



ÅRSREGNSKAPET FOR REGNSKAPSÅRET 2019 - GENERELL INFORMASJON

Enheten

Organisasjonsnummer:	885 361 102
Organisasjonsform:	Aksjeselskap
Foretaksnavn:	FORTUM FORVALTNING AS
Forretningsadresse:	Askekroken 11 0277 OSLO

Regnskapsår

Årsregnskapets periode:	01.01.2019 - 31.12.2019
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Konsern

Morselskap i konsern:	Ja
Konsernregnskap lagt ved:	Ja

Regnskapsregler

Regler for små foretak benyttet:	Nei
Benyttet ved utarbeidelsen av årsregnskapet til selskapet:	Regnskapslovens alminnelige regler
Benyttet ved utarbeidelsen av årsregnskapet til konsernet:	-

Årsregnskapet fastsatt av kompetent organ

Bekreftet av representant for selskapet:	Marit Nesheim Hauge
Dato for fastsettelse av årsregnskapet:	02.09.2020

Grunnlag for avgivelse

År 2019: Årsregnskapet er elektronisk innlevert
År 2018: Tall er hentet fra elektronisk innlevert årsregnskap fra 2019

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Brønnøysundregistrene, 03.11.2021



Resultatregnskap

Beløp i: NOK	Note	2019	2018
RESULTATREGNSKAP			
Inntekter			
Annen driftsinntekt	11	4 880 637	
Sum inntekter		4 880 637	
Kostnader			
Avskrivning	3	107 266	
Annen driftskostnad	8	6 638 996	4 534 487
Sum kostnader		6 746 262	4 534 487
Driftsresultat		-1 865 625	-4 534 487
Finansinntekter og finanskostnader			
Inntekt på andre investeringer	11	67 302 288	264 912 800
Annen finansinntekt	11	6 693 006	4 114 457
Sum finansinntekter		73 995 294	269 027 257
Nedskrivning finansielle anleggsmidler	10	181 000 000	
Annen finanskostnad	11	460 328	1 034 057
Sum finanskostnader		181 460 328	1 034 057
Netto finans		-107 465 034	267 993 200
Ordinært resultat før skattekostnad		-109 330 659	263 458 713
Skattekostnad på ordinært resultat	7	19 845 734	61 089 035
Ordinært resultat etter skattekostnad		-129 176 393	202 369 678
Årsresultat		-129 176 393	202 369 678
Overføringer og disponeringer			
Konsernbidrag	2		-45 938 739
Overføring til/fra annen egenkapital	2	129 176 393	-156 430 939
Sum overføringer og disponeringer		129 176 393	-202 369 678



Balanse

Beløp i: NOK	Note	2019	2018
BALANSE - EIENDELER			
Anleggsmidler			
Immaterielle eiendeler			
Varige driftsmidler			
Maskiner, inventar og lignende	3	11 339 923	
Sum varige driftsmidler		11 339 923	
Finansielle anleggsmidler			
Investering i datterselskap	10	5 420 020 618	5 604 094 635
Investeringer i aksjer og andeler	10		
Sum finansielle anleggsmidler		5 420 020 618	5 604 094 635
Sum anleggsmidler		5 431 360 541	5 604 094 635
Omløpsmidler			
Varer			
Fordringer			
Andre fordringer		2 710 668	30 254
Konsernfordringer	5	852 745 433	930 669 956
Sum fordringer		855 456 101	930 700 210
Investeringer			
Andre markedsbaserte finansielle instrumenter	11		709 320
Sum investeringer			709 320
Sum omløpsmidler		855 456 101	931 409 530
SUM EIENDELER		6 286 816 642	6 535 504 164

BALANSE - EGENKAPITAL OG GJELD

Egenkapital

Innskutt egenkapital



Balanse

Beløp i: NOK	Note	2019	2018
Aksjekapital	2,6	757 000 000	757 000 000
Annen innskutt egenkapital	2	1 448 612 661	1 448 612 661
Sum innskutt egenkapital		2 205 612 661	2 205 612 661
Opptjent egenkapital			
Annen egenkapital	2	3 990 078 280	4 119 807 944
Sum opptjent egenkapital		3 990 078 280	4 119 807 944
Sum egenkapital		6 195 690 941	6 325 420 605
Gjeld			
Langsiktig gjeld			
Utsatt skatt	7	259 582	156 050
Sum avsetninger for forpliktelser		259 582	156 050
Annen langsiktig gjeld			
Sum langsiktig gjeld		259 582	156 050
Kortsiktig gjeld			
Leverandørgjeld		4 403 202	165 513
Betalbar skatt	7	19 586 152	66 328 439
Kortsiktig konserngjeld	5	247 116	93 573 657
Annen kortsiktig gjeld	10	66 629 649	49 859 900
Sum kortsiktig gjeld		90 866 119	209 927 509
Sum gjeld		91 125 701	210 083 559
SUM EGENKAPITAL OG GJELD		6 286 816 642	6 535 504 164



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Financials 2019

Financials 2019 – 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 letter, corporate governance statement, remuneration statement 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 2019. Here you will also find a description of the risk management as well as information on sustainability and Fortum share performance.

Key figures

Key figures consist of financial key figures, share key figures and operational key figures for 2018–2019. The financial key figures derive mainly from the primary statements. Segment key figures include information on segments.

Auditor's report

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

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.

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.

Proposal for the use of profit shown on the balance sheet

The Board of Directors proposal for the dividend in 2019 is disclosed in this section.

Key figures 2010–2019, 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 2010–2019 as well as capex and quarterly financial information for the years 2018 and 2019.

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 2020.

Notes

1–3 Basis of preparation

These notes describe the basis of preparing the consolidated financial statements and consist of the accounting policies, critical 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.

6–14 Income statement

These notes provide supporting information for the income statement.

15–34 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 included on the balance sheet.

38–40 Group structure and related parties

This section includes information on related party transactions and events after balance sheet date and the subsidiaries of Fortum.

The following symbols show which amounts are noted in the items in income statement, balance sheet and cash flow statement.

IS = Income statement

BS = Balance sheet

CF = Cash flow

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Financial performance and position

Financial performance and position

Strong operational performance in 2019 – financial targets achieved

Key financial ratios ¹⁾

	2019	2018	2017
Return on capital employed, %	10.0	6.7	7.1
Comparable net debt/EBITDA	3.0	3.6	0.8

¹⁾ See **Definitions of key figures**.

Key figures

EUR million	2019	2018	2017	Change 19/18
IS Sales	5,447	5,242	4,520	4%
Comparable EBITDA	1,766	1,523	1,275	16%
IS Comparable operating profit	1,191	987	811	21%
IS Operating Profit	1,110	1,138	1,158	-2%
- of sales %	20.4	21.7	25.6	
IS Share of profit of associates and joint ventures	744	38	148	1,858%
IS Profit before income tax	1,728	1,040	1,111	66%
- of sales %	31.7	19.8	24.6	
IS Earnings per share, EUR	1.67	0.95	0.98	76%
CF Net cash from operating activities	2,015	804	993	151%
Shareholders' equity per share, EUR	14.61	13.33	14.69	10%
Interest-bearing net debt (at end of period)	5,260	5,509	988	
Return on shareholders' equity, %	11.9	6.8	6.6	
Equity-to-assets ratio, %	57	54	61	

During 2019, we continued our determined efforts to implement Fortum's strategy. We focused on operational excellence in all our operations, re-assessed parts of our district heating business, continued to build solar and wind power, reached an agreement to increase our shareholding in Uniper, and improved our financial results substantially. At year-end, we reached our long term 10% target for return on capital employed.

In June, we announced our intention to assess the strategic options for the district heating and cooling business in Estonia and in Joensuu, Finland. The assessment concluded in the divestment of the Joensuu operations on 10 January 2020, for approximately EUR 530 million, releasing cash, strengthening our balance sheet, and unlocking

value. We are initiating an extended assessment that includes our district heating and cooling business in Baltic countries, in Poland, and in Järvenpää, Finland.

In October, our Uniper investment took a leap forward with our agreement to buy an additional share of 20%, in the company. In November, we received approval to close the transaction from the Russian Commission, subject to certain conditions. The clarification of these conditions is somewhat delayed recent change of the Russian Government. In December, we received approval from the United States confident to achieve closing during the first quarter of 2020. As announced previously, with closing adequate board representation in the Supervisory Board of Uniper reflecting our ownership. This new the chairmanship.

As the majority owner, Fortum will focus on cooperation and strategic alignment with Uniper. Our companies are already well-positioned to drive forward the European energy transition. Together, we can benefit from a further aligned strategic focus to enable a carbon-neutral Europe by 2050. During transition, Europeans expect their energy companies to execute ambitious climate policies while continuing to provide electricity and heat at all times and at an affordable cost. The German Government's cost presented last week, reflects these requirements – coal-fired generation will be phased out by the the latest. Fortum stands for a strategy of decarbonisation, which of course also applies to our investment supports Uniper's decision to close down the company's old coal-fired units as the company's new plant Datteln 4 is taken into use. As long as coal has to be used to provide for security of supply in makes sense to use it in the most efficient and clean units.

We have continued our decarbonisation efforts during the year and will do so in the future. We have decided to tighten our climate target for specific CO₂ emissions by 10% to 180 gCO₂/kWh, applying stand-alone fleet for the year 2020. We are building more solar and wind power while also utilising recycling' business model to release cash. This enables us to invest more with a limited equity exposure major effort is our commitment to carbon-neutral district heating in Espoo, Finland, in the 2020s, as by our goal to discontinue the use of coal in Espoo in 2025. Other examples of work for a cleaner energy in Finland include the sustainable decommissioning of the one-gigawatt Inkoo coal-fired power plant recycling rate of 92% of the material, placing the Meri-Pori coal-fired power plant into the Finnish national reserve capacity system from July 2020, as well as the recent decisions of Fortum's associated Turun Seudun Energiantuotanto to close down the coal-fired unit Naantali 2. In Sweden, Fortum's joint Stockholm Exergi has decided to decommission its last coal-fired unit after this heating season.

The comparable operating profit for 2019 increased by more than EUR 200 million to EUR 1.2 billion driven by a clear result improvement in the Generation segment and also supported by improved results

Financial performance and position

Consumer Solutions and Russia segments. In addition, our share of profits from associated companies and joint ventures increased to almost EUR 750 million, largely thanks to our share of Uniper's profits. Our focus on cash flow measures, together with the strong results in 2019, increased our cash flow to more than EUR 2 billion at year-end. Our comparable net debt-to-EBITDA at year-end was 3.0x. When adjusting the net debt with the impact of the divestment of the Joensuu district heat business in January 2020 and the announced sale of a 80% share of our Nordic wind portfolio, we also achieved our other long-term financial target of a comparable net debt-to-EBITDA ratio of around 2.5x. Maintaining strong cash flow and consistent deleveraging are also central for our credit rating. Fortum's key objective is to have a solid investment-grade rating of at least BBB to preserve financial flexibility and good access to capital markets after the Uniper transaction has been closed.

The fourth-quarter results were characterised by the strong improvement in the Generation segment, driven by clearly higher hydro volumes and good operational performance. The higher hedge price helped us achieve a higher power price, in spite of the clearly lower spot prices in the Nordics. All other operational segments also improved their results. In City Solutions, the result recovered after a disappointing third quarter. The hard work in Consumer Solutions continued to pay off with EBITDA increasing for the ninth consecutive quarter. In the Russia segment, the improvement in the heat business supported the results.

Based on Fortum's 2019 results, our financial position and the outlook for the coming years, Fortum's Board of Directors is proposing an unchanged dividend of EUR 1.10 per share for the calendar year 2019. With an earnings per share of EUR 1.67, the proposal corresponds to a pay-out ratio of 65.9%, which is within the 50%-80% range of our dividend policy.

