total	**88,998**	**134,453**

13 Financial derivatives

Interest rate and currency derivatives by instrument 2021

	Notional amount Remaining lifetimes				Fair value		
EUR 1,000	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Hedge accounting							
Foreign exchange derivatives	482,534	271,364	-	753,898	10,838	10,891	-52
Interest rate swaps	1,300,000	1,322,558	1,175,000	3,797,558	71,385	26,972	44,413
Cross currency swaps	214,384	46,957	-	261,341	29,996	1,963	28,032
Non-hedge accounting							
Foreign exchange derivatives	13,700,810	331,925	-	14,032,734	85,461	119,935	-34,474
Interest rate swaps	-	34,145	-	34,145	273	93	180
Cross currency swaps	-	23,656	-	23,656	-	836	-836
Total	**15,697,728**	**2,030,606**	**1,175,000**	**18,903,334**	**197,954**	**160,690**	**37,264**
Of which long-term					59,506	37,051	22,455
Short-term					138,448	123,640	14,808

Interest rate and currency derivatives by instrument 2020

	Notional amount Remaining lifetimes				Fair value		
EUR 1,000	Under 1 year	1-5 years	Over 5 years	Total	Positive	Negative	Net
Hedge accounting							
Foreign exchange derivatives	450,201	177,048	-	627,249	8,802	9,114	-312
Interest rate swaps	825,000	1,874,658	1,675,000	4,374,658	153,721	61,068	92,653
Cross currency swaps	14,056	261,341	-	275,397	38,182	3,087	35,095
Non-hedge accounting							
Foreign exchange derivatives	9,529,153	572,978	-	10,102,131	196,345	111,668	84,677
Interest rate swaps	-	19,932	-	19,932	-	259	-259
Cross currency swaps	-	23,656	-	23,656	-	1,367	-1,367
Total	**10,818,410**	**2,929,613**	**1,675,000**	**15,423,023**	**397,050**	**186,563**	**210,487**
Of which long-term					186,647	71,935	114,712
Short-term					210,403	114,628	95,775

Maturity analysis of interest-bearing loans and derivatives

Interest-bearing loans are non-discounted expected cash flows including future interest payments and amortisations. Interest rate and currency derivatives represent the fair value of the derivatives on the balance sheet.

	2021				2020			
EUR 1,000	Under 1 year	1-5 years	Over 5 years	Total	Under 1 year	1-5 years	Over 5 years	Total
Interest-bearing loans	4,006,987	5,034,504	2,000,842	11,042,334	948,619	4,642,160	2,998,928	8,589,707
Interest rate and currency derivatives	123,640	18,540	18,510	160,690	114,628	35,084	36,851	186,564
Interest rate and currency derivative receivables	-138,448	-29,386	-30,120	-197,954	-210,403	-104,049	-82,598	-397,050
Total	**3,992,179**	**5,023,659**	**1,989,233**	**11,005,070**	**852,844**	**4,573,195**	**2,953,180**	**8,379,220**

Interest-bearing loans include loans from the State Nuclear Waste Management Fund and Teollisuuden Voima Oyj of EUR 1,165 million (2020: 1,145). These loans are renewed yearly and the related interest payments are calculated for ten years in the table above.

14 Derivatives and liabilities by fair value hierarchy

Fair value measurements are classified using a fair value hierarchy, i.e. Level 1, Level 2 and Level 3 that reflects the significance of the inputs used in making the measurements. For further information see accounting principles in Fortum consolidated accounts Note 15 Financial assets and liabilities by fair value hierarchy.

Derivatives at fair value in financial assets

	Level 1		Level 2		Level 3		Total	
EUR 1,000	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
In non-current assets								
Derivative financial instruments								
Interest rate and currency derivatives								
Hedge accounting			54,867	171,797			54,867	171,797
Non-hedge accounting			4,639	14,851			4,639	14,851
In current assets								
Derivative financial instruments								
Interest rate and currency derivatives								
Hedge accounting			57,353	28,868			57,353	28,868
Non-hedge accounting			81,095	181,535			81,095	181,535
Total			**197,954**	**397,050**			**197,954**	**397,050**

Derivatives and liabilities at fair value in financial liabilities

	Level 1		Level 2		Level 3		Total	
EUR 1,000	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
In non-current liabilities								
Interest-bearing liabilities [1]			1,669,072	2,145,032			1,669,072	2,145,032
Derivative financial instruments								
Interest rate and currency derivatives								
Hedge accounting			32,085	56,525			32,085	56,525
Non-hedge accounting			4,966	15,410			4,966	15,410
In current liabilities								
Derivative financial instruments								
Interest rate and currency derivatives								
Hedge accounting			7,742	16,703			7,742	16,703
Non-hedge accounting			115,898	97,926			115,898	97,926
Total			**1,829,762**	**2,331,595**			**1,829,762**	**2,331,595**

1) Fair valued part of bond in the fair value hedge relationship.

Net fair value amount of interest rate and currency derivatives was EUR 37 million (2020: 210), including assets EUR 197 million (2020: 397) and liabilities, EUR 161 million (2020: 187). Fortum Corporation has cash collaterals based on Credit Support Annex agreements with some counterparties. At the end of December 2021 Fortum Corporation had received EUR 40 million (2020: 109) from Credit Support Annex agreements. The received cash has been booked as a short-term interest-bearing liability.

15 Contingent liabilities and other commitments

EUR 1,000	2021	2020
On own behalf		
Other contingent liabilities	832	438
On behalf of group companies		
Guarantees	3,794,749	1,330,784
On behalf of associated companies		
Guarantees	280,610	359,497
Total	**4,076,191**	**1,690,719**

In 2021 Fortum signed an EUR 8 billion credit facility agreement with Uniper comprising tranches for both a shareholder loan and a parent company guarantee. As a part of the intra-group credit facility agreement, Fortum Oyj provided a guarantee facility of EUR 4 billion to Uniper, of which EUR 2 billion parent company guarantee was outstanding at 31 December 2021.

Operating lease commitments

EUR 1,000	2021	2020
Due within one year	5,727	7,884
Due after one year and within five years	17,294	19,322
Due after five years	3,010	7,093
Total	**26,031**	**34,299**

16 Related party transactions

See Note 38 Related party transactions in the Consolidated financial statements.

Investments in group companies, associated companies and other holdings

		No. of shares units	Holding %
Investments in group companies			
Fortum Waste Solutions Oy	Finland	3,520,800	100.00
Fortum Heat and Gas Oy	Finland	2,000,000	100.00
Fortum Clean Oy	Finland	100	100.00
Fortum Norm Oy	Finland	250	100.00
Fortum Power and Heat Oy	Finland	91,197,543	100.00
Fortum Real Estate Oy	Finland	2,000,000	100.00
Fortum Holding B.V.	Netherlands	61,062	100.00
Fortum India Private Ltd	India	1	0.10
Fortum Finance Ireland Designated Activity Company	Ireland	25,000	100.00
Fortum Sweden AB	Sweden	1,000,000	100.00
Investments in associated companies			
Wello Oy	Finland	272,828	18.60
Other holdings			
AW-Energy Oy	Finland	2,854,688	3.43
Clic Innovation Oy	Finland	100	3.80
East Office of Finnish Industries Oy	Finland	1	5.88
Green Industry Park Oy	Finland	19	19.00
Prototype Carbon Fund	USA	N/A	

17 Events after the balance sheet date

On 24 February 2022, Russia started a widespread invasion into Ukraine. As a consequence, the US, the EU and the UK amongst others have imposed sanctions targeting Russia's ability to access capital and financial markets, sanctioning numerous individuals and banks; as well as trading in general. These sanctions and possible counter sanctions as well as further reactions by the US, the EU and the UK could impact Fortum's operations in Russia.

Meanwhile, uninterrupted gas supply from Russia to Europe has continued. Fortum's Russian operations are also running normally.

Given the uncertainty and risks arising from the geopolitical situation, including imposed sanctions and possible future sanctions and counter sanctions and their consequences, there may be significant impact to the fair values and economic lives of assets; as well as on the commodity prices and related margining requirements in Europe. The book value of Fortum's Russian assets, including the exposure in the Nord Stream 2 pipeline project, was approximately EUR 5.5 billion as of 31 December 2021. Fortum is currently assessing the impact of recent developments and mitigating measures, and specifically the following:

- Germany has halted the certification of the gas pipeline Nord Stream 2, while the US has sanctioned Nord Stream 2 AG, its subsidiaries and the CEO. Fortum has, within its Uniper segment, a financial receivable of approximately EUR 1 billion related to the Nord Stream 2 pipeline project.
- The Russian rouble (RUB) has depreciated significantly from the closing rate as of 31 December 2021. If this prevails, it has a negative translation impact on Fortum Group's earnings, assets and liabilities denominated in RUB.
- The above-mentioned events have led to an increase in European commodity prices and corresponding margining outflows for the Fortum Group. Due to the de-risking and financing measures taken, this has not materially deteriorated Fortum's overall liquidity situation.