Financial results

Sales by segment

EUR million	2019	2018	Change 19/18
Generation	2,141	1,842	16%
City Solutions	1,200	1,110	8%
Consumer Solutions	1,835	1,759	4%
Russia	1,071	1,069	0%
Other Operations	115	103	12%
Netting of Nord Pool transactions ¹⁾	-529	-516	
Eliminations	-387	-125	
IS Total	5,447	5,242	4%

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	2019	2018	Change 19/18
Generation	939	763	23%
City Solutions	309	310	0%
Consumer Solutions	141	110	28%
Russia	469	417	12%
Other Operations	-91	-78	-17%
Total	1,766	1,523	16%

Comparable operating profit by segment

EUR million	2019	2018	Change 19/18
Generation	794	628	26%
City Solutions	121	135	-10%
Consumer Solutions	79	53	49%
Russia	316	271	17%
Other operations	-119	-99	-20%
IS Total	1,191	987	21%

Operating profit by segment

EUR million	2019	2018
Generation	771	711
City Solutions	127	111
Consumer Solutions	20	20
Russia	317	282
Other operations	-127	-127
IS Total	1,110	1,110

Share of profits of associated companies and joint ventures

EUR million	2019	2018
Generation	10	10
City Solutions	37	37
Consumer Solutions	0	0
Russia	5	5
Other operations	638	638
IS Total	742	742

For further information see ▶ **Note 6** Segment reporting.

Fortum's sales increased by 4% and comparable operating profit improved by 21% and was EUR 1,191 (987) million. The higher sales and higher achieved power price in the Generation segment as well as the improved performance in the Russia segment as well as the improved performance in the Consumer Solutions segments were the main contributors to the improvement.

Operating profit for the period was impacted by EUR -8 million of items affecting comparability, mainly from the fair value non-hedge-accounted derivatives (▶ **Note 7**). In the third quarter, Fortum recorded a capital gain of EUR 77 million from the 10% stake in Hafslund Produktions.

The share of profit of associates and joint ventures was EUR 742 million. Fortum's share of Uniper's profits, EUR 632 (-2) million, Uniper's October-December 2018 and January-September

Financial performance and position

and the impact on Uniper's results from the reinstatement of the UK capacity market in the fourth quarter of 2019, totalling EUR 601 (-2) million, as well as the fair value adjustments reversal according to the purchase price allocation of Uniper for 2019, EUR 31 (-) million (► **Note 3**). The share of profit of Uniper includes 'Non-operating results', EUR 392 (79) million. Co-owned nuclear companies accounted for EUR 16 (1) million, Stockholm Exergi for EUR 24 (61) million, including the EUR -22 million effect of the impairment booked in Stockholm Exergi relating to the early decommissioning of CHP6 (See Segment Review, City Solutions), and TGC-1 for EUR 54 (40) million (► **Note 19**).

Net finance expenses amounted to EUR 125 (136) million, of which net interest expenses were EUR 139 (114) million. Interest expenses include the remaining amortised cost of EUR 13 million due to the prepayment of the bridge financing for the acquisition of Uniper shares in 2018. Other financial expenses include the EUR 10 million cost for the new committed credit facilities related to the acquisition of an additional minimum stake of 20.5% in Uniper. Net finance expenses included a positive impact of EUR 40 million related to the regular nuclear technical update in Finland (► **Note 29**).

Profit before income taxes was EUR 1,728 (1,040) million.

Taxes for the period totalled EUR 221 (181) million. The effective income tax rate, according to the income statement, was 12.8% (17.5%). The comparable effective income tax rate, excluding the impact of the share of profit of associated companies and joint ventures as well as non-taxable capital gains, tax rate changes, and other major one-time income tax effects, was 22.4% (22.0%) (► **Note 13**).

The profit for the period was EUR 1,507 (858) million. Earnings per share were EUR 1.67 (0.95), of which EUR -0.07 (0.15) per share were related to items affecting comparability.

Cash flow

In 2019, net cash from operating activities was strong and increased by EUR 1,211 million to EUR 2,015 (804) million, mainly impacted by a EUR 356 (-524) million change in settlements for futures on Nasdaq Commodities, the improved comparable EBITDA of EUR 1,766 (1,523)

Financial position and cash flow

EUR million	2019	2018	Change 19/18
Interest expense	-167	-148	-13%
Interest income	28	34	-18%
Fair value gains and losses on financial instruments	8	-8	200%
Other financial expenses - net	6	-15	140%
IS Finance costs - net	-125	-136	8%
Interest-bearing liabilities	6,694	6,093	10%
Less: Liquid funds	1,435	584	146%
Interest-bearing net debt	5,260	5,509	-5%

million, dividends received of EUR 239 (61) million, and a EUR -33 (-146) million change in working capital. The impact of the change of realised foreign exchange gains and losses was EUR 14 (231) million.

Net cash from investing activities was EUR -369 (-4,398) million. The comparison period in 2018 included the acquisition of Uniper shares.

Capital expenditure increased by EUR 116 million to EUR 695 (579) million. Cash collaterals and restricted cash decreased by EUR 347 million, including the non-cash collateral arrangement in the first quarter to release pledged cash from the Nordic power exchange, which had a major positive impact of EUR 310 million. Consequently, cash flow before financing activities increased significantly to EUR 1,646 (-3,594) million.

Proceeds from long-term liabilities were EUR 2,805 (1,764) million, arising from the issuance of new bonds totalling EUR 2.5 billion under the Euro Medium Term Note (EMTN) programme and a bilateral loan of EUR 300 million. The proceeds from the issued bonds were used to repay the bridge financing of EUR 1,750 million related to the acquisition of Uniper shares in 2018 and repayment of a bond of EUR 750 million. The total payments of long-term liabilities were EUR 2,567 (586) million. The net increase in liquid funds was EUR 806 (-3,268) million.

Dividends received totalled EUR 239 (61) million, mainly related to dividends received from Uniper EUR 165 (-) million, Stockholm Exergi EUR 40 (39) million, Turun Seudun Energiantuotanto EUR 20 (10) million, and TGC-1 EUR 10 (7) million.

Assets and capital employed

At the end of 2019, total assets amounted to EUR 23,364 million. Liquid funds at the end of the period increased to (584) million. Capital employed was EUR 19,929 (18,170) million.

Equity

Equity attributable to owners of the parent company totalled (11,841) million. The dividend of EUR 1.10 per share for 2019 approved by the 2019 Annual General Meeting (AGM) on and paid on 4 April 2019. The increase in equity of EUR 1.10 was mainly related to the net profit for the period of EUR 1.51 million, the positive impact from fair valuation of cash flow hedges of EUR 255 million, and the positive translation differences of EUR 255 million, offset by the dividend payment of EUR 977 million.

Financing

Net debt decreased by EUR 249 million to EUR 5,260 (5,509) million, including lease liabilities of EUR 114 million. Interest-bearing liabilities increased by EUR 601 million and liquid funds increased by EUR 806 million. The dividend, EUR 977 million, was paid on 4 April 2019. At the end of 2019, the Group's liquid funds including of EUR 2 million relating to assets held for sale) totalled EUR 1 million. Liquid funds include cash and bank deposits held of EUR 201 (317) million. At the end of 2019, Fortum had committed credit facilities amounting to EUR 1,900 (1,800) million, of which EUR 1,750 million is maturing in June 2020. In the first quarter of 2019, Fortum signed additional committed credit facilities for the acquisition of Uniper shares as announced in 2019 (► **Note 24**). On 7 January 2020, Fortum cancelled EUR 1 million of these new committed credit facilities.

On 19 February 2019, Fortum issued bonds with a total of EUR 2,500 million under its EMTN programme. The bonds in three tranches with the following maturities: EUR 1,000 million with a 0.875% fixed coupon maturing on 27 February 2023; EUR 1,000 million with a 1.625% fixed coupon maturing on 27 February 2022; and EUR 500 million with a 2.125% fixed coupon maturing on 27 February 2021.

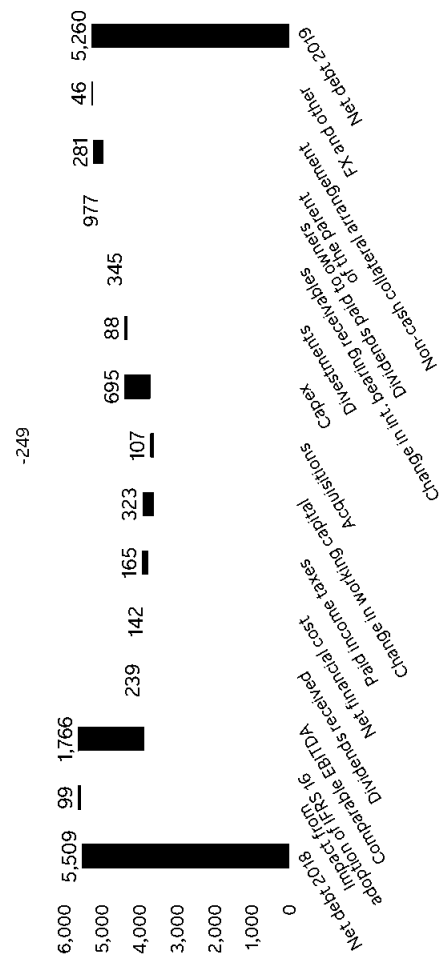
Financial performance and position

The proceeds from the issued bonds were used to repay the bridge financing of EUR 1,750 million related to the acquisition of the initial 49.99% stake in Uniper in 2018 and repayment of a 6% fixed-coupon bond of EUR 750 million, which resulted in a more balanced debt maturity profile. In April 2019, Fortum drew a five-year EUR 300 million bilateral financial loan.

Following Fortum's announcement to acquire an additional stake of more than 20.5% of Uniper's shares, Standard & Poor's and Fitch reviewed the credit rating of Fortum. In October 2019, Standard & Poor's placed Fortum's long-term credit rating of BBB on CreditWatch Negative. The short-term rating is at level A-2. In October 2019, Fitch Ratings placed Fortum's long-term credit rating of BBB and short-term credit rating of F2 on Rating Watch Negative. Both rating agencies are expected to update the credit ratings after the closing of the acquisition of at least an additional 20.5% of Uniper shares. Standard & Poor's have announced that they will likely consolidate Uniper into Fortum and link the issuer credit rating on Uniper to that of Fortum upon antitrust approval.

Fortum's key objective is to have a solid investment-grade rating of at least BBB, in order to preserve financial flexibility and good access to capital markets post-closing of the above-mentioned acquisition of Uniper shares, and to strengthen its financial profile longer term. This will provide appropriate financial stability and support to the enlarged group.

Change in net debt during 2019, EUR million



Key figures

The comparable net debt-to-EBITDA ratio for 2019 was 3.0x (3.6x). The target is to steer the leverage the current net debt-to-EBITDA ratio towards the long-term over-the-cycle target of approximately adjusting net debt with the impact of the divestment of the Joensuu district heating business and the sale of a 80% share of our Nordic wind portfolio, Fortum's long-term target of around 2.5x was achieved. Gearing was 40% (46%) and the equity-to-assets ratio was 57% (54%). Equity per share was EUR 2.5x (2.5x).

Return on capital employed (ROCE) for 2019 was 10.0% (6.7%). Fortum targets a long-term over-the-cycle return on capital employed of at least 10%.

Fortum's key financial targets will be revisited in due course to ensure alignment with a commitment to solid investment grade rating of at least BBB.

Operating and regulatory environment

Nordic countries

According to preliminary statistics, electricity consumption in the Nordic countries was 392 TWh (399 TWh) during the first quarter and slightly lower industrial demand caused a slight decrease in the demand.

At the beginning of 2019, the Nordic water reservoirs were at 74 TWh, which is 10 TWh lower than the term average and 8 TWh lower than one year earlier. At the end of the year, the reservoirs were at 55 TWh below the long-term average and 5 TWh higher than one year earlier. In April 2019, the Norwegian energy regulator (NVE) revised the Norwegian reservoir statistics. The reported reference levels and deviations have been updated accordingly.

Power consumption

TWh	2019	2018
Nordic countries	392	399
Russia	1,059	1,055
Tyumen	94	92
Chelyabinsk	35	35
Russia Urals area	260	260

Financial performance and position

During 2019, the average system spot price in Nord Pool was EUR 38.9 (44.0) per MWh. The average area price in Finland was EUR 44.0 (46.8) per MWh and in Sweden (SE3, Stockholm) EUR 38.4 (44.5) per MWh.

In 2019, the average German spot price was EUR 37.7 (44.5) per MWh.
The market price of CO₂ emission allowances (EUA) showed some volatility during the year, but ended the year at the same price level as in the beginning of the year, at EUR 25 per tonne.

Average prices

	2019	2018	2017
Spot price for power in Nord Pool power exchange, EUR/MWh	38.9	44.0	29.4
Spot price for power in Finland, EUR/MWh	44.0	46.8	33.2
Spot price for power in Sweden, SE3, Stockholm, EUR/MWh	38.4	44.5	31.2
Spot price for power in Sweden, SE2, Sundsvall, EUR/MWh	37.9	44.2	30.8
Spot price for power in European and Urals part of Russia, RUB/MWh ¹⁾	1,289	1,247	1,204
Average capacity price, tRUB/MW/month	624	609	535
Spot price for power in Germany, EUR/MWh	37.7	44.5	34.2
Average regulated gas price in Urals region, RUB/1,000 m ³	3,910	3,801	3,685
Average capacity price for old capacity (CCS), tRUB/MW/month ²⁾	154	148	148
Average capacity price for new capacity (CSA), tRUB/MW/month ²⁾	1,096	1,075	899
Spot price for power (market price), Urals hub, RUB/MWh ¹⁾	1,117	1,043	1,041
CO ₂ , (ETS-EUA), EUR/tonne CO ₂	25	16	6
Coal (ICE Rotterdam), USD/tonne	61	92	84
Oil (Brent Crude), USD/bbl	64	72	55

1) Excluding capacity tariff.

2) Capacity prices paid only for the capacity available at the time.

Water reservoirs

TWh	31 Dec 2019	31 Dec 2018	31 Dec 2017
Nordic water reservoirs level	79	74	86
Nordic water reservoirs level, long-term average	84	83	83

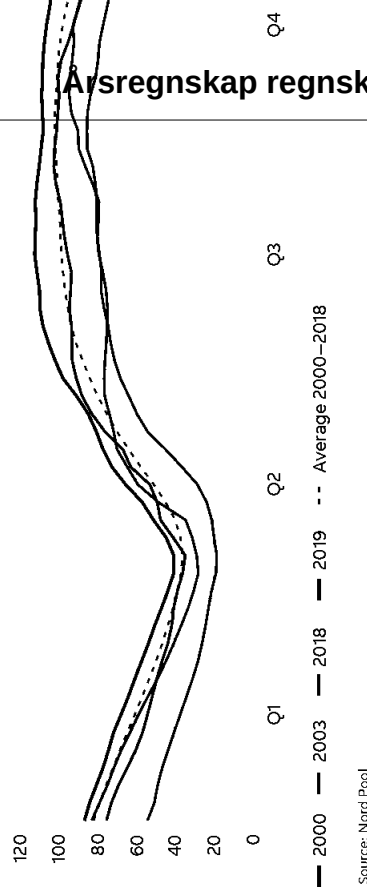
Russia

Fortum operates mainly in the Tyumen and Khanty-Mansiysk area of Western Siberia, where industry is dominated by the oil and gas industries, and in the Chelyabinsk area of the Urals, which is dominated by the metal industry. The Russian market is divided into two price zones and Fortum operates in the First (European and Urals part of Russia).

According to preliminary statistics, Russian electricity consumption was 1,059 (1,056) TWh and in the First Price Zone in 2019.

In 2019, the average electricity spot price, excluding capacity prices, was RUB 1,289 (1,247) per First Price Zone and RUB 1,117 (1,043) per MWh in the Urals hub.

Nordic water reservoirs, energy content, TWh



Export/import

TWh (+ = import to, - = export from Nordic area)

Export/import between Nordic area and Continental Europe+Baltics

Export/import between Nordic area and Russia

Export/import Nordic area, total

2019

2018

2017

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Financial performance and position

Regulatory environment

New EU institutions with a strong focus on climate

Following the EU elections in May, the new Parliament took office. The Commission headed by President Ursula von der Leyen started at the beginning of December and, without delay, issued the first outline of its Green Deal.

The European Council, except Poland, endorsed the target of reaching EU economy-wide climate neutrality by 2050. Meanwhile, the Commission announced its intention to triple the budget of the Just Transition Fund to EUR 100 billion, with the target to ease the transformation in heavily fossil-reliant countries. Polish adherence will be reconsidered in the European Council in June 2020, whilst the 2050 EU economy-wide target will be part of the Climate Law due in February 2020.

Fortum welcomes the firm climate orientation of the new EU institutions.

The European Green Deal emerging

In December, the European Commission published a Communication on the European Green Deal. It will be the new Commission's bold political initiative, aiming at EU economy-wide climate neutrality by 2050. The Commission is expected to launch up to 50 related initiatives during the next two years.

While, the Green Deal will not be solely about climate ambition, it is expected to deliver extensive growth for Europe bundling all EU policy areas and all sectors of society. The Green Deal comprises, among other things, energy supply, circular economy, ecosystems, biodiversity, and mainstreaming of sustainability in all EU policies.

Practically all energy and climate targets and policies will be subject to revision, and consequently, entail a regulatory risk. The Commission will present a Green Financing Strategy in autumn 2020 in order to enable the private sector to contribute to the financing of a green transition.

Fortum welcomes the Green Deal and considers sector integration and electrification as offering significant solutions and business opportunities to meet the ambitious goals of the Green Deal.

Sustainable finance regulation adopted

In December, the European Council and Parliament reached an agreement on the taxonomy regulation of sustainable finance. The taxonomy creates a unified classification system for what can be considered sustainable investments. The regulation still needs to be formally approved by the Council and Parliament and is expected to enter into force by the end of 2022.

The regulation strongly leans towards renewable energy technologies. Nuclear and gas may qualify as 'transitional activities', depending on the outcome of the assessment that will be carried out by the Commission during 2020. The status of waste-to-energy is still open whilst the treatment of hazardous waste has been classified as sustainable.

As such, the objective of the sustainable finance initiative is in line with Fortum's strategy. Fortum has, however, strongly advocated for an approach based on CO₂ emissions and technology-neutrality in compliance with the Paris Agreement. There is a risk that if the taxonomy discriminates against some low-carbon technologies, the financing costs of such investments will increase in the future and result in unduly expensive decarbonisation.

EIB's new energy lending policy approved

In November, the European Investment Bank (EIB) agreed on a new energy lending policy and confirmed the EIB's increased ambition in climate action and environmental sustainability. EIB will align all financing activities with the goals of the Paris Agreement from the end of 2020 and end financing for fossil fuel energy projects from the end of 2021.

The Sustainable Europe Investment Plan launched by the new Commission targets to unlock EUR 1 trillion of climate action and environmentally sustainable investments by 2030. The EIB will play a key role in this and will gradually turn into a climate bank. EIB will no longer consider new financing for fossil fuel energy projects, including gas. In addition, EIB set a new Emissions Performance Standard of 250g of CO₂/kWh for power and heat projects. This will replace the current 550g of CO₂/kWh standard. Nuclear and renewable energy projects continue to be eligible for funding. If in line with the EU waste hierarchy and national waste management plans, waste-to-energy projects are also eligible.

The new EIB lending policy is well in line with Fortum's strategy.

German climate and coal phase-out legislation

In September 2019, the German Government released an climate and energy package in order to meet the 2030 emission reduction target of 55% and carbon-neutrality by 2050. In the German Parliament approved the climate package. The package includes a national emissions trading system for the transport and with carbon prices of EUR 25 in 2021 and EUR 55 in 2025. It also includes higher costs for consumers and companies, the climate package includes subsidies for electric cars and tax incentives for green electricity, and housing.

The climate protection law ("Klimaschutzgesetz") sets a emission reduction targets for the period 2020–2030 for energy, industry, transport, buildings, agriculture, waste management and others.

In addition, the Government decided on a coal phase-out on the earlier proposal and is committed to propose legislation with the recommendations of the Coal Commission, and to gas strategy including hydrogen. The coal phase-out legislation approved by the federal cabinet on 29 January 2020 and to be completed in the first half of 2020. In the years 2020 the Government plans to carry out large-scale reviews of the phase-out is progressing. The review will inform the decision the phase-out can be brought forward by three years, i.e. could phase out coal as early as 2035. With regards to the plant Datteln 4, owned by Uniper, the Government will announce to allow the commissioning of the plant while, at the same time, less-efficient plants would be closed.

In Fortum's opinion, it would be essential to have the relevant legislation become effective as soon as possible as the firm the closure of hard coal plants are planned already for sun the first plants are to be closed in 2022.

Changed Swedish taxation resulted in new CHP to-energy taxes

In line with a broad political agreement made in January 2020 new taxes of up to EUR 1.5 billion, legislation on the taxation

Financial performance and position

incineration was approved by the Swedish Government on 4 December 2019. The tax level was set at SEK 75/tonne in 2020 and will increase to SEK 125/tonne by 2022.

As part of the tax change, the Government also passed a law to increase the tax for fossil-fuelled CHP plants, effective from August 2019. The Government has not specified the definition of a green tax, and additional taxes are likely to be presented during the spring of 2020.

Swedish energy agreement collapses

In December, the Conservatives and Christian Democrats left the Swedish broad energy agreement made in 2016. The main reason was the ongoing disagreement on nuclear power, with the opposition wanting to update the agreement with more nuclear friendly wording. The collapse of the agreement will not have any major financial implications for Fortum as key elements in the original agreement, mainly tax reductions for hydro and nuclear power, have already been implemented. However, it will most likely result in increasing regulatory uncertainty, especially for nuclear power.

Segment reviews

Business model

Fortum's business activities cover the production and sales of electricity and heat, waste-to-energy and circular economy solutions, as well as energy-sector expert services and various consumer solutions. Fortum is the third largest power generator and the largest electricity retailer in the Nordic countries. Globally, the company is one of the leading heat producers. As two thirds of Fortum's power production is hydro and nuclear, the company is also among the lowest-emitting generators in Europe.

With core operations in 10 countries, Fortum employs a diverse team of more than 8,000 energy-sector professionals. Fortum has some 130 hydro power plants, 26 combined heat and power (CHP), condensing, and nuclear power plants, as well as four wind power parks and four solar power plants. Globally, the company supplies heat in 24 cities and towns and has five waste-to-energy plants. Fortum's key markets are the Nordic and Baltic countries, Russia, Poland, and India.

Fortum's business divisions are Generation, City Solutions, Consumer Solutions and Russia. Other Operations includes corporate functions, R&D and technology development projects, as well as Fortum's shareholding in Uniper SE.

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.

Generation

Generation is responsible for Nordic power production. The comprises nuclear, hydro, wind, and thermal power production power portfolio optimisation, trading, industrial intelligence and nuclear services.