Fortum actively monitors the situation in order to ensure continued compliance with prevailing rules and applicable sanctions laws.

See the Risk management section in the Operating and financial review.

On 18 January 2022, Fortum announced that 1.3 GW portfolio of wind projects is being transferred from the Fortum-Rusnano wind investment fund (50/50 joint venture) to a joint venture recently established with Bank GPB. Upon the transfer, the joint venture of Fortum-Rusnano wind investment fund will be dissolved.

Signatures for the operating and financial review and financial statements

Espoo, 2 March 2022

Veli-Matti Reinikkala	Anja McAlister	Philipp Rösler	Teppo Paavola
Essimari Kairisto	Annette Stube	Luisa Delgado	Markus Rauramo President and CEO

The auditor's note

Our auditor's report has been issued today.

Espoo, 2 March 2022

Deloitte Oy
Audit Firm

Jukka Vattulainen
Authorised Public Accountant (KHT)

Auditor's report

(Translation of the Finnish original)

To the Annual General Meeting of Fortum Oyj

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of Fortum Oyj (business identity code 1463611-4) for the year ended 31 December, 2021. The financial statements comprise the consolidated income statement, consolidated statement of comprehensive income, consolidated balance sheet, consolidated statement of changes in total equity, consolidated cash flow statement and notes to the consolidated financial statements, including a summary of significant accounting policies, as well as the parent company's income statement, balance sheet, cash flow statement and notes to the financial statements.

In our opinion

- the consolidated financial statements give a true and fair view of the group's financial position, financial performance and cash flows in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU,
- the financial statements give a true and fair view of the parent company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

Our opinion is consistent with the additional report submitted to the Audit Committee.

Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report.

We are independent of the parent company and of the group companies in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

In our best knowledge and understanding, the non-audit services that we have provided to the parent company and group companies are in compliance with laws and regulations applicable in Finland regarding these services, and we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 537/2014. The non-audit services that we have provided have been disclosed in note 8 to the consolidated financial statements.

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

Key Audit Matters

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

We have also addressed the risk of management override of internal controls. This includes consideration of whether there was evidence of management bias that represented a risk of material misstatement due to fraud.

Key audit matter	How our audit addressed the key audit matter
Fair value of commodity derivatives and liquidity Refer to Notes 4, 6, 7, 8, 9, 14, 15 and 27 • Fortum's business is exposed to fluctuations in prices and availability of commodities used in the production, transmission and sales of energy products. The main exposure is toward electricity and gas prices and volumes, prices and volumes of emission allowances, and prices and availability of fuels relating to Fortum's sales EUR 112,400 million (EUR 49,015 million) and materials EUR 103,923 million (EUR 43,377 million). Fortum hedges its exposure to commodity market risks in order to reduce volatility in cash flow and to increase the predictability of future results. The fair values of derivatives and their changes may have a material effect on Fortum's financial statements. Higher commodity prices increase the net margining payments which are mainly settled with cash. As a result of the recent increase in commodity prices, the cash-flow risk related to margin calls on the Group's hedges has increased substantially during 2021. • In December 31, 2021, assets related to commodity derivative financial instruments in Fortum's consolidated balance sheet amounts to EUR 82,147 million (EUR 10,417 million) and liabilities to EUR 88,458 million (EUR 10,295 million). The Margin receivables related to the derivative financial instruments amounted EUR 9,163 million (EUR 1,132 million) and liabilities to EUR 985 million (EUR 331 million). Changes in the fair value of derivatives hedging future cash flows in items affecting the comparability in the income statement amount to EUR -5,424 million (EUR -675 million) and cash flow hedges in other equity components to EUR -1,138 million (EUR -158 million).	• Our audit procedures included the assessment of Fortum's internal controls related to derivative transactions, hedging activities and the determination of fair values. • We have assessed the appropriateness of the valuation models used by Fortum, including the assumptions used in the models. We have validated model input data with observable external information. • We have conducted audit procedures regarding the existence and completeness of open derivative contracts. • We have assessed the appropriateness of accounting application according to the requirements of IFRS 9. • We have assessed the risk scenario prepared by Fortum over further price changes and impact to liquidity requirements for margin calls and Fortum's ability to meet liquidity requirements for the next 12 months. • We have assessed the appropriate presentation of derivatives and the liquidity measures in the consolidated financial statements.

• Due to the increased commodity prices at the year-end 2021, mitigating actions were taken to increase liquidity and reduce the positions exposed to margin calls. To manage this volatility and high price levels, Fortum took financing measures to secure its liquidity position and ability to cover changes in margin requirements. In December 2021, Fortum withdrew revolving credit facility of EUR 1,750 million to manage sufficient liquidity for possible further increases in commodity prices and consequent further additional requirement of collateral payments. Furthermore, Fortum signed new bilateral financing agreements to mitigate the liquidity position. These agreements consisted of a EUR 400 million term loan and a EUR 500 million term loan and a revolving credit facility of EUR 800 million, of which EUR 500 million was drawn as of 31 December 2021.

Key audit matter	How our audit addressed the key audit matter
Valuation of property, plant and equipment and goodwill Refer to Notes 1, 2, 3, 16, 17 and 19. • The consolidated balance sheet includes property, plant and equipment amounting to EUR 18,319 million (EUR 18,641 million) and goodwill amounting to EUR 1,021 million (EUR 1,069 million). • At the end of each reporting period management has to assess whether there is any indication that asset may be impaired. If any such indication exists, the recoverable amount of the asset is estimated. Goodwill is subject to annual impairment test. • The main assumptions used in the valuation of energy and heat production property, plant and equipment and goodwill relate to the estimated future operating cash flows and the discount rates that are used in calculating the present value. • The potential indicators for impairment are among other things changes in electricity and fuel prices, regulatory/political risk relating to energy taxes, price regulations and limitations to the lifetime of production assets, coupled with changes in anticipated impacts arising from climate change. • The assumptions used in the valuation of the balances in question require management judgment. • Estimates are also made in an acquisition when determining the fair values and remaining useful lives of acquired intangible and tangible assets.	• We have evaluated the process how management has assessed the indicators for potential impairment. We have performed audit procedures on impairment models relating to material cash generating units. • We have obtained entity's impairment testing documentation for goodwill and energy production assets and tested and evaluated the rationale of key assumptions applied by management on a sample basis, including commodity price forecasts, profit and cash flow forecasts, terminal values, foreign exchange rates and the selection of discount rates. • We have compared, that the forecasts used in the impairment testing calculations are based on forecasts approved by management. • We challenged management's assumptions and judgments with reference to historical data and, where applicable, external benchmarks. • We assessed the models used in the impairment testing and carried out our testing for the sensitivity calculations. • We have assessed management's assessment of climate change impact to Fortum's business and how this has been taken into account in determining the cashflows used in impairment testing. • We assessed the adequacy of related disclosures in the financial statements.

Key audit matter	How our audit addressed the key audit matter
Shares in Nuclear Waste Funds and Nuclear provisions Refer to Notes 2 and 29. • Fortum's balance sheet includes Nuclear related provisions amounting to EUR 3,891 million (EUR 3,866 million) and Fortum's share of the Nuclear Waste Management Fund amounting to EUR 3,515 million (EUR 3,445 million). • Fortum's nuclear related provisions and the related part of the Nuclear Waste Management Fund are both presented separately in the balance sheet as disclosed in note 29. • Fortum's share in the Nuclear Waste Management Funds is accounted for according to IFRIC 5 which states that the fund assets are measured at the lower of fair value or the value of the related liabilities. • Due to complexity and materiality, the accounting treatment for nuclear decommissioning is complex and requires application of special accounting practice and management judgment when forming estimates for the basis of accounting such as technical plans, timing, cost estimates and discount rate.	• We have assessed Fortum's accounting manual and principles for Nuclear Decommissioning Accounting, whether they are in line with IFRS accounting principles. • We have assessed the assumptions and judgments made and adopted by the management in the accounting for the nuclear waste provisions and share in nuclear waste management fund which have been based on current legislation and submitted by authorities. • We assessed the adequacy of related disclosures in the financial statements.

Emphasis of Matter – Subsequent Events

We draw your attention to the note 39. "Events after the balance sheet date" of the financial statements, which describes the uncertainties and risks caused by the geopolitical situation which may have impact to fair value of assets and on the commodity prices and related margining requirements in Europe. Our opinion is not modified in respect of this matter.

Responsibilities of the Board of Directors and the President and CEO for the Financial Statements

The Board of Directors and the President and CEO are responsible for the preparation of consolidated financial statements that give a true and fair view in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU, and of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the President and CEO are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors and the President and CEO are responsible for assessing the parent company's and the group's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the parent company or the group or cease operations, or there is no realistic alternative but to do so.