EUR million	2019	2018
Sales	2,141	1,811
- power sales	2,006	1,706
of which Nordic power sales ¹⁾	1,568	1,414
- other sales	135	105
Comparable EBITDA	939	771
Comparable operating profit	794	671
Operating profit	771	671
Share of profits of associates and joint ventures ²⁾	11	10
Comparable net assets (at period-end)	6,147	6,417
Comparable return on net assets, %	12.5	10.5
Capital expenditure and gross investments in shares	265	211
Number of employees	11,000	10,000

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

2) Power plants are often built jointly with other power producers, and own electricity at cost including interest cost and production taxes. The share is mainly IFRS adjustments (e.g. accounting for nuclear-related assets and depreciations on fair-value adjustments from historical acquisitions) (NN).

The Generation segment's total power generation in the Nordic region increased due to higher hydro and nuclear volumes. The hydro generation in the comparison period were low mainly due to the historical levels in the third quarter of 2018. The segment's overall performance and the load factor for nuclear generation were on a high level. The nuclear load factor for the Fortum fleet and part companies was at the highest level in Fortum's history with a CO₂-free power plant setting a new production record. The total power generation accounted for 100% (100%) of the total power generation.

Financial performance and position

The achieved power price in the Generation segment increased by EUR 2.2 per MWh, +6%, driven by higher hedge prices and successful optimisation of hydropower production, as well as higher first-quarter spot power prices.

Comparable operating profit increased by 26%, mainly due to higher hydro and nuclear volumes and the higher achieved power price.

Operating profit was affected by EUR -23 (108) million of items affecting comparability, mainly related to the fair value change of non-hedge-accounted derivatives. In the third quarter of 2018, Fortum recorded a capital gain of EUR 77 million from the sale of the 10% stake in Hafslund Produktion (**► Note 6**).

The share of profits of associated companies and joint ventures totalled EUR 10 (-72) million (**► Note 19**).

The annual outages of the Loviisa nuclear power plant were managed well. The maintenance outages at Unit 1 and Unit 2 lasted 20 days and 26 days, respectively. Both units underwent a refuelling outage, during which approximately one quarter of the fuel was replaced.

In June 2019, Posiva decided to start construction of the encapsulation plant for spent nuclear fuel and start equipping the Onkalo final depository with systems needed for the final disposal. The start of the final disposal will still require licences to operate. In September 2019, the final disposal of spent nuclear fuel took a step forward, as the foundation stone for Posiva's encapsulation plant was laid at Onkalo, in Eurajoki, Finland. Posiva will dispose of the high-level nuclear waste of its owners, Fortum Power and Heat Oy (share of ownership 40%) and Teollisuuden Voima (TVO) (share of ownership 60%).

In December 2019, 440 MW of the production capacity of Fortum's Meri-Pori power plant was selected for inclusion in the Finnish national peak-load reserve capacity system from 1 July 2020 to 30 June 2022.

Power generation by source

TWh	2019	2018	Change 19/18
Hydropower, Nordic	20.3	19.1	6%
Wind power, Nordic	0.4	0.3	33%
Nuclear power, Nordic	23.5	22.8	3%
Thermal power, Nordic	0.2	0.1	100%
Total	44.4	42.3	5%

Nordic sales volume

TWh	2019	2018	Change 19/18
Nordic sales volume	51.3	48.4	6%
of which Nordic Power sales volume ¹⁾	42.7	40.5	5%

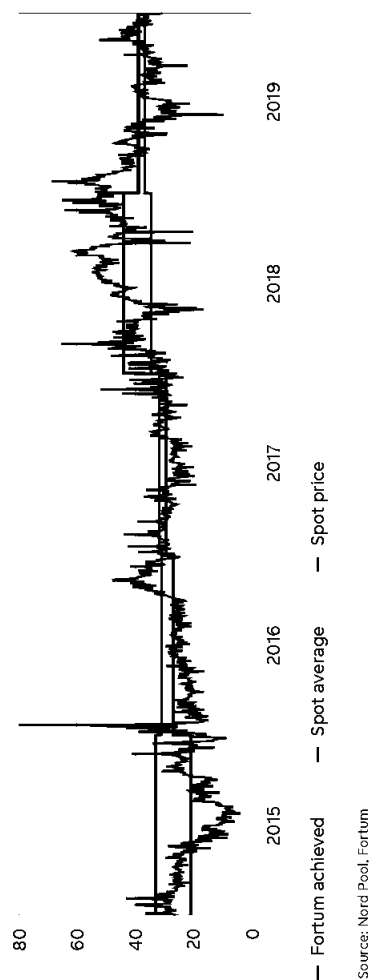
¹⁾ The Nordic power sales income and volume includes hydro, wind, and nuclear generation, excluding minorities. It does not include thermal generation, minorities, customer business or other purchases.

Sales price

EUR/MWh	2019	2018	Change 19/18
Generation's Nordic power price ¹⁾	36.8	34.6	6%

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

Nord Pool, power price, 2015–2019, EUR/MWh



Financial performance and position

City Solutions

City Solutions is responsible for developing sustainable solutions for urban areas into a growing business for Fortum. The segment comprises heating, cooling, waste-to-energy, biomass, and other circular economy solutions, as well as solar power production. The business operations are located in the Nordics, the Baltic countries, Poland, and India. The segment also includes Fortum's 50% holding in Stockholm Exergi, which is a joint venture and is accounted for using the equity method.

EUR million	2019	2018	Change 19/18
Sales	1,200	1,110	8%
- heat sales	615	604	2%
- power sales	153	134	14%
- waste treatment sales ¹⁾	250	211	18%
- other sales ²⁾	181	161	12%
Comparable EBITDA	309	310	0%
Comparable operating profit	121	135	-10%
Operating profit	127	130	-2%
Share of profits of associates and joint ventures	37	74	-50%
Comparable net assets (at period-end)	3,892	3,794	3%
Comparable return on net assets, %	4.7	5.5	-15%
Capital expenditure and gross investments in shares	322	242	33%
Number of employees	1,970	2,017	-2%

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 were at the same level as in the previous year. Power sales volumes increased, mainly due to higher power volumes in the new unit in Naantali, Finland.

Comparable operating profit decreased by 10%. The main reason for the decline was the profit of EUR 26 million recorded in the third quarter of 2018 from the sale of a 54% share of Fortum's Indian solar portfolio, partly offset by the positive impact of one-time effects in the fourth quarter of 2019 and the strong result improvement during the year in the Norwegian heating and cooling business. The full-year comparable operating profit from the recycling and waste business was close to the level of the

previous year. The cost synergies related to the Hafslund transaction materialised gradually during 2019, with targeted annual synergies of EUR 5–10 million expected to be achieved by the end of 2020.

Operating profit was affected by EUR 7 (-5) million of items affecting comparability, mainly related to capital gains and the fair value change of non-hedge-accounted derivatives (► Note 6).

The share of profits of associated companies and joint ventures totalled EUR 37 (74) million, the main part of which was related to the share of profit of Stockholm Exergi. EUR 24 (61) million and Turun Seudun Energiantuoto EUR 13 (13) million (► Note 19).

In September 2019, Fortum announced, in line with Fortum's strategy and the target to achieve carbon-neutral district heating in Espoo during the 2020's, the intention to discontinue the use of coal in the Espoo district heating network by the end of 2025.

In December 2019, the Swedish Government decided to implement new taxes on fossil fuels used for heat production in CHP plants, taking effect from August 2019. Consequently, during 2019, the board of Stockholm Exergi decided to decommission the last coal-fired unit in Stockholm, CHP6, starting from the end of the 2019–2020 heating season. Fortum's share of profits from Stockholm Exergi was impacted by EUR -22 million related to the impairment booked in Stockholm Exergi's fourth-quarter 2019 results.

On 20 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, and the cash was received at the completion of the divestment on 10 January 2020. Fortum will record a tax-exempt capital gain of approximately EUR 430 million in the City Solutions segment's first-quarter 2020 results.

Heat sales by country

TWh	2019	2018	Change 19/18
Finland	3.8	3.8	0%
Poland	3.3	3.5	-6%
Norway	1.7	1.6	6%
Other countries	2.0	1.9	5%
Total	10.8	10.8	0%

Power sales by country

TWh	2019
Finland	1.6
Poland	0.6
Other countries	1.0
Total	3.2

Consumer Solutions

Consumer Solutions is responsible for the electricity and gas businesses in the Nordics and Poland, including the customer invoicing, and debt collection businesses. Fortum is the largest retail business in the Nordics, with approximately 2.4 million across different brands in Finland, Sweden, Norway, and Poland. Fortum provides electricity as well as related value-added services.

EUR million	2019
Sales	1,833
- power sales	1,639
- other sales	200
Comparable EBITDA	141
Comparable operating profit	70
Operating profit	20
Comparable net assets (at period-end)	640
Capital expenditure and gross investments in shares	5
Number of employees	1,321

The electricity sales volumes increased by 1%, mainly due to sales to business customers, partly offset by the impact of weather in the first and fourth quarters and the reduced number of customers. The decrease in the number of customers was due to more selective customer acquisition and retention approach. During the year, the market sentiment in the Nordics continued to be with tough competition and high customer churn. However, integration and restructuring of Hafslund, Fortum has been its competitive position in the Nordics. Higher market prices in the first quarter, was the main driver for the 5% increase in

Financial performance and position

Comparable operating profit increased by 49%, mainly supported by higher sales margins. The higher sales margins are a result of the active development of the product and service portfolios following the Hafslund integration and subsequent development of the business. Part of the improvement was related to favourable market conditions in the first half of the year, temporarily increasing profitability in certain areas of the customer portfolio. The annual EUR 10 million cost synergies related to the Hafslund transaction, projected to materialise by the end of 2020, fully materialised already during 2019.

Operating profit was affected by EUR -59 (22) million of items affecting comparability, due to the fair value change of non-hedge-accounted derivatives (► **Note 6**).

In August 2019, the Polish Price Freeze Act became effective. This had a EUR -1 million impact on the operating profit.

Sales volumes

TWh	2019	2018	Change 19/18
Electricity ¹⁾	30.6	30.4	1%
Gas ²⁾	4.1	4.1	0%

¹⁾ 2018 figure corrected from previously published.

²⁾ Not including wholesale volumes.

Number of customers

Thousands ¹⁾	2019	2018	Change 19/18
Electricity	2,340	2,440	-4%
Gas	40	30	33%
Total	2,380	2,470	-4%

¹⁾ Rounded to the nearest 10,000.

Russia

The Russia segment comprises power and heat generation and sales in Russia. The segment also includes Fortum's over 29% holding in TGC-1, which is an associated company and is accounted for using the equity method.

EUR million	2019	2018	Change 19/18
Sales	1,071	1,069	0%
- power sales	924	872	6%
- heat sales	145	193	-25%
- other sales	2	4	-50%
Comparable EBITDA	469	417	12%
Comparable operating profit	316	271	17%
Operating profit	317	273	16%
Share of profits of associates and joint ventures	59	36	64%
Comparable net assets (at period-end)	3,205	2,789	15%
Comparable return on net assets, %	12.3	10.3	19%
Capital expenditure and gross investments in shares	133	117	14%
Number of employees	2,955	2,941	0%

In 2018, Fortum and STS Corporation established the Yustek joint venture for the heat distribution and supply in Chelyabinsk. The operations of the Yustek joint venture started in November 2018 and became fully operational in January 2019 by obtaining the single heat supplier status and related tariffs. Fortum has transferred the heat networks in Chelyabinsk and certain heat-only boilers with a capacity of 1,661 MW to the Yustek joint venture under a lease agreement. In 2018, the businesses transferred to the Yustek joint venture had a marginal annual effect on the comparable operating profit of the Russia segment.

Power generation volumes remained stable during the year. Heat production volumes decreased following the transfer of the heat distribution business in Chelyabinsk, including certain heat-only boilers,

Russian power generation and heat production

TWh	2019	2018	Change 19/18
Russian power generation	29.3	29.6	-1%
Russian heat production	17.3	20.4	-15%

to the Yustek joint venture. The warmer weather in both the Tyumen and Tyumen areas also had a negative impact.