Auditor's responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice 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 the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the parent company's or the group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of the Board of Directors' and the President and CEO 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 parent company's or the group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the parent company or the group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Reporting Requirements

Information on our audit engagement

We were first appointed as auditors by the Annual General Meeting on 16.3.2006, and our appointment represents a total period of uninterrupted engagement of 16 years.

Other Information

The Board of Directors and the President and CEO are responsible for the other information. The other information comprises the Operating and Financial Review and the information included in the Financials, but does not include the financial statements and our auditor´s report thereon. We have obtained the Operating and Financial Review prior to the date of this auditor's report, and the Financials is expected to be made available to us after that date.

Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. With respect to Operating and Financial Review, our responsibility also includes considering whether the Operating and Financial Review has been prepared in accordance with the applicable laws and regulations.

In our opinion, the information in the Operating and Financial Review is consistent with the information in the financial statements and the Operating and Financial Review has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed on the other information that we obtained prior to the date of this auditor´s report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Other opinions

We support that the financial statements should be adopted. The proposal by the Board of Directors regarding the use of the profit shown on the balance sheet is in compliance with the Limited Liability Companies Act. We support that the Board of Directors of the parent company and the President and CEO should be discharged from liability for the financial period audited by us.

Espoo, 2 March 2022

Deloitte Oy
Audit Firm

Jukka Vattulainen
Authorised Public Accountant (KHT)

Auditor's assurance report of ESEF financial statements

(Translation of the Finnish Original)

Independent auditor's report on the ESEF consolidated financial statements of Fortum Oyj

To the Board of Directors of Fortum Oyj

We have performed a reasonable assurance engagement on whether the iXBRL tagging of the consolidated financial statements in the ESEF consolidated financial statements (FORTUMOYJ-2021-12-31-fi.zip) of Fortum Oyj (1463611-4) for the financial year 1 January - 31 December 2021 has been prepared in accordance with the requirements of Article 4 of Commission Delegated Regulation (EU) 2018/815 (ESEF RTS).

Responsibilities of the Board of Directors and the Managing Director

The Board of Directors and Managing Director are responsible for the preparation of the report of the Board of Directors and financial statements (ESEF financial statements) that comply with the requirements of ESEF RTS. This responsibility includes:

- preparation of ESEF financial statements in XHTML format in accordance with Article 3 of ESEF RTS
- tagging the consolidated financial statements in the ESEF financial statements with iXBRL tags in accordance with Article 4 of ESEF RTS, and
- ensuring consistency between ESEF financial statements and audited financial statements.

The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of ESEF financial statements in accordance with the requirements of ESEF RTS.

Auditor's Independence and Quality Control

We are independent of the company in accordance with the ethical requirements that are applicable in Finland and are relevant to the engagement we have performed, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

The auditor applies International Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Auditor's Responsibilities

In accordance with the engagement letter, we express an opinion on whether the tagging of the consolidated financial statements in the ESEF financial statements has been prepared in all material respects in accordance with the requirements of Article 4 of ESEF RTS. We conducted a reasonable assurance engagement in accordance with International Standard on Assurance Engagements ISAE 3000.

The engagement includes procedures to obtain evidence on:

- whether the tagging of the consolidated financial statements in the ESEF financial statements has been prepared in all material respects in accordance with the requirements of Article 4 of ESEF RTS, and
- whether the ESEF financial statements are consistent with the audited financial statements.

The nature, timing and extent of the procedures selected depend on the auditor's judgment. This includes the assessment of risk of material departures from the requirements set out in ESEF RTS, whether due to fraud or error.

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

Opinion

In our opinion, the tagging of the consolidated financial statements in the ESEF financial statements (FORTUMOYJ-2021-12-31-fi.zip) of Fortum Oyj for the financial year 1 January - 31 December 2021 has been prepared in all material respects in ac-cordance with the requirements of Article 4 of ESEF RTS.

Our audit opinion on the consolidated financial statements of Fortum Oyj for the financial year 1 January - 31 December 2021 has been expressed in our auditor's report dated 2 March 2022. In this report, we do not express an audit opinion or any other assurance conclusion on the consolidated financial statements.

Espoo, 2 March 2022

Deloitte Oy
Audit Firm

Jukka Vattulainen
Authorised Public Accountant (KHT)

Financial key figures

Comparability of information presented in tables

Information in the tables and graphs presented for year 2012 or earlier is not restated due to the adoption of IFRS 10 and IFRS 11. Adoption of standards influences treatment of Fortum's holding in Stockholm Exergi AB (Exergi), (previously AB Fortum Värme samägt med Stockholms stad), in the consolidated financial statements. From 1 January 2014 onwards Exergi is treated as a joint venture and thus consolidated with equity method. Before the change the company was consolidated as a subsidiary with 50% minority interest.

Fortum announced the sale of Swedish Distribution business in March 2015. After the divestment of the Swedish Distribution business Fortum has no electricity distribution operations and therefore Distribution segment was treated as discontinued operations in 2015, with restatement of year 2014, according to IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.

Fortum adopted IFRS 16 on 1 January 2019, and IFRS 9 and IFRS 15 on 1 January 2018. Fortum applied the transition relief for not restating the comparatives of 2018 and 2017, respectively.

In 2019, Fortum classified certain assets as held for sale. These assets and the related liabilities are included in segment assets and liabilities at 31 December 2019.

Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from 1 April 2020, consolidated Uniper's results into its income statement. In 2019 and in the first quarter of 2020, Uniper was consolidated as an associated company into Fortum's income statement.

Following the consolidation of Uniper, Fortum's business profile changed and the previous long-term financial targets did not appropriately reflect the Group's new business profile. In May 2020, Fortum's Board of Directors consequently decided to remove the financial targets (return on capital employed of at least 10% and comparable net debt-to-EBITDA of around 2.5x) as of the first quarter of 2020. In December 2020 in connection with the strategy update, Fortum updated its long-term financial target to be Financial net debt/comparable EBITDA below 2x. For more information, see Note 5 Capital risk management.

In 2021, Fortum introduced two new Alternative Performance Measures (APM) to provide additional financial performance indicators to support meaningful comparison of underlying net profitability between periods: Comparable net profit, and Comparable earnings per share. Comparable net profit is shown after non-controlling interest and adjusted for items affecting comparability, as well as adjustments to share of profit of associates and joint ventures, net finance costs, income tax expenses, and non-controlling interest. Comparable earnings per share is calculated from comparable net profit. For more information, see Definitions and reconciliations of key figures and Note 7 Comparable operating profit and comparable net profit.

For information of Alternative Performance Measures used by Fortum, see Definitions and reconciliations of key figures and Note 1 Significant accounting policies.

EUR million or as indicated	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**Change 21/20 %**
Income statement											
Reported											
Sales total Fortum	6,159	5,309	4,751	3,702	3,632	4,520	5,242	5,447	49,015	112,400	129
Sales continuing operations			4,088	3,459	3,632	4,520	5,242	5,447	49,015	112,400	129
EBITDA total Fortum	2,538	2,129	3,954	4,640	1,006	1,623	1,674	1,693	2,688	693	-74
EBITDA continuing operations			1,673	196	1,006	1,623	1,674	1,693	2,688	693	-74
Operating profit total Fortum	1,874	1,508	3,428	4,245	633	1,158	1,138	1,118	1,599	-588	-137
- of sales%	*30.4*	*28.4*	*72.2*	*114.7*	*17.4*	*25.6*	*21.7*	*20.5*	*3.3*	*-0.5*	
Operating profit continuing operations			1,296	-150	633	1,158	1,138	1,118	1,599	-588	-137
- of sales%			*31.7*	*-4.3*	*17.4*	*25.6*	*21.7*	*20.5*	*3.3*	*-0.5*	
Share of profit/loss of associates and joint ventures total Fortum	23	178	149	20	131	148	38	744	656	192	-71
Profit before income tax total Fortum	1,586	1,398	3,360	4,088	595	1,111	1,040	1,728	2,199	-289	-113
- of sales%	*25.8*	*26.3*	*70.7*	*110.4*	*16.4*	*24.6*	*19.8*	*31.7*	*4.5*	*-0.3*	
Profit before income tax continuing operations			1,232	-305	595	1,111	1,040	1,728	2,199	-289	-113
- of sales%			*30.1*	*-8.8*	*16.4*	*24.6*	*19.8*	*31.7*	*4.5*	*-0.3*	
Profit for the period total Fortum	1,512	1,212	3,161	4,142	504	882	858	1,507	1,855	-114	-106
- of which attributable to owners of the parent	1,416	1,204	3,154	4,138	496	866	843	1,482	1,823	739	-59
Profit for the period continuing operations			1,089	-228	504	882	858	1,507	1,855	-114	-106
- of which attributable to owners of the parent			1,081	-231	496	866	843	1,482	1,823	739	-59
Comparable											
EBITDA total Fortum	2,416	1,975	1,873	1,265	1,015	1,275	1,523	1,766	2,434	3,817	57
EBITDA continuing operations			1,457	1,102	1,015	1,275	1,523	1,766	2,434	3,817	57
Operating profit total Fortum	1,752	1,403	1,351	922	644	811	987	1,191	1,344	2,536	89
Operating profit continuing operations			1,085	808	644	811	987	1,191	1,344	2,536	89
Share of profit/loss of associates and joint ventures									656	154	-77
Net profit (after non-controlling interests)									1,483	1,778	20