Sales remained stable. The negative effect of the transition distribution business in Chelyabinsk to the Yustek joint venture heat volumes due to the warmer weather in Chelyabinsk and were offset by higher electricity prices, higher CSA payments 2, and the stronger Russian rouble.

Comparable operating profit increased by 17%, supported by electricity margins, lower bad-debt provisions, and higher CSA payments. The increase in CSA payments was related to receiving higher payments for the last years of the CSA period from the third quarter of 2018. The effect of the change in rouble exchange rate was EUR 4 million.

The share of profits of associated companies and joint ventures totalled EUR 59 (36) million, mainly related to the share of 1, EUR 54 (40) million, and the Yustek joint venture in Chelyabinsk, EUR 2 (1) million (► **Note 19**).

Key electricity, capacity and gas prices for Fortum

	2019	2018
Electricity spot price (market price), Urals hub, RUB/MWh	1,117	1,000
Average regulated gas price, Urals region, RUB/1,000 m ³	3,910	3,810
Average capacity price for CCS and other, tRUB/MW/month ¹⁾	15	15
Average capacity price for CSA, tRUB/MW/month ²⁾	1,099	1,000
Average capacity price, tRUB/MW/month	620	620
Achieved power price for Fortum in Russia, RUB/MWh	1,990	1,800
Achieved power price for Fortum in Russia, EUR/MWh ³⁾	27	27

¹⁾ Including capacity receiving payments under "forced mode status", regulated by bilateral agreements.

²⁾ Capacity prices paid for the capacity volumes, excluding own consumption.

³⁾ Translated using the average exchange rate.

Financial performance and position

Other Operations

Other Operations comprises corporate functions, technology and innovation, internal and external ventures, R&D, as well as Fortum's shareholding in Uniper, which is consolidated as an associated company from 30 June 2018 (► Note 3).

EUR million	2019	2018	Change 19/18
Sales ¹⁾	115	103	12%
Comparable EBITDA	-91	-78	-17%
Comparable operating profit	-119	-99	-20%
Operating profit	-127	-76	-67%
Share of profits of associates and joint ventures	638	0	-
Comparable net assets (at period-end)	4,356	4,023	8%
Capital expenditure and gross investments in shares	49	4,003	-99%

¹⁾ Mainly internal sales.

Uniper investment and purchase price allocation

In 2017, Fortum announced a public takeover offer to buy shares in Uniper. In June 2018, the offer was settled and Fortum's ownership was 47.12%. At the end of 2018, Fortum's ownership in Uniper was 49.99%. The total acquisition cost for the initial 49.99% stake in Uniper of EUR 3,968 million, including direct costs relating to the acquisition, is reported in 'Participations in associated companies and joint ventures'. The purchase price allocation was finalised during the second quarter of 2019. Uniper's balance sheet as of 30 June 2018 has been used as the starting point for the purchase price allocation; however, a fair value adjustment of EUR 613 million has been made for the acquired assets and liabilities. Fortum's share of the goodwill on Uniper's balance sheet, EUR 930 million, is derecognised, as it is not an identifiable asset according to IFRS. Potential future impairments of goodwill (existing as of 30 June 2018) booked by Uniper will therefore be reversed to

Fortum's share of profits of associates and joint ventures. The fair value adjustments of EUR 613 million relates mainly to political and regulatory risks that are reflected in the fair value of certain generation and production assets. The fair value adjustment will be reversed to 'Share of profits of associates and joint ventures' over a period of 20 years, EUR 31 million annually. If Uniper reports negative impacts relating to these generation and production assets, Fortum will assess the potential need to use this fair value adjustment to reverse the negative impacts (► Note 3).

In May 2019, Uniper hosted its AGM. The AGM approved the proposed dividend of EUR 0.90 per share, which, for Fortum, corresponds to received dividends of EUR 165 million.

On 8 October 2019, Fortum announced it had entered into agreements with Elliott and Knight Vinke to acquire an additional stake of at least 20.5% in Uniper for approximately EUR 2.3 billion, increasing Fortum's share in Uniper to more than 70.5% (subject to regulatory clearances) and the total investment in Uniper to approximately EUR 6.2 billion, representing an average acquisition price of EUR 23.97 per share (► Notes 3 and 19).

In 2018, in connection with the acquisition of the initial stake of 49.99% in Uniper, Fortum already received unconditional merger clearance from the European Commission with no further clearance required in the EU for any further acquisitions. On 30 December 2019, Fortum received regulatory clearance in the United States for the transaction. On 14 November 2019, the Russian Government Commission for Monitoring Foreign Investments approved, subject to certain conditions, the closing of the acquisition. The clarification of these conditions is still ongoing. Closing of the transactions is still subject to customary merger control clearance in Russia, and is expected by the end of the first quarter of 2020.

Fortum will fully consolidate Uniper as a subsidiary in its financial statements from closing of the transaction. The transaction will be

financed with existing cash resources and committed credit facilities that were syndicated to 13 banks in the fourth quarter of 2019. Fortum's key objective is to have a solid investment-grade credit rating of at least BBB, in order to preserve financial flexibility and good access to capital markets post-closing of the acquisition of an additional 20.5% in Uniper, and to strengthen its financial position over the term. This will provide the appropriate financial stability and support for the enlarged group. As Uniper publishes its interim reports for the first quarter, Fortum's share of Uniper's results is accounted for in the first quarter of one quarter, with potential adjustments. Fortum's 2019 Statements include Fortum's share of Uniper's October-December 2019 and January-September 2019 results (► Note 3). Uniper will publish its 2019 results on 10 March 2020 and its first-quarter results on 7 May 2020.

On 30 January 2020, Uniper announced an ambitious plan for its German hard-coal-fired power production. The plan includes shut down a total of 1,500 MW of hard-coal capacity by the end of 2020 and a further 1,400 MW by the end of 2025. The last remaining coal-fired power plant would be the 1,100-MW Patten 4 that must be decommissioned in 2038, at the latest, according to the draft law on coal phase-outs in Germany.

Financial results of Other Operations

Comparable operating profit declined, mainly as a result of increased spend in Business Technology, including internal and external investments. The investments in Valo Ventures and the related costs totalled EUR 638 (0) million (► Note 19).

The share of profits of associated companies and joint ventures totalled EUR 638 (0) million (► Note 19). Fortum's share of profits of associates and joint ventures totalled EUR 632 (-2) million, comprises Uniper's October-December 2019 and January-September 2019 results and the impact from reinvestments in the UK capacity market in the fourth quarter 2019, totalled EUR 632 (-2) million.

Financial performance and position

million, as well as the fair value adjustments reversal according to the purchase price allocation of Uniper for 2019, EUR 31 (-) million (► **Note 3**). EUR 392 (79) million of non-operating results from Uniper are included in the share of profits (► **Note 19**).

Capital expenditures, divestments and investments in shares

EUR million	2019	2018
Capital expenditure		
Intangible assets	75	53
Property, plant and equipment	638	532
Total	713	584
Gross investments in shares		
Subsidiaries	13	36
Associated companies and joint ventures	73	4,041
Other investments	20	11
Total	106	4,088

In 2019, capital expenditures and investments in shares totalled EUR 819 (4,672) million, of which the Solberg acquisition from the Solberg-Blaiken asset swap amounted to EUR 36 million. Capital expenditures, excluding the impact of the Solberg-Blaiken asset swap, were EUR 683 (584) million (► **Note 6**). In 2018, investments in shares were mainly attributable to the purchase of Uniper shares.

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:

Generation	Type	Electricity capacity MW	Heat capacity MW	Supply starts
Hydro plants in Sweden and Finland	Hydro	14		2019
Hydro plants in Sweden and Finland	Hydro	~15		2020
Sørfor, Norway ¹⁾	Wind	97		Q4/2019 - Q3/2020
Kalax, Finland	Wind	90		Q1/2021
City Solutions				
Zabrze, Poland	CHP	75	145	1 April 2019
Kivelahti, Finland	Bio HOB ²⁾		58	2020
Suomenoja, Finland	Heat pump		20	2021
Pavagada 2, India	Solar	250		5 August 2019
Rajasthan, India	Solar	250		Q4/2020
Russia				
Solar ³⁾	Solar	116		2021–2022

1) The Sørfor wind park is part of the transaction with Credit Suisse Energy Infrastructure Partners and an 80% share will be sold once it is commissioned.

2) Biofuel-fired heat-only boiler (HOB).

3) Separate investment decision needed.

Generation

Through its interest in TVO, Fortum is participating in the building of Olkiluoto 3 (OL3), a 1,600-MW nuclear power plant unit in Finland. OL3 is funded through external loans, share issues, and shareholder loans according to shareholder agreements between the owners and TVO. As a 25% shareholder in OL3, Fortum has committed to pro rata funding of the project. At the end of the reporting period, Fortum's outstanding loan receivables related to OL3 were EUR 170 million and the outstanding commitment was EUR 63 million. In March 2019, the Finnish Government

granted an operating licence for OL3. According to the timeline updated by plant supplier Areva-Siemens consortium in December 2019, the plant will start regular electricity generation in November 2020 (► **Note 37**).

In December 2019, Fortum and Credit Suisse Energy Infrastructure Partners (CSEIP) signed an agreement whereby funds advanced by Fortum will acquire an 80% stake in Fortum's Nordic wind portfolio and will continue to manage the construction and serve as long-term manager for the wind portfolio. The portfolio consists of the Nygårdsfjellet (32 MW, Norway), Anstadblåheia (50 MW, Norway), Solberg (76 MW, Sweden) wind parks as well as the Kalax (Finland) wind park, which is under construction. The parties agreed that funds advised by CSEIP will invest in an 80% stake in Sørfor (97 MW, Norway) wind park, once it is fully commissioned. Part of the capacities are already operational and the remainder is expected to be commissioned by the end of the third quarter. In addition, Fortum and CSEIP have agreed on further cooperation and exclusivity on a new project in Sävar, Sweden (154 MW) and the ambition to build it at a later stage. The total consideration for the divestment of the 80% stake on a debt- and cash-free basis to be approximately EUR 250 million, of which EUR 170 million is expected to be paid in the first quarter of 2020. The transaction is subject to regulatory approvals in the EU and is expected to close in the first quarter. The sale will have a minor positive effect on the generation first-quarter 2020 comparable operating profit.

In May 2019, Fortum announced the restructuring of Fortum Skellefteå Kraft's ownership in the two jointly owned Swedish power parks Solberg and Blaiken. Through an asset swap arrangement, Fortum became the sole owner of the 76-MW Solberg wind park and Kraft became the sole owner of the 248-MW Blaiken wind park. The acquisition related to the Solberg-Blaiken asset swap amounted to EUR 36 million. The asset swap arrangement was financed in part by a loan from Fortum. The asset swap had a minor impact on Fortum's cash flow and results.

Financial performance and position

In May 2019, Fortum made the investment decision to start construction of the 90-MW Kalax wind park in Närpes, Finland. The capital expenditure of the wind park is approximately EUR 90 million. The wind park is expected to be fully operational in the first quarter of 2021 at the latest. In October 2019, Fortum signed a 12-year power purchase agreement selling 70% of the power production of the Kalax wind park to Neste Corporation.

In January 2019, Fortum acquired all remaining C-shares of TVO, entitling it to 100% of the power production of the Meri-Pori coal condensing power plant, an increase from 67% previously. In December, 440 MW of the production capacity of Fortum's Meri-Pori power plant was selected for inclusion in the Finnish national peak-load reserve capacity system from 1 July 2020 to 30 June 2022.

City Solutions

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 will record a tax exempt capital gain of approximately EUR 430 million in the City Solutions segment's first-quarter 2020 results. In June 2019, Fortum announced it would review and consider strategic options for the Joensuu and Estonian district heating businesses. The strategic review of the Estonian district heating business is still ongoing. An extended assessment that includes the district heating and cooling businesses in all Baltic countries, in Poland, and in Järvenpää, Finland, is also being initiated.

In May 2019, Fortum announced its plan to construct a new 20-MW heat pump unit at the Suomenoja power plant in Espoo, Finland, to produce carbon-neutral district heating and to replace fossil fuel-based heat production. The unit is planned for commissioning in spring 2021 and will, together with the Kivenlahti bio-HOB, increase the share of Espoo's carbon-neutral district heating production in 2022 to over 50%. The final investment decision to build the unit was made in the fourth quarter of 2019.

In March 2019, Fortum announced that it had won the right from Solar Energy Corporation of India to build a 250-MW solar power plant

in Rajasthan, India. Commissioning of the plant is expected in the fourth quarter of 2020.

In June 2018, Fortum won the right to build a 250-MW solar power plant in the Pavagada solar park in Karnataka, India. The capital expenditure was approximately EUR 160 million. The plant was fully commissioned by 5 August 2019.

In June 2018, Fortum signed an agreement to sell a 54% share of its solar power company operating four solar power plants in India to UK Climate Investments (40%) and Elite Alfred Berg (14%). In April 2019, Elite Alfred Berg used its option to buy an additional 2% from Fortum.

In 2015, Fortum decided to build a new multi-fuel CHP plant in Zabrze, Poland. The new plant is primarily fuelled by refuse-derived fuel (RDF) and coal; however, it is also able to use a mixture of fuels. The new plant has a production capacity of 145 MW of heat and 75 MW of electricity and replaces the existing purely coal-fired units in Zabrze and Bytom. Commissioning was somewhat delayed from the original plan and commercial operations started on 1 April 2019.

Russia

In April 2019, the Ministry of Energy of the Russian Federation selected Fortum and Energy Sales Company Vostok's 50/50 joint venture as the guaranteed electricity retail supplier to 1.5 million customers in the Chelyabinsk region as of 1 July 2019. The decision was made based on an auctioning process held in March 2019. In the auction, the joint venture committed to a 100% reimbursement of the RUB 4.8 billion debt of Chelyabenergosbyt, corresponding to approximately EUR 66 million. The transaction required a limited equity investment from Fortum, as the joint venture financed the major part of the reimbursement with external debt. For Fortum, the net impact of the reimbursement was substantially lower due to the fact that Fortum was the single largest creditor, with EUR 11 million of the debt.

In June 2019, Fortum won the right to build 5.6 MW of solar capacity in Russian CSA auctions, in addition to the 110 MW won in June 2018.

The power plants are to be commissioned during the years 2021–2022.

In June 2018, the Fortum-Rusnano wind investment fund (50/50 joint venture) won the right to build 823 MW of wind capacity in a CSA

auction. The wind parks were to be commissioned during 2019–2023. During the fourth quarter of 2018, the wind investment made an investment decision on a 100-MW wind farm. Power and capacity supply is expected to start during the first half of 2020.

In June 2017, the Fortum-Rusnano wind investment fund won the right to build 1,000 MW of wind capacity in a CSA auction. Wind parks were to be commissioned during the years 2018–2023. During the fourth quarter of 2018, the wind investment made an investment decision on a 100-MW wind farm. Power and capacity supply is expected to start during the first half of 2020.

In June 2017, the Fortum-Rusnano wind investment fund won the right to build 1,000 MW of wind capacity in a CSA auction. Wind parks were to be commissioned during the years 2018–2023. During the fourth quarter of 2018, the wind investment made an investment decision on a 100-MW wind farm. Power and capacity supply is expected to start during the first half of 2020.

Research and development

Sustainability is at the core of Fortum's strategy and, along with current businesses, the company is carefully exploring and developing new sources of growth within renewable energy production.

Fortum's goal is to be at the forefront of energy technology and application development. To accelerate innovation and commercialisation of new offerings, Fortum is strengthening innovation and digitalisation efforts and building partnerships with leading global suppliers, technology and service companies and institutions. Fortum makes direct and indirect investments that have promising new innovations focused on connectivity, disruptive potential and accelerate the transition towards a circular economy. Fortum also invests in technologies that support the utilisation of the current asset base and that can create new products for Fortum. The company is continuously looking for clean energy solutions and for solutions that increase resource system efficiency.

On 19 December 2019, the Board of Directors decided to update the LTII plan for key employees and to update the 2020–2022 long-term incentive (LTI) plan for all other executives. The Board of Directors also decided to update the LTII programme and conditions of the LTI programme, valid for the plans as of the beginning of 2020, to include more precise malus and clawback clauses. The 2020–2022 LTI plan is part of Fortum's LTII programme and otherwise follows the same principles as the previous plan. The 2020–2022 LTI plan will continue to be applied in accordance with the previous plan.

Financial performance and position

participants, including the members of Fortum Executive Management. The Board of Directors also decided to establish a Restricted Share programme, as a supplement to the LTI programme, and reserve shares that potentially will be allocated under the 2020–2022 plan. The Restricted Share programme will follow 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 maximum number of shares that may be delivered as a reward is expected to be 660,000 shares for the 2020–2022 LTI plan and 60,000 shares for the 2020–2022 Restricted Share plan.

On 11 October 2019, the Board of Directors decided to establish an Employee Share Savings (ESS) programme and launch the savings period for the year 2020 under that programme. The shares for the ESS programme will be purchased from the market quarterly after Fortum's interim reports have been published. Dividends paid for the shares will be reinvested in additional shares to be purchased from the market after the dividend payment. The Board of Directors will annually decide on the potential launch of each individual savings period. The ESS programme 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 total amount of all savings for the 2020 savings period may not exceed EUR 6 million. More than 40% of the eligible employees took the opportunity to invest in the first ESS plan.

Events after the balance sheet date

On 6 February 2020, Fortum announced, in line with its strategy and continued review of the business portfolio, that it had decided to assess strategic options, including possible divestment, of its district heating and cooling businesses in Poland, Estonia, Lithuania, Latvia, and Järvenpää in Finland. Based on initial assessments, these district heating and cooling businesses have been identified as operations that could provide higher growth and value potential with an alternative ownership structure.

On 20 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, and the cash was received at the completion of the divestment on 10 January 2020. Fortum will record a tax-exempt capital gain of approximately EUR 430 million in the City Solutions segment's first-quarter 2020 results.

Key drivers and risks

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 associated companies and joint ventures. The principal associated companies and joint ventures are Uniper SE, TVO, OKG AB, Forsmarks Kraftgrupp AB, Kemijoki Oy, TGC-1, and Stockholm Exergi AB. For more information about the risk exposures, please see each respective company's annual report.

One of the key factors influencing Fortum's business performance is the Nordic electricity wholesale price. The key short-term drivers behind the electricity wholesale price development in the Nordic region are commodity prices, such as coal and gas, European electricity wholesale prices, prices for CO₂ emission allowances, the hydrological situation, temperatures, and the electricity import-export balance. In the longer term, global economic growth and changes to energy policy and regulations impact commodity and CO₂ emission allowance prices, which, in turn, impact the Nordic wholesale price of electricity. In addition, increased volatility in exchange rates could have both translation and transaction effects on Fortum's financials, especially through the Russian rouble and Swedish krona.

Operational risks resulting from failed internal processes or systems or from external events can have a negative impact on Fortum's results. In all regions, fuel prices and power plant availability also impact profitability.

Changes in the regulatory and fiscal environment create risks and opportunities for the energy and environmental management business. The main strategic risk is that the regulatory and market environment develops in a way that we have not been able to foresee and prepare for. In response to these uncertainties, Fortum analyses and assesses a number of future market and regulation scenarios, including the impact of these on different generation forms and technologies. As a result, Fortum's strategy includes broadening of the revenue base and diversification into new

businesses, technologies, and markets. The environmental business is based on the framework and opportunities created by environmental regulation. Being able to respond to customer needs by the tightening regulation is a key success factor.

For Fortum's Russian business, the key drivers are economic conditions, the rouble exchange rate, regulation of the heat business, further development of the electricity and capacity market, and profitability driver is the received capacity payments based on contracts and Competitive Capacity Selection (CCS) auction. A part of Fortum's generation capacity built after 2007 is entitled to payments for approximately 10 years after commissioning unit (approximately 15 years for renewable generation). The capacity payments vary, depending on the age, location, type of the plant, as well as on seasonality and availability. The payments are adjusted for, among other factors, the weighted average capital (WACC), the consumer price index (CPI), and re-exchange rate. Earnings from the electricity-only (spot) market decline over years after commissioning of a unit. In addition, thermal power plants are entitled to clearly higher CSA payments starting approximately after commissioning.

For further details on Fortum's risks and risk management, see the **► Risk management** section of the Operating and financial review and **► Note 4** Financial risk management.

Outlook

Hedging

At the end of 2019, approximately 75% of the generation estimated Nordic power sales volume was hedged at EUR for 2020, and approximately 40% at EUR 33 per MWh for 2021.

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

Financial performance and position

Capital expenditure and divestments

Fortum currently estimates its capital expenditure, including maintenance but excluding acquisitions, to be approximately EUR 700 million (previously expected to be less than EUR 600–650 million) in 2020. This includes approximately EUR 200 million of solar and wind investments, which are subject to the capital recycling business model. The maintenance capital expenditure in 2020 is estimated to be approximately EUR 300 million, well below the level of depreciation.

Nordic market

Electricity is expected to continue to gain a higher share of total energy consumption. Electricity demand in the Nordic countries during the next few years is expected to grow annually by approximately 0.5% on average. The growth rate will largely be determined by the macroeconomic development in Europe and especially in the Nordic countries and, in the longer term, also by the rate of electrification of industry, transportation, and heating.

During the fourth quarter of 2019 the gas price was at a low level, and also the front-year gas price decreased. Coal prices decreased, EUA prices developed sideways, and oil prices increased.

At the end of January 2020, the forward quotation for coal (ICE Rotterdam) for the remainder of 2020 was around USD 53 per tonne and the market price for EUAs for 2020 at the level of EUR 24 per tonne. The Nordic system electricity forward price on Nasdaq Commodities for the remainder of 2020 was around EUR 20 per MWh and for 2021 around EUR 27 per MWh. In Germany, the electricity forward price for the remainder of 2020 was around EUR 36 per MWh and for 2021 around EUR 41 per MWh. The Nordic water reservoirs were about 6 TWh above the long-term average and 13 TWh higher than one year earlier.

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 production portfolio, as well as currency fluctuations. Excluding the potential effects from changes in the power generation mix, a 1 EUR/MWh change in the Generation segment's Nordic

power sales achieved price will result in an approximately EUR 45 million change in Fortum's annual comparable operating profit. The achieved power price also includes the results of optimisation of Fortum's hydro and nuclear production, as well as operations in the physical and financial commodity markets.

In June 2018, the Swedish Parliament adopted new hydro legislation effective 1 January 2019. The new legislation states that the power industry shall create a joint hydropower fund to finance major parts of the required environmental actions. Consequently, a fund has been established with a total financial cap of SEK 10 billion to be paid over a 20-year period. All major utilities will contribute to the fund based on their share of Swedish hydropower production. Fortum's share of the fund's total financing is 23%. In addition to the new legislation, the Government issued an ordinance that came into force on 11 January 2019 to establish a national prioritisation plan for the revision of hydropower permits.