EUR million or as indicated	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Change 21/20 %
Financial position and cash flow											
Capital employed total Fortum	19,420	19,183	17,918	19,870	18,649	18,172	18,170	19,929	26,239	30,885	18
Financial net debt								4,833	7,023	789	-89
Adjusted net debt								4,978	9,784	3,227	-67
Interest-bearing net debt	7,814	7,793	4,217	-2,195	-48	988	5,509	5,260	N/A	N/A	
Interest-bearing net debt without Exergi financing		6,658	3,664	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Capital expenditure and gross investments in shares total Fortum	1,574	1,020	843	669	1,435	1,815	4,672	819	4,953	1,407	-72
- of sales%	*25.6*	*19.2*	*17.7*	*18.1*	*39.5*	*40.2*	*89.1*	*15.0*	*10.1*	*1.3*	
Capital expenditure and gross investments in shares continuing operations			695	625	1,435	1,815	4,672	819	4,953	1,407	-72
Capital expenditure total Fortum	1,558	1,005	774	626	591	690	584	713	1,146	1,116	-3
Capital expenditure continuing operations			626	582	591	690	584	713	1,146	1,116	-3
Net cash from operating activities total Fortum	1,382	1,548	1,762	1,381	621	993	804	1,575	2,555	4,970	95
Net cash from operating activities continuing operations			1,406	1,228	621	993	804	1,575	2,555	4,970	95
Key ratios											
Return on capital employed total Fortum, %	10.2	9.0	19.5	22.7	4.0	7.1	6.7	10.0	N/A	N/A	
Return on shareholders' equity total Fortum, %	14.6	12.0	30.0	33.4	3.7	6.6	6.8	11.9	12.9	-0.8	
Interest coverage total Fortum	7.6	6.7	19.9	27.6	4.6	8.7	10.0	8.0	27.3	-12.7	
Interest coverage including capitalised borrowing costs total Fortum	5.7	5.3	15.7	21.5	4.1	7.8	9.2	7.5	18.6	-9.4	
Funds from operations/interest-bearing net debt total Fortum,%	19.9	18.8	42.9	-59.7	-1,503.4	83.9	26.8	32.2	N/A	N/A	
Funds from operations/interest-bearing net debt without Exergi financing total Fortum,%		22.1	49.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Gearing, %	73	77	39	-16	0	7	46	40	45	6	
Financial net debt/comparable EBITDA									2.9	0.2	
Comparable net debt/EBITDA total Fortum	3.2	3.9	2.3	-1.7	0.0	0.8	3.6	3.0	N/A	N/A	
Comparable net debt/EBITDA without Exergi financing		3.4	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Equity-to-assets ratio, %	43	43	51	61	62	61	54	57	27	9	
Other data											
Dividends	888	977	1,155	977	977	977	977	977	995	1,013 1)	2
Research and development expenditure	41	49	41	47	52	53	56	67	56	61	9
- of sales%	*0.7*	*0.9*	*1.0*	*1.4*	*1.4*	*1.2*	*1.1*	*1.1*	*0.1*	*0.1*	
Average number of employees total Fortum 2)	10,600	9,532	8,821	8,193	7,994	8,507	8,767	8,248	17,304	19,796	
Average number of employees continuing operations 2)			8,329	8,009	7,994	8,507	8,767	8,248	17,304	19,796	

1) Board of Directors' proposal for the planned Annual General Meeting on 28 March 2022.
2) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31, 2020.

See **Definitions and reconciliations of key figures**.

Share key figures

EUR or as indicated	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Change 21/20 %
Data per share											
Earnings per share total Fortum	1.59	1.36	3.55	4.66	0.56	0.98	0.95	1.67	2.05	0.83	-60
Earnings per share continuing operations			1.22	-0.26	0.56	0.98	0.95	1.67	2.05	0.83	-60
Earnings per share discontinued operations	-	-	2.33	4.92	-	-	-	-			
Diluted earnings per share total Fortum	1.59	1.36	3.55	4.66	0.56	0.98	0.95	1.67	2.05	0.83	-60
Diluted earnings per share continuing operations			1.22	-0.26	0.56	0.98	0.95	1.67	2.05	0.83	-60
Diluted earnings per share discontinued operations	-	-	2.33	4.92	-	-	-	-	-	-	
Comparable earnings per share total Fortum									1.67	2.00	20
Cash flow per share total Fortum	1.56	1.74	1.98	1.55	0.70	1.12	0.91	2.27	2.88	5.60	94
Cash flow per share continuing operations			1.38	1.38	0.70	1.12	0.91	2.27	2.88	5.60	94
Equity per share	11.30	11.28	12.23	15.53	15.15	14.69	13.33	14.61	14.58	13.66	-6
Dividend per share	1.00	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.12	1.14 [1]	2
Extra dividend			0.20	-	-	-					
Payout ratio, %	62.9	80.9	36.6	23.6	196.4	112.2	115.8	65.9	54.6	137.3 [1]	
Dividend yield, %	7.1	6.6	7.2	7.9	7.5	6.7	5.8	5.0	5.7	4.2 [1]	
Price/earnings ratio (P/E)	8.9	12.2	5.1	3.0	26.1	16.8	20.1	13.2	9.6	32.5	
Share prices											
At the end of the period	14.15	16.63	17.97	13.92	14.57	16.50	19.10	22.00	19.70	26.99	
Average	15.66	15.11	17.89	16.29	13.56	15.28	19.10	20.06	17.20	23.65	
Lowest	12.81	13.10	15.13	12.92	10.99	12.69	16.43	18.09	12.25	19.72	
Highest	19.36	18.18	20.32	21.59	15.74	18.94	22.91	22.50	23.46	27.96	
Other data											
Market capitalisation at the end of the period, EUR million	12,570	14,774	15,964	12,366	12,944	14,658	16,966	19,542	17,499	23,975	
Trading volumes [2]											
Number of shares, 1,000 shares	494,765	465,004	454,796	541,858	611,572	582,873	474,705	372,272	647,869	351,450	
In relation to weighted average number of shares, %	55.7	52.3	51.2	61.0	68.8	65.6	53.4	41.9	72.9	39.6	
Average number of shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,312	888,294	888,294	888,294	
Diluted adjusted average number of shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,312	888,294	888,294	888,294	
Number of registered shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,294	888,294	888,294	888,294	

1) Board of Directors' proposal for the planned Annual General Meeting on 28 March 2022.
2) Trading volumes in the table represent volumes traded on Nasdaq Helsinki. In addition to the Nasdaq Helsinki, Fortum shares were traded on several alternative market places, for example at Boat, Cboe and Turquoise, and on the OTC market as well. In 2021, approximately 70% (2020: 68%) of Fortum's shares were traded on markets other than the Nasdaq Helsinki Ltd.

See ▸ **Definitions and reconciliations of key figures.**

Segment key figures

Fortum renewed its business structure as of 1 March 2014. The reorganisation led to a change in Fortum's external financial reporting structure as previously separately reported segments Heat and Electricity Sales were combined into one segment: Heat, Electricity Sales and Solutions.

Fortum has applied new IFRS 10 Consolidated financial statements and IFRS 11 Joint arrangements from 1 January 2014. The effect of applying the new standards to Fortum Group financial information relates to Stockholm Exergi AB (publ) (previously AB Fortum Värme samägt med Stockholm Stad), that is treated as a joint venture and thus consolidated with equity method from 1 January 2014 onwards. Before the change the company was consolidated as a subsidiary with 50% minority interest.

Fortum announced the sale of Swedish Distribution business in March 2015. After the divestment of the Swedish Distribution business Fortum does not have any distribution operations and therefore Distribution segment has been treated as discontinued operations in 2015 with restatement of year 2014, according to IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.

Fortum reorganised its operating structure as of 1 April 2016. The business divisions are: Generation (mainly the former Power and Technology); City Solutions (mainly the former Heat, Electricity Sales and Solutions) and Russia. Because of the minor financial impact, the comparable segment information for 2015 was not restated.

As of 1 March 2017, the City Solutions division was divided into two divisions: City Solutions and Consumer Solutions, both reported as separate reporting segments. Fortum has restated its 2016 comparison segment reporting figures in accordance with the new organisation structure.