In June 2018, the Swedish Administrative Court of Appeal gave its decisions on Fortum Sverige AB's hydropower production-related real-estate tax assessments for the years 2009–2014. The court decisions were not in Fortum's favour. Fortum applied for the right to appeal from the Supreme Administrative Court, but did not receive permission to appeal. As the Administrative Court, the Administrative Court of Appeal in Stockholm, and the Supreme Administrative Court have handled only the arguments concerning state aid, the case concerning the other legal arguments has now been transferred back to the Administrative Court. The disputed amount, excluding interest for the time period, totals approximately SEK 510 million (approximately EUR 49 million). Moreover, Fortum's Swedish companies have appeals for 2011–2016 pending before the Administrative Court relating to the real-estate tax rate for their hydropower plants and referring to the same legal grounds. Fortum has paid the real-estate tax in accordance with the legislation. If the final court decision is unfavourable to Fortum, it will not impact Fortum's results. In December 2018, Fortum Sverige AB filed a complaint to the EU Commission regarding the Swedish real-estate tax for hydropower plants for 2017 and prior years. Fortum has asked the Commission to investigate whether the Swedish legislation regarding the real-estate tax for hydropower plants and the Swedish court decisions are in line with EU state aid rules.

According to the Swedish Government's budget proposals for the years, presented in September 2016, the Swedish hydropower tax will decrease from 2.8% to 0.5%. The tax is being reduced in January 2017 to 2.2%, in January 2018 to 1.6%, in January 2019 to 0.5%, and in January 2020 to 0.5%. In 2018, the tax was EUR 65 million. In addition to the decrease in the tax rate, the hydro-estate tax values, which are linked to electricity prices, were updated every six years in 2019. The real-estate tax values are updated every six years.

City Solutions

In City Solutions, growth in cash flow and earnings is mainly through investments in new plants and through acquisition of fuel cost, CO₂ prices, availability, taxation and regulatory conditions and efficiency of the plants, as well as state fees. Waste are the key drivers for profitability, but power prices also affect profitability. Fortum aims to create conditions with potential for sizeable profit contribution, especially within the waste and recycling and the bio-economy.

The development of Fortum Oslo Varme's business operations is estimated to require one-time integration-related costs and over the coming years. The cost synergies materialised in 2019, with targeted annual synergies of EUR 5–10 million achieved by the end of 2020.

In March 2019, Fortum announced that it has won the Solar Energy Corporation of India to build a 250-MW solar plant in Rajasthan, India. The solar park will be entitled to a fixed 2.48 INR/kWh for 25 years. Commissioning of the plant is the fourth quarter of 2020.

In June 2018, Fortum won the right to build a 250-MW solar plant in the Pavagada solar park in Karnataka, India. The expenditure was approximately EUR 160 million and the solar park is entitled to a fixed tariff of 2.85 INR/kWh for 25 years. The plant was commissioned by 5 August 2019.

Financial performance and position

Consumer Solutions

Competition in the Nordic electricity retail market is expected to remain challenging, with continued pressure on sales margins and customer churn. To counter the market challenges and to create a solid foundation for competitive operations, Consumer Solutions will continue its cost spend in developing new digital services for consumers.

Russia

In the Russia segment, capacity payments based on CSA contracts are a key driver for earnings growth, as capacity payments based on CSA contracts are considerably higher than for CCS auctions. Currently, Fortum's CSA capacity amounts to 2,368 MW. In February 2019, the System Administrator of the wholesale market published data from 2018 regarding the WACC and the CPI, which were used to calculate the CSA price for 2019. The CSA payments were revised downwards to reflect the lower bond rates and upwards due to the lower earnings from the electricity-only-market. The net impact of the adjustments was a minor increase of the CSA payments for 2019.

In addition, thermal power plants are entitled to clearly higher CSA payments starting approximately six years after commissioning. In 2020, no such increase in CSA payments is expected for the Fortum generation fleet.

Fortum's other Russian generation capacity, totalling 2,560 MW, is allowed to participate in the CCS auctions. The long-term CCS auctions for the years 2018–2021 were held in 2015, 2016, and 2017. All Fortum plants offered in the auctions were selected. The nominal CCS price was 111 tRUB/MW/month for 2018, 110 tRUB/MW/month for 2019, 115 tRUB/MW/month for 2020, and 134 tRUB/MW/month for 2021. The CCS auctions for 2022–2024 were held in August 2019. The nominal CCS price was 168 tRUB/MW/month for 2022, 171 tRUB/MW/month for 2023, and 182 tRUB/MW/month for 2024. The CCS auction for 2025 is expected to be held in February 2020. Fortum has also obtained so-called "forced mode status", i.e. it receives payments with a higher rate, for some of the units at the Argayash power plant. "Forced mode status" was obtained for 195 MW for the years 2018–2019, for 175 MW for the year 2020, and for 105 MW for the year 2021.

In June 2019, Fortum won the right to build 5.6 MW of solar capacity in a CSA auction, in addition to the 110 MW won in June 2018. The power plants will receive a guaranteed CSA price for a period of 15 years, corresponding to approximately RUB 14,000 per MWh and RUB 15,000 per MWh, respectively. The plants are to be commissioned during 2021–2022.

In June 2018, the Fortum-Rusnano wind investment fund (Fortum's ownership 50%) won the right to build 823 MW of wind capacity in a CSA auction. 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 December 2018, the wind investment fund made an investment decision on a 100-MW wind farm.

In June 2017, the Fortum-Rusnano wind investment fund won the right to build 1,000 MW of wind capacity in a CSA auction. 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 fourth quarters of 2017, 2018, and 2019, the wind investment fund made investment decisions on a 50-MW, 200-MW, and 250-MW wind farm, respectively.

The Russian Government increased the gas price by 1.4% in July 2019. Fortum estimates the gas price to be increased by 3% in July 2020.

Other Operations

For information on the financial impact of the Uniper shareholding, please see ► **Notes 3 and 19.**

Income taxation

In June 2018, the Swedish Government decided to lower the Swedish corporate tax in two steps, from 22.0% to 21.4%, effective January 2019, and to 20.6%, effective January 2021.

In Belgium, Fortum has received income tax assessments for the years 2008–2012. The tax authorities disagree with the tax treatment of Fortum EIF NV, which was later merged into Fortum Project Finance NV. Fortum finds the tax authorities' interpretation to be inconsistent with the local regulation and has appealed the decisions. The Court of First Instance

in Antwerp rejected Fortum's appeal for the years 2008–2012. In June 2014, Fortum found the decision unjustifiable and a Court of Appeal. In January 2016, Fortum received a favourable decision from the Court of Appeal in Antwerp in which the Court found that the tax authorities' interpretation and the tax assessments were nullified. The tax authorities disagreed with the decision on appeal to the Supreme Court (Hof van Cassatie) in March 2019, the Advocate General at the Supreme Court issued an opinion which was in favour of Fortum Project Finance. In May 2020, the Supreme Court, however, annulled the decision of the Court of Appeal and referred the case back to the Court of Appeal for full retrial. Fortum's appeals concerning 2009–2012 and 2013–2014 have been rejected. Fortum expects the remaining years to follow the final decision for 2008. Based on legal analysis and a supporting legal provision has been accounted for. The amount of additional provision is EUR 36 million for the year 2008, EUR 27 million for 2009, EUR 15 million for 2010, EUR 21 million for 2011, and EUR 15 million for 2012. The tax has already been paid.

In March 2018, the Swedish Supreme Administrative Court not to grant leave to appeal to Fortum with respect to the deduction cases relating to the years 2009–2014. The unannounced decision of the Administrative Court of Appeal from June 2018 remains in force. The additional tax and interest on total 50 million (EUR 122 million), was paid in 2016 and booked as second-quarter 2017 results. There are strong grounds to expect that these decisions of the Administrative Court of Appeal and the Administrative Court violate EU law and fundamental rights under the law. On these grounds, Fortum filed a summons for application to the District Court of Stockholm in which damages were claimed from the Swedish state in these cases. Fortum also filed a summons to initiate a mutual agreement procedure between Sweden and the Netherlands for the year 2012 (► **Note 37**).

Sustainability

Sustainability at Fortum

Fortum gives balanced consideration in its operations to climate and resource issues, as well as its impacts on personnel and society. Fortum conducted a sustainability materiality analysis in 2019 and the renewed sustainability priority areas are the following:

Personnel and society	Climate and resources
Business ethics and compliance	Climate change and GHG emissions
Customer rights and satisfaction	Energy efficiency
Human rights	Circular economy
Corporate governance	Emissions to air, land and water
Stakeholder engagement	Water use
	Security of supply

The Group-level sustainability targets are linked to the main sustainability priority areas and emphasise Fortum's role in society. They measure not only environmental and safety targets, but also Fortum's reputation, customer satisfaction, employee wellbeing, and the security of power and heat production. Targets are set annually and are based on continuous operational improvement. A new target in 2019 is the Contractor safety improvement index.

The achievement of the sustainability targets is monitored in monthly, quarterly and annual reporting. Fortum publishes a yearly Sustainability Report with additional information on the company's sustainability performance.

Group sustainability targets and performance 2019

Climate and resources	Target	2019	2018
Specific CO ₂ emissions from total energy production as a five-year average, g/kWh	≤200	186	186
Energy-efficiency improvement by 2020, baseline 2012, GWh/a	≥1,900	1,707	1,637
Major EHS incidents, no. ¹⁾	≤18	11	18
Energy availability of CHP plants, %	≥95.0	95.9	96.4
Personnel and society			
Reputation index, based on One Fortum Survey	≥73.0	72.3	72.5
Customer satisfaction index (CSI), based on One Fortum Survey	70–74	54–80	63–83
Lost Workday Injury Frequency (LWIF), own personnel and contractors	≤1.7	1.7	1.8
Severe occupational accidents, no.	0	1	4
Quality of investigation process of occupational accidents, major EHS incidents and near misses	Level 3.0	Level 3.0	Level 3.0
GAP index, implementation of EHS minimum requirements	Level 3.0	Level 3.0	Level 2.0
Contractor safety improvement index	Level 2.0	Level 2.0 ²⁾	-
Sickness-related absences, %	≤2.5	3.0	2.8

1) The figure does not include the exceedances caused by possible changes in permit limits in Russia.

2) The reporting of the Contractor safety improvement index started in the second quarter of 2019. The figure is still excluding City Solutions' solar power sites.

Fortum's goal is to achieve excellent financial performance in strategically selected core areas through strong competence and responsible ways of operating. Fortum measures financial performance with return on capital employed (long-term target: at least 10%) and capital structure (long-term target: comparable net debt/EBITDA around 2.5x).

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, maintenance investments, employee wages and salaries, and Fortum supports social development and wellbeing in its countries by e.g. paying taxes. The tax benefits Fortum provides society include not only corporate income taxes, but also taxes. In 2019, Fortum's taxes borne were EUR 397 (299) publishes its tax footprint annually.

Fortum is listed on the Nasdaq Helsinki exchange and is in the STOXX Global ESG Leaders, OMX Sustainability Finland Euronext Vigeo Eurozone 120, Euronext Vigeo Europe 120 Gender Equality indices. Fortum is also ranked in category Climate Change 2019 rating, and it has received A rating A ESG Ratings assessment in 2019, and a Prime Status (B-) ESG Corporate Rating. In June 2019, Fortum became a co-FTSE4Good Index Series.

Fortum's sustainability reporting covers all functions and operational control, including subsidiaries in all countries. The figures for power and heat generation, capacities and include also figures from Fortum's share in associated companies that sell their production to the others at joint ventures.

In the Financial Statements, Uniper is treated as an associated company and Stockholm Exergi as a joint venture. Both are consolidated with the equity method. Stockholm Exergi are not included in Fortum's sustainability targets and indicators descriptions of management practices. Stockholm Exergi's sustainability information are available in the companies' sustainability reports that can be found on the companies' own web pages.