In November 2018, Fortum announced that the solar and wind businesses were reorganised and the wind operations became a business area within the Generation segment and the solar operations within the City Solutions segment. Previously these were included in Other Operations. The Russian wind and solar operations continue as a part of the Russia segment. Fortum has restated its 2018 comparative segment reporting figures in accordance with the new organisation structure.

Following the consolidation of Uniper as a subsidiary on 31 March 2020, Fortum revised its reportable segments and reports Uniper as a separate segment. Until 31 March 2020 Fortum's share of Uniper's associated company results is presented in Other operations.

See more information in Note 6 Segment reporting.

Sales by segment, EUR million	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Generation	2,415	2,252	2,156	1,722	1,657	1,677	1,842	2,141	2,006	2,899
- of which internal	296	69	85	83	15	15	-2	259	421	143
Russia	1,030	1,119	1,055	893	896	1,101	1,069	1,071	929	906
- of which internal	-	-	-	-	-	-	-	-	2	3
City Solutions		1,516	1,332	1,187	782	1,015	1,110	1,200	1,075	1,302
- of which internal		87	34	-13	1	19	37	45	64	39
Heat	1,628									
- of which internal	18									
Consumer Solutions					668	1,097	1,759	1,835	1,267	2,622
- of which internal					2	3	11	-3	2	14
Electricity Sales	722									
- of which internal	55									
Uniper									44,514	105,992
- of which internal									0	29
Other Operations	137	63	58	114	92	102	103	115	140	138
- of which internal	-66	54	44	75	61	67	79	86	110	104
Distribution	1,070	1,064								
- of which internal	37	19								
Eliminations and Netting of Nord Pool transactions	-843	-706	-513	-458	-463	-470	-641	-916	-916	-1,459
Total for continuing operations	**6,159**	**5,309**	**4,088**	**3,459**	**3,632**	**4,520**	**5,242**	**5,447**	**49,015**	**112,400**
Discontinued operations			751	274						
Eliminations [1]			-89	-31						
Total			**4,751**	**3,702**	**3,632**	**4,520**	**5,242**	**5,447**	**49,015**	**112,400**

1) Sales to and from discontinued operations.

Comparable operating profit by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	1,146	859	877	561	417	478	628	794	722	1,110
Russia	68	156	161	201	191	296	271	316	251	261
City Solutions		109	104	108	64	98	135	120	47	135
Heat	271									
Consumer Solutions					48	41	53	79	90	52
Electricity Sales	39									
Uniper									363	1,120
Other Operations	-92	-54	-57	-63	-77	-102	-99	-118	-129	-142
Distribution	320	332								
Comparable operating profit	**1,752**	**1,403**	**1,085**	**808**	**644**	**811**	**987**	**1,191**	**1,344**	**2,536**
Impairment charges and reversals				-918	27	6	-4	-8	2	-83
Capital gains and other related items	155	61	305	22	38	326	102	7	765	2,681
Impact from acquisition accounting									-222	-
Changes in fair values of derivatives hedging future cash flow					-65	14	98	-72	-675	-5,424
Nuclear fund adjustment [1)]					-11	1	-45			
Other									386	-299
Other items affecting comparability [2)]	-33	45	-94	-62						
Operating profit, continuing operations	**1,874**	**1,508**	**1,296**	**-150**	**633**	**1,158**	**1,138**	**1,118**	**1,599**	**-588**
Discontinued operations			2,132	4,395						
Operating profit			**3,428**	**4,245**	**633**	**1,158**	**1,138**	**1,118**	**1,599**	**-588**

1) In 2020, Nuclear fund adjustment was reclassified from Items affecting comparability to Other financial items - net. Comparatives for 2019 have been reclassified accordingly.
2) Other items affecting comparability comprise Changes in fair values of derivatives hedging future cash flow and Nuclear fund adjustment.

Comparable EBITDA by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	1,260	1,007	998	680	527	603	763	939	886	1,299
Russia	189	258	304	267	312	438	417	469	394	404
City Solutions		211	204	209	186	262	310	308	239	317
Heat	481									
Consumer Solutions					55	57	110	141	153	123
Electricity Sales	40									
Uniper									856	1,789
Other Operations	-83	-49	-49	-53	-64	-83	-78	-91	-94	-114
Distribution	529	548								
Total for continuing operations	**2,416**	**1,975**	**1,457**	**1,102**	**1,015**	**1,275**	**1,523**	**1,766**	**2,434**	**3,817**
Discontinued operations			416	163						
Total			**1,873**	**1,265**	**1,015**	**1,275**	**1,523**	**1,766**	**2,434**	**3,817**

Depreciation and amortisation, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	114	148	121	118	110	125	135	145	164	189
Russia	121	150	147	117	123	142	147	153	143	142
City Solutions		102	100	101	121	163	175	188	191	182
Heat	210									
Consumer Solutions					7	16	57	62	63	71
Electricity Sales	1									
Uniper									494	668
Other Operations	9	5	8	10	13	18	22	28	35	28
Distribution	209	216								
Total for continuing operations	**664**	**621**	**377**	**346**	**373**	**464**	**536**	**575**	**1,090**	**1,281**
Discontinued operations			150	50						
Total			**526**	**395**	**373**	**464**	**536**	**575**	**1,090**	**1,281**

Comparable share of profit of associates and joint ventures by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation									13	11
Russia									47	62
City Solutions									57	42
Uniper									38	39
Other Operations									502	0
Total for continuing operations									**656**	**154**
Discontinued operations										
Total [1]									**656**	**154**

1) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

Share of profit of associates and joint ventures by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	-12	4	-14	-111	-34	-1	-72	10	29	36
Russia	27	46	35	32	38	31	36	59	47	62
City Solutions		91	88	59	76	80	74	37	57	42
Heat	20									
Electricity Sales	-									
Uniper									54	51
Other Operations	-20	32	37	40	51	38	0	638	470	0
Distribution	8	4								
Total for continuing operations	**23**	**178**	**146**	**20**	**131**	**148**	**38**	**744**	**656**	**192**
Discontinued operations			3	0						
Total			**149**	**20**	**131**	**148**	**38**	**744**	**656**	**192**

Capital expenditure by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	190	179	197	187	196	174	248	247	158	168
Russia	568	435	340	285	201	152	54	67	43	47
City Solutions		123	86	105	109	170	209	314	219	161
Heat	464									
Consumer Solutions					3	7	47	55	57	68
Electricity Sales	1									
Uniper									635	673
Other Operations	11	12	3	6	83	187	26	30	34	15
Distribution	324	255								
Total for continuing operations	**1,558**	**1,005**	**626**	**582**	**591**	**690**	**584**	**713**	**1,146**	**1,116**
Discontinued operations			147	44						
Total			**774**	**626**	**591**	**690**	**584**	**713**	**1,146**	**1,116**

Gross investments in shares by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	-	2	2	16	7	90	14	13	70	7
Russia	-	0	27	0	0	125	63	66	48	36
City Solutions		11	37	23	698	386	33	9	114	2
Heat	10									
Consumer Solutions					117	486	0	-	0	-
Uniper									3	9
Other Operations	6	2	4	4	22	39	3,977	18	3,572	237
Distribution	-	0								
Total for continuing operations	**16**	**15**	**69**	**43**	**844**	**1,125**	**4,088**	**106**	**3,807**	**290**
Discontinued operations			-	-						
Total			**69**	**43**	**844**	**1,125**	**4,088**	**106**	**3,807**	**290**

Gross divestments of shares by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	102	79	67	0	0	0	160	12	171	129
Russia	-	-	0	0	127	0	0	-	0	18
City Solutions		11	446	27	33	0	147	2	895	3,870
Heat	269									
Consumer Solutions					1	55	0	-	10	0
Electricity Sales	2									
Uniper									69	88
Other Operations	0	-	2	-	0	687	0	16	81	19
Distribution	37	52								
Total for continuing operations	**410**	**142**	**515**	**27**	**161**	**742**	**306**	**30**	**1,226**	**4,122**
Discontinued operations			2,681	6,369						
Total			**3,196**	**6,395**	**161**	**742**	**306**	**30**	**1,226**	**4,122**

Comparable net assets by segment, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation				5,931	5,815	5,672	6,485	6,019	6,234	6,336
Russia				2,561	3,284	3,161	2,789	3,212	2,431	2,508
City Solutions				2,182	2,873	3,728	3,794	3,945	3,679	2,456
Consumer Solutions					154	638	648	637	565	1,125
Uniper									7,432	4,971
Other Operations				258	514	276	4,023	4,400	136	125
Total for continuing operations				**10,932**	**12,641**	**13,474**	**17,739**	**18,214**	**20,477**	**17,523**

Fortum is disclosing Comparable net assets instead of Net assets from 2016 onwards. Net assets until 2015 are disclosed below.

Net assets by segment, EUR million	**2012**	**2013**	**2014**	**2015** [1]
Generation	6,389	6,355	6,001	5,913
City Solutions		2,295	2,112	2,170
Heat	4,286			
Electricity Sales	51			
Russia	3,848	3,846	2,597	2,561
Other Operations	158	295	496	291
Distribution	3,889	3,745		
Total for continuing operations	**18,621**	**16,537**	**11,206**	**10,934**
Net assets related to discontinued operations			2,615	
Total			**13,820**	**10,934**

1) Fortum is disclosing Comparable net assets instead of Net assets from 2016 onwards.

Comparable return on net assets by segment, %	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	18.5	13.8	14.2	9.5	6.9	8.4	10.8	13.3	12.2	18.0
Russia	2.7	5.2	5.6	8.2	8.0	10.1	10.3	12.3	11.1	12.9
City Solutions		8.7	8.7	7.9	5.9	5.5	5.5	4.6	2.8	6.1
Heat	7.0									
Consumer Solutions					44.3	11.7	7.8	13.3	15.9	6.9
Electricity Sales	203.1									
Uniper [1]									N/A	16.5
Distribution [2]	8.8	8.8	9.3							

1) Fortum consolidated Uniper into its balance sheet as of 31 March 2020 and, from the second quarter of 2020, consolidated Uniper's results into its income statement. Comparable return on net assets for the Uniper segment are presented from 2021 onwards as information for full 12 months is available.
2) Classified as discontinued operations from 2014 onwards.

Return on net assets by segment, %	2012	2013	2014	2015 [1]
Generation	18.7	14.5	13.6	-8.5
City Solutions		9.7	19.1	7.7
Heat	8.8			
Electricity Sales	152.3			
Russia	3.0	5.2	5.6	8.3
Distribution [2]	9.1	9.3	73.6	

1) Fortum is disclosing Comparable net assets instead of Net assets from 2016 onwards.
2) Classified as discontinued operations from 2014 onwards.

Average number of employees	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Generation	1,896	1,900	1,685	1,389	1,064	1,036	1,107	1,122	1,163	1,153
Russia	4,301	4,245	4,196	4,180	3,814	3,710	3,378	2,942	2,969	2,862
City Solutions		2,051	1,913	1,458	1,529	1,807	1,994	1,979	2,051	1,964
Heat	2,354									
Consumer Solutions					877	1,180	1,473	1,379	1,216	1,091
Electricity Sales	515									
Uniper [1]									8,945	11,751
Other Operations	661	550	536	983	711	774	814	825	959	976
Distribution	873	786								
Total for continuing operations [1]	**10,600**	**9,532**	**8,329**	**8,009**	**7,994**	**8,507**	**8,767**	**8,248**	**17,304**	**19,796**
Discontinued operations			492							
Total			**8,821**							

1) 2020 comparative figure was revised to reflect the consolidation of Uniper from March 31, 2020.

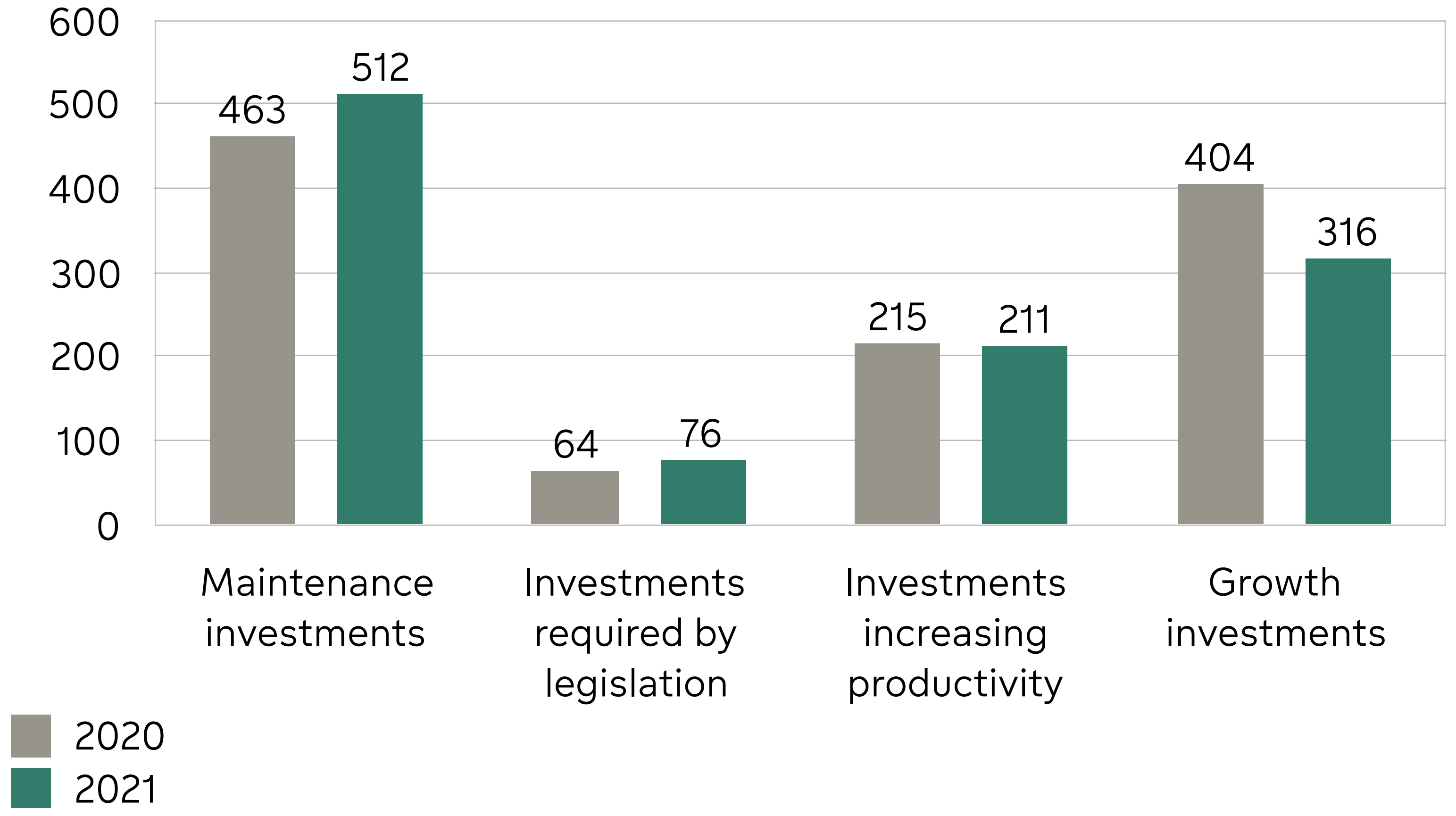
Capital expenditure

Capital expenditure by type and segment [1)]

	Finland		Sweden		Norway		Russia		Germany		United Kingdom		Other countries		Total	
EUR million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Generation																
Hydropower	20	16	83	54											104	69
Nuclear power	31	49													31	49
Renewable-based electricity, wind	29	3				27									29	30
Other	3	3	1	7											4	9
Total	**83**	**70**	**85**	**61**	**0**	**27**									**168**	**158**
Russia																
Fossil-based electricity							33	25							33	25
Fossil-based heat								14								14
District heat network							12								12	
Renewable-based electricity, wind								4								4
Other							2								2	
Total							**47**	**43**							**47**	**43**
City Solutions																
Fossil-based heat	1												4	7	5	8
Fossil-based electricity													6		6	
Renewable, of which	28	36	7	7	21	5					2	1	36	107	94	156
waste	14	20	7	7	5	5					2	1	4	7	32	40
biofuels		9			2									2	3	10
solar													32	98	32	98
other	14	8			13										28	8
District heat network	9	10			13	19							14	17	36	46
Other	14	4	4	2					0	0			2	3	19	9
Total	**53**	**49**	**11**	**9**	**34**	**24**			**0**	**0**	**2**	**1**	**62**	**134**	**161**	**219**
Consumer Solutions																
Other	11	16	6	14	25	19							10	8	52	57
Total	**11**	**16**	**6**	**14**	**25**	**19**							**10**	**8**	**52**	**57**
Uniper																
Hydropower			36	34					29	19					66	53
Nuclear power			41	50											41	50
Fossil-based electricity			5	13			130	115	188	225	123	86	45	44	491	483
Fossil-based heat									5	4					5	4
Global commodities investments									43	23	1	1	5		49	25
Other			1						19	19	1	1		1	21	21
Total			**84**	**97**			**130**	**115**	**285**	**290**	**125**	**88**	**50**	**45**	**674**	**635**
Other																
Other	13	23	1	6		2							1	3	15	34
Total	**13**	**23**	**1**	**6**		**2**							**1**	**3**	**15**	**34**
Segments total	**160**	**160**	**186**	**186**	**58**	**71**	**177**	**159**	**285**	**279**	**127**	**89**	**124**	**191**	**1,116**	**1,146**
Of which investments in CO_2 free production	**95**	**84**	**161**	**138**	**16**	**27**	**0**	**4**	**31**	**19**	**0**	**0**	**32**	**100**	**335**	**372**

1) Includes capital expenditure to both intangible assets and property, plant and equipment.

Fortum classifies investments in four main categories, EUR million



Generation
Fortum invested EUR 29 million (2020: 30) into wind power production in the Nordics. The majority of this was related to the Pjelax-Böle and Kristinestad Norr wind farms in Finland. In Finland, Fortum also invested EUR 31 million (2020: 49) into the Loviisa nuclear power plant. Fortum additionally invested EUR 100 million (2020: 69) into hydro production, mainly maintenance, legislation and productivity investments. Investments in CO_2 free production were EUR 164 million (2020: 149).

Russia
Investments by Russia segment were EUR 47 million (2020: 43). They consisted mainly of maintenance, legislation and productivity projects. Of the investments EUR 33 million was invested into gas-based production. Investments in CO_2 free production were EUR 0 million (2020: 4).

City Solutions
The largest investment project in 2021 was EUR 31 million to the Rajasthan solar plant in India. Maintenance, legislation and productivity investments totalled EUR 123 million (2020: 112). This amount consists mainly of investments in district heat networks and plants as well as the maintenance of existing CHP plants and measures defined by legal requirements. Investments in CO_2 free production were EUR 63 million (2020: 116).

Consumer Solutions
Investments in Consumer Solutions totalled EUR 52 million (2020: 57). The amount consists mainly of sales commissions for customer acquisition that are capitalised and new product development costs.

Uniper
Investments by Uniper segment totalled EUR 674 million, of which maintenance, legislation and productivity investments were EUR 439 million. Investments to gas-based production were 155 million and investments in CO_2 free production were EUR 108 million.

Other
Investments in Other segment were EUR 15 million (2020: 34). They consisted mainly of IT investments and investments into internal ventures.

Operational key figures

Note: Operational key figures are unaudited

Comparability of information presented in tables and graphs

Information in the tables and graphs presented for year 2012 or earlier is not restated due to the adoption of IFRS 10 and IFRS 11. Adoption of standards influences treatment of Fortum's holding in Stockholm Exergi AB (Exergi), (previously AB Fortum Värme samägt med Stockholms stad), in the consolidated financial statements. From 1 January 2014 onwards Exergi is treated as a joint venture and thus consolidated with equity method. Before the change the company was consolidated as a subsidiary with 50% minority interest. Uniper sales and production volumes are disclosed from 1 April 2020 onwards.

Production

Fortum's total power and heat production in Nordics, TWh	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Power generation								45.5	59.2	68.8
Heat production								6.3	5.1	5.5

Fortum is disclosing total power and heat production in Nordics instead of EU and Norway from 2019 onwards. Power and heat production in EU and Norway until 2018 are disclosed below.

Fortum's total power and heat production in EU and Norway, TWh	2012	2013	2014	2015	2016	2017	2018 [1]
Power generation	53.9	47.4	50.1	50.2	47.5	46.6	44.7
Heat production	18.5	10.4	8.2	6.4	7.1	8.6	9.4

1) Fortum is disclosing total power and heat production in Nordics instead of EU and Norway from 2019 onwards.

Fortum's total power and heat production in other European countries, TWh	2012	2013	2014	2015	2016	2017	2018	2019 [1]	2020	2021
Power generation								1.3	26.7	46.9
Heat production								2.8	7.1	8.7

1) Disclosed from 2019 onwards.

Fortum's total power and heat production in Russia, TWh	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Power generation	19.2	20.0	23.3	25.7	25.5	26.3	29.6	29.3	55.6	71.9
Heat production	24.8	24.2	26.4	25.8	20.7	20.0	20.4	17.3	17.4	19.1

Fortum's power generation by source, total in the Nordic area, TWh	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Hydro and wind power	25.2	18.1	22.4	25.1	20.8	20.9	19.4	20.7	29.6	31.4
Nuclear power	23.4	23.7	23.8	22.7	24.1	23.0	22.8	23.5	28.6	36.4
Thermal power	3.0	3.4	1.8	1.0	1.4	1.6	1.3	1.4	1.0	1.0
Total	**51.6**	**45.2**	**48.0**	**48.8**	**46.2**	**45.4**	**43.5**	**45.5**	**59.2**	**68.8**

Fortum's power generation by source, total in the Nordic area, %	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Hydro and wind power	49	40	46	51	45	46	45	45	50	46
Nuclear power	45	52	50	47	52	51	52	52	48	53
Thermal power	6	8	4	2	3	3	3	3	2	1
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Fortum's power generation by source, total in other European countries, TWh	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019 1)**	**2020**	**2021**
Hydro and wind power								-	3.3	4.9
Thermal power								1.3	23.4	42.0
Total								**1.3**	**26.7**	**46.9**

1) Disclosed from 2019 onwards.

Fortum's power generation by source, total in other European countries, %	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019 1)**	**2020**	**2021**
Hydro and wind power								-	12	10
Thermal power								100	88	90
Total								**100**	**100**	**100**

1) Disclosed from 2019 onwards.

Power generation capacity by segment, MW	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	9,702	9,475	9,063	8,046	8,039	7,862	7,867	8,220	8,163	8,041
Russia	3,404	4,250	4,758	4,903	4,482	4,794	4,912	4,928	4,928	4,672
Heat	1,569									
City Solutions		793	803	743	760	775	788	1,082	988	559
Uniper								-	36,218	33,828
Other Operations					53	292	157	-	-	-
Total	**14,675**	**14,518**	**14,624**	**13,692**	**13,334**	**13,722**	**13,724**	**14,230**	**50,297**	**47,099**

Heat production capacity by segment, MW	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Generation	250	250	-	-	-	-	-	-	-	-
Russia	13,396	13,466	13,466	12,696	9,920	10,094	10,229	8,437	8,437	7,613
Heat	8,785									
City Solutions		4,317	3,936	3,915	3,818	4,671	4,780	4,812	4,057	3,026
Uniper								-	7,017	6,232
Total	**22,431**	**18,033**	**17,402**	**16,611**	**13,738**	**14,765**	**15,009**	**13,249**	**19,511**	**16,871**

	Finland		Sweden		Russia		Germany		United Kingdom		Netherlands		Other		Total	
Fortum's power generation capacity by type and area, MW	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Hydropower	1,553	1,553	4,872	4,895	-	-	1,982	1,991	-	-	-	-	-	-	8,406	8,439
Nuclear power	1,487	1,487	3,073	3,361	-	-	-	-	-	-	-	-	-	-	4,560	4,848
Combined heat and power	375	375	6	455	3,241	3,497	2,322	3,222	-	-	525	525	178	355	6,647	8,429
Condensing power 1)	565	565	1,175	1,162	12,151	12,151	5,626	6,383	6,401	6,401	1,070	1,070	428	428	27,416	28,160
Wind power	-	-	-	-	35	35	-	-	-	-	-	-	-	101	35	136
Solar power	-	-	-	-	35	35	-	-	-	-	-	-	-	250	35	285
Total	**3,980**	**3,980**	**9,125**	**9,873**	**15,462**	**15,718**	**9,930**	**11,596**	**6,401**	**6,401**	**1,595**	**1,595**	**606**	**1,134**	**47,099**	**50,297**

1) Including 440 MW of Meri-Pori power plant, which is under reserve capacity agreement during period July 2020 - June 2022 and 875 MW of Heyden power plant, which is under reserve capacity agreement during period July 2021 – September 2022.

	Finland		Norway		Russia		Germany		Poland		Netherlands		Other		Total	
Fortum's heat production capacity by area, MW	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Heat	1,440	1,417	888	888	10,186	11,010	2,299	3,061	622	941	1,133	1,133	303	1,061	16,871	19,511

Sales

Fortum's total power and heat sales in Nordics, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Power sales								2,877	2,494	5,319
Heat sales								390	271	403

Fortum is disclosing total power and heat sales in Nordics instead of EU and Norway from 2019 onwards. Power and heat production in EU and Norway until 2018 are disclosed below.

Fortum's total power and heat sales in EU and Norway, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018 1)**
Power sales	2,700	2,462	2,344	1,921	1,893	2,244	2,922
Heat sales	1,201	538	468	423	449	524	615

1) Fortum is disclosing total power and heat sales in Nordics instead of EU and Norway from 2019 onwards.

Fortum's total power and heat sales in other European countries, EUR million	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019 1)**	**2020**	**2021**
Power sales 2)								130	16,226	26,005
Heat sales								228	410	660

1) Disclosed from 2019 onwards.
2) Including commodity trading.

Fortum's total power and heat sales in Russia, EUR million	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Power sales	713	822	758	661	691	837	872	924	1,411	1,750
Heat sales	300	290	285	228	199	258	193	145	145	154

Fortum's total power sales by area, TWh	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Finland	21.6	23.4	21.6	22.3	22.8	22.5	23.1	23.1	23.1	23.0
Sweden	30.1	23.3	28.2	29.8	28.8	30.8	29.7	31.5	44.7	53.5
Norway					1.5	7.2	15.3	15.0	13.8	13.7
Russia	23.3	25.6	26.5	29.4	29.5	30.5	34.1	33.8	68.3	84.9
Germany 1)								-	338.8	334.9
United Kingdom								-	13.0	19.5
Netherlands								-	6.3	22.4
Other countries	3.8	4.3	3.8	2.8	2.1	2.9	1.8	2.5	8.1	7.6
Total	**78.8**	**76.6**	**80.1**	**84.3**	**84.7**	**93.9**	**104.0**	**105.8**	**516.0**	**559.4**

1) Including commodity trading.

NordPool transactions are calculated as a net amount of hourly sales and purchases at the Group level.

Fortum's total heat sales by area, TWh	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Finland	5.8	5.5	3.2	3.1	3.6	3.9	3.8	3.8	2.9	3.1
Russia	26.4	24.1	26.0	25.4	20.7	19.8	20.7	16.9	17.4	19.0
Norway								1.7	1.5	1.8
Sweden	8.5	-	-	-	0.1	0.3	0.3	0.3	0.3	0.3
Poland	4.3	4.1	3.4	3.4	3.6	3.7	3.5	3.3	3.4	3.8
Germany								-	2.4	3.6
United Kingdom								-	0.0	-
Netherlands								-	2.3	3.2
Other countries	2.9	3.1	2.8	1.2	1.4	2.2	3.2	1.6	1.6	1.1
Total	**47.9**	**36.8**	**35.4**	**33.2**	**29.4**	**29.9**	**31.5**	**27.6**	**31.7**	**35.9**

Volume of distributed electricity in distribution networks, TWh	2012	2013	2014	2015
Finland	9.8	9.5	2.8	
Sweden	14.4	14.1	13.7	6.4
Norway	2.4	2.5	1.1	
Estonia	-			
Total	**26.6**	**26.1**	**17.6**	**6.4**

Quarterly financial information

Note: Quarterly financial information is unaudited.

Selected data based on quarterly consolidated income statement

EUR million	I/2020	II/2020	III/2020	IV/2020	2020	I/2021	II/2021	III/2021	IV/2021	2021
Reported										
IS Sales	1,357	12,330	14,049	21,279	49,015	21,493	17,128	23,700	50,079	112,400
IS Operating profit	603	539	-1	458	1,599	1,345	-840	-3,105	2,012	-588
IS Share of profit/loss of associates and joint ventures	479	39	25	113	656	80	61	11	40	192
IS Net profit	938	403	103	411	1,855	1,310	-659	-1,768	1,003	-114
IS Net profit (after non-controlling interests)	930	340	174	379	1,823	1,092	-473	-721	842	739
Earnings per share (basic), EUR	1.05	0.38	0.19	0.43	2.05	1.23	-0.53	-0.82	0.95	0.83

EUR million	I/2020	II/2020	III/2020	IV/2020	2020	I/2021	II/2021	III/2021	IV/2021	2021
Comparable										
EBITDA	543	512	132	1,247	2,434	1,479	348	574	1,416	3,817
IS Operating profit	393	203	-179	928	1,344	1,171	35	260	1,070	2,536
Share of profit/loss of associates and joint ventures [1]	551	23	19	63	656	67	52	9	27	154
Net profit (after non-controlling interests)	812	155	-93	610	1,483	837	79	170	693	1,778
Earnings per share (basic), EUR	0.91	0.17	-0.10	0.69	1.67	0.94	0.09	0.19	0.78	2.00

1) Comparable share of profit/loss of associates and joint ventures for 2020 has been recalculated following the introduction of comparable net profit APM in 2021.

Quarterly sales by segment

EUR million	I/2020	II/2020	III/2020	IV/2020	2020	I/2021	II/2021	III/2021	IV/2021	2021
Generation [1]	574	450	441	541	2,006	675	575	684	965	2,899
Russia	317	202	172	238	929	264	182	193	267	906
City Solutions [1]	342	212	184	337	1,075	418	256	201	427	1,302
Consumer Solutions	424	237	235	370	1,267	661	424	485	1,052	2,622
Uniper	-	11,365	13,159	19,990	44,514	19,770	15,893	22,411	47,918	105,992
Other Operations [1]	34	34	34	38	140	34	36	33	35	138
Netting of Nord Pool transactions [2]	-83	-54	-74	-105	-317	-223	-137	-229	-540	-1,128
Eliminations	-250	-115	-102	-130	-598	-107	-101	-79	-45	-331
IS Total	**1,357**	**12,330**	**14,049**	**21,279**	**49,015**	**21,493**	**17,128**	**23,700**	**50,079**	**112,400**

1) Sales, both internal and external, includes effects from realised hedging contracts. Effect on sales can be negative or positive depending on the average contract price and realised spot price.
2) Sales and purchases with Nord Pool Spot is netted on Group level on an hourly basis and posted either as revenue or cost depending on if Fortum is a net seller or net buyer during any particular hour.

Quarterly comparable operating profit by segments

EUR million	I/2020	II/2020	III/2020	IV/2020	2020	I/2021	II/2021	III/2021	IV/2021	2021
Generation	235	173	136	177	722	269	195	245	401	1,110
Russia	99	37	40	76	251	100	37	45	80	261
City Solutions	58	-15	-36	41	47	86	-4	-21	73	135
Consumer Solutions	32	19	18	21	90	36	19	13	-17	52
Uniper	-	24	-310	649	363	711	-177	9	578	1,120
Other Operations	-31	-34	-27	-36	-129	-31	-36	-31	-44	-142
IS **Comparable operating profit**	**393**	**203**	**-179**	**928**	**1,344**	**1,171**	**35**	**260**	**1,070**	**2,536**
Impairment charges and reversals	-	-1	-1	4	2	-1	-31	-46	-5	-83
Capital gains and other related items	413	69	299	-16	765	51	23	2,612	-5	2,681
Impact from acquisition accounting	-222	-	-	-	-222	-	-	-	-	-
Changes in fair values of derivatives hedging future cash flow	19	154	-242	-605	-675	165	-852	-5,871	1,134	-5,424
Other	-	115	123	147	386	-41	-15	-61	-182	-299
IS **Operating profit**	**603**	**539**	**-1**	**458**	**1,599**	**1,345**	**-840**	**-3,105**	**2,012**	**-588**

The first and last quarters of the year are usually the strongest quarters for power and heat businesses.

Investor information

Fortum's 2021 reporting entity comprises CEO's Business Review, Financials, Corporate Governance Statement and Remuneration Report, Tax footprint as well as Sustainability.

Annual General Meeting 2022

The Annual General Meeting 2022 of Fortum Corporation will be held on Monday, 28 March 2022, starting at 14:00 EEST.

Payment of dividends

The Board of Directors proposes to the Annual General Meeting that Fortum Corporation pays a dividend of EUR 1.14 per share for 2021, totalling approximately EUR 1,013 million based on the registered shares as of 2 March 2022. The possible dividend-related dates planned for 2022 are:

- the ex-dividend date 29 March 2022,
- the record date for dividend payment 30 March 2022 and
- the dividend payment date 6 April 2022.

Financial information in 2022

Fortum will publish three interim reports in 2022:

- January–March Interim Report on 12 May
- January–June Half-year Financial Report on 12 August, and
- January–September Interim Report on 10 November.

The reports are published at approximately 9:00 EET in Finnish and English, and are available on Fortum's website at www.fortum.com/investors.

Fortum's management hosts regular press conferences, targeted at investors, analysts and the media. Webcasts of these conferences are available online at www.fortum.com/investors. Fortum observes silent period of 30 days prior to publishing its results.

Fortum share basics

Listed on Nasdaq Helsinki
Trading ticker: FORTUM
Number of shares, 2 March 2022: 888,294,465
Sector: Utilities

Fortum's activities in capital markets during 2021

Fortum's Investor Relations activities cover equity and fixed-income markets to ensure full and fair valuation of the company's shares, access to funding sources and stable bond pricing. The key task of Investor Relations is to provide correct, adequate and up-to-date information regularly and equally to all market participants. By doing this, Investor Relations aims to minimise the investor's risk and reduce the share's volatility. Investors and analysts are met on a regular basis primarily in Europe and North America.

In 2021, Fortum met approximately 600 professional equity investors individually or in group meetings and at investor conferences mostly virtually and maintained regular contact with equity research analysts at investment banks and brokerage firms.

Financial Statements Bulletin 2021, 3 March
Financial Statements 2021, Latest week 10

Annual General Meeting, 28 March
Interim Report January–March 2022, 12 May

Half-year Financial Report January–June 2022, 12 August

Interim Report January–September 2022, 10 November