Sustainability risks and opportunities

Fortum's operations are exposed to risks, which if material, adverse effects on the environment and on the safety and employees, contractors and neighbouring societies. Key

Sustainability

Fortum's main internal policies and instructions guiding sustainability

	Climate and resources		Personnel and society	
	Economic matters	Environmental matters	Social and employee matters	Human rights
Values	x	x	x	x
Code of Conduct	x	x	x	x
Supplier Code of Conduct	x	x	x	x
Disclosure Policy	x	x	x	x
Group Risk Policy	x	x	x	x
Sustainability Policy (including environmental, and health and safety policies)	x	x	x	x
Minimum Requirements for EHS Management	x	x	x	x
Biodiversity Manual	x	x	x	x
Group Manual for Sustainability Assessment	x	x	x	x
Human Resources Policy	x	x	x	x
Leadership Principles	x	x	x	x
Accounting Manual	x	x	x	x
Investment Manual	x	x	x	x
Tax Principles	x	x	x	x
Group Instructions for Anti-Bribery	x	x	x	x
Group Instructions for Safeguarding Assets	x	x	x	x
Group Instructions for Conflicts of Interest	x	x	x	x
Anti-Money-Laundering Manual	x	x	x	x
Compliance Guidelines for Competition Law	x	x	x	x
Security Guidelines	x	x	x	x
Policy for Sponsoring and Donations	x	x	x	x
Group Instructions for Compliance Management	x	x	x	x

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 the Group. These risks are presented in the Risk management section in the Operating and financial review. 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.

Sustainability governance and policies

Sustainability management at Fortum is strategy-driven and is based on the company's Values, the Code of Conduct, the Supplier Code of Conduct, the Sustainability Policy and other Group policies and their specifying instructions. 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 ultimately approved by Fortum's Board of Directors. Fortum's line management is responsible for the implementation of the Group's policies and instructions and for day-to-day sustainability management. Realisation of the safety targets is a part of Fortum's short-term incentive system.

Fortum is a participant of the UN Global Compact initiative and the UN Caring for Climate initiative. Fortum respects and supports 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). Additionally, Fortum recognises in its operations the UN Guiding Principles on Business and Human Rights, the OECD Guidelines for Multinational Enterprises and OECD Due Diligence Guidance for Responsible Business Conduct, the International Chamber of Commerce's anti-bribery and anti-corruption guidelines, and the Bettercoal initiative's Code on responsible coal mining.

Sustainability

Business ethics

The Fortum Code of Conduct and Fortum Supplier Code of Conduct define how we treat others, engage in business, safeguard corporate assets, and how Fortum expects suppliers and business partners to operate. Fortum's Board of Directors is responsible for the company's mission and values and has approved the Fortum Code of Conduct. Fortum has zero tolerance for corruption and fraud and does not award donations to political parties or political activities, religious organisations, authorities, municipalities or local administrations.

In addition to internal reporting channels, Fortum employees and partners can report suspicions of misconduct confidentially by using the "SpeakUp" channel on Fortum's internal and external web pages.

Suspected misconduct and measures related to ethical business practices and compliance with regulations are regularly reported to the Audit and Risk Committee.

No cases of corruption or bribery were confirmed in 2019.

Climate and resources

Fortum's Group-level targets for climate and resources are related to CO₂ emissions, energy efficiency, secure supply of electricity and heat for customers, and major Environmental, Health and Safety (EHS) incidents.

The Group Sustainability Policy together with the Minimum Requirements for EHS Management steer Fortum's environmental management. Investments, acquisitions and divestments are assessed based on the sustainability assessment criteria defined in the Group's Investment Manual. Operational-level activities follow the requirements set forth in the ISO 14001 environmental management standard, and 99.8% (99.9%) of Fortum's power and heat production worldwide has ISO 14001 certification.

Energy

Fortum's energy production is primarily based on carbon dioxide-free hydropower and nuclear power and on energy-efficient combined heat

and power (CHP). In line with the strategy, Fortum targets a multi-gigawatt wind and solar portfolio, which is subject to the capital recycling business model.

In 2019, Fortum's power generation was 76.3 (74.6) TWh and heat production 26.4 (29.8) TWh. 59% (57%) of the total power generation was CO₂-free. In Europe, 96% (96%) of the power generation was CO₂-free. Investments in CO₂-free production were EUR 401 (278) million. Investments in hydro, wind and solar power and bioenergy totalled EUR 344 (180) million.

Fortum has a Group-level target to achieve annual energy-efficiency improvements of ≥1,900 GWh by 2020 compared to 2012. Fortum achieved 1,707 GWh/a by the end of 2019.

The main fuels that Fortum uses to produce electricity and heat are natural gas, uranium, coal, waste-derived fuels and biomass fuels. The most significant fuel was natural gas, which accounted for 63% (63%) of the total fuel consumption. The next highest fuel use was uranium 20% (21%). Coal accounted for 10% (8%) of the total fuel use, and waste-derived fuels and biomass fuels 3% (4%) and 3% (3%), respectively. Russia accounted for 99% of the use of natural gas and 57% of the use of coal.

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 energy availability of the company's CHP plants in 2019 was, on average, 95.9% (96.4%), outperforming the target of ≥95.0%.

Climate

Fortum expects the concern about climate change to increase the demand for low-carbon production and energy-efficient solutions and products. Fortum aims to mitigate climate change by investing in CO₂-free energy production and by improving energy and resource efficiency. Fortum is also adapting its operations to climate change in production planning and in the assessment of growth projects and investments.

In 2019, Fortum's direct CO₂ emissions were 19.1 (20.1) of CO₂ emissions originated from Russian power plants. Direct emissions decreased primarily because of the decreased production. Of the total CO₂ emissions, 2.1 (2.5) Mt were emissions trading scheme (ETS). The estimate for Fortum's allowances in 2019 is 0.7 (0.8) Mt.

Fortum's total CO ₂ emissions (million tonnes, Mt)	2019
Total emissions	19.1
Emissions subject to ETS	2.1
Free emission allowances	0.7
Emissions in Russia	16.3

In 2019, Fortum's specific carbon dioxide emissions from production were 189 (192) g/kWh. The specific CO₂ emissions energy production as a five-year average were 186 (186) better than Fortum's Group target of ≤200 g/kWh.

Circular economy

Fortum's aim is to promote resource efficiency in its own transition towards a more extensive circular economy. Resource and maximising the added value of waste and biomass are the environmental approach, as defined in the Group Sustainability Manual.

In 2019, Fortum received about 1.6 (1.6) million tonnes of hazardous waste and about 600,000 (600,000) tonnes of waste from customers. As much of the waste stream as possible is recycled, recovered or reused. Waste that is unsuitable for reuse as a material is incinerated in Fortum's waste-to-energy plants in the Nordic countries, Lithuania and Poland.

Emissions

Fortum's activities cause various emissions to atmosphere, including CO₂ emissions, these include flue-gas emissions,

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Sustainability

In 2019, the percentage of sickness-related absences was 3.0 (2.8), which did not meet the target level of ≤2.5. Sickness absences increased especially in Russia and Norway.

Society

Customer satisfaction

Fortum's targets for reputation and customer satisfaction are monitored annually. In the One Fortum Survey in 2019, the combined company reputation index among key stakeholder groups was 72.3 (72.5) points, on a scale of 0–100, which did not meet the target of ≥73.0 points.

The Group-level target (70–74 points, on a scale of 0–100) for customer satisfaction was achieved among all business areas with two exceptions: retail electricity sales and EV charging solutions for both consumers and businesses.

Supply chain

Fortum's total purchasing volume in 2019 was EUR 3.8 (3.7) billion, and Fortum had about 14,000 suppliers of goods and services. Fortum expects its business partners to act responsibly and to comply with the Fortum Code of Conduct and the Fortum Supplier Code of Conduct. Fortum assesses the performance of its business partners with supplier qualification and supplier audits. In 2019, Fortum conducted a total of 14 (13) supplier audits in Poland, Russia, India, China, Indonesia and Vietnam. In addition, one coal supplier in Kazakhstan was assessed against the Bettercoal Code by a third party.

Human rights

Fortum's goal is to operate in accordance with the UN Guiding Principles on Business and Human Rights and to apply these principles in company's own operations as well as in country and partner risk assessments and supplier audits.

A human rights assessment is carried out 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 2019, 6 (7) of these assessments were made.

In 2019, there were no grievances related to human rights filed through Fortum's formal grievance channels, nor were there any grievances carried over from the previous year.

Corporate citizenship

Fortum's operations impact the local communities where the power plants are located, and the company engages in many kinds of collaboration with local stakeholders. According to Fortum's Policy for Sponsoring and Donations, the company's sponsorships focus on the wellbeing of children and youth, renewable energy projects, R&D and innovations supporting Fortum's strategy. In addition, Fortum sponsors projects related to recycling, recovery and reuse. Fortum also engages in collaboration with universities through different research and development projects. In 2019, Fortum's support for activities promoting the common good totalled about EUR 2.7 (3.8) million. In addition, the grants awarded by Fortum Foundation, not part of Fortum Group, totalled about EUR 660,000 (680,000).

Risk management

Risk management framework and objectives

Fortum's Risk Management framework is described in the Group Risk Policy and supporting documents. The Group Risk Policy includes an overview of Fortum's risk management systems consisting of the general principles of risk management and the main features of the risk management process. The objectives of the risk management systems are to;

- support the development of the Group strategy,
- support strategy execution,
- support the achievement of agreed targets within acceptable risk levels so that the Group's ability to meet financial commitments is not compromised,
- ensure the understanding of material risks and uncertainties affecting Fortum, and
- support the prevention of accidents that can have a severe effect on the health and safety of employees or third parties, and from incidents that can have a material impact on Fortum's assets, reputation or the environment.

Risk management organisation

The main principle is that risks are managed at source meaning that each Division and Corporate Function Head is responsible for managing risks that arise within their business operations. However, certain risks, such as currency, interest rate, liquidity and refinancing risks, are managed centrally.

The 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 material risks and uncertainties. Corporate Risk Management, a function headed by the Chief Risk Officer (CRO) reporting to the CFO, provides instructions and tools which support the Group in running an efficient risk management process. Corporate Risk Management is responsible for assessing and reporting

Corporate Risk Policy Structure

Approving body

Board of Directors

President and CEO

Division / Corporate Function Head

Reviewing Body

Audit and Risk Committee

CFO

CRO

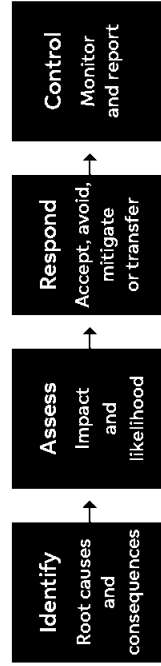
Group Risk Instructions

Division / Corporate Function Risk manuals and Guidelines

maturity of risk management in Divisions and Corporate Functions and for providing independent monitoring and reporting of 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.

Fortum's risk management process is designed to support the achievement of agreed targets by ensuring that risk management activities are consistent with the general principles of risk management and that risks are monitored and followed-up in a prudent manner. The main risk management process consists of event identification, risk response and risk control. Identification is regularly carried out according to a structured process and risks are assessed in terms of impact and likelihood according to a Group-common methodology. Risk is assessed not only in monetary terms, but also in terms of safety, environment and reputation. All risks have a risk owner responsible for implementing actions to respond to the risk. Risk can be to accept, avoid, mitigate or transfer the risk. Risk control which include monitoring and reporting of risks, are designed to ensure compliance with approved instructions, manuals and guidelines and ensure that risk exposures remain within approved limits and

Risk management process



Risk management

Fortum's Board of Directors approves the Group Risk Policy and the CEO approves Group Risk Instructions covering commodity market risks, counterparty credit risks, and operational risks. Fortum also has other Group policies and instructions covering e.g. compliance, privacy, sustainability, treasury and cyber and information security risks which are aligned with the Group Risk Policy. There are risk mandates or limits defined for commodity market risks, counterparty credit risks and financial risks. Divisions and Corporate Functions issues risk manuals and guidelines as needed which detail how the Group Risk Instructions are implemented.

Risk factors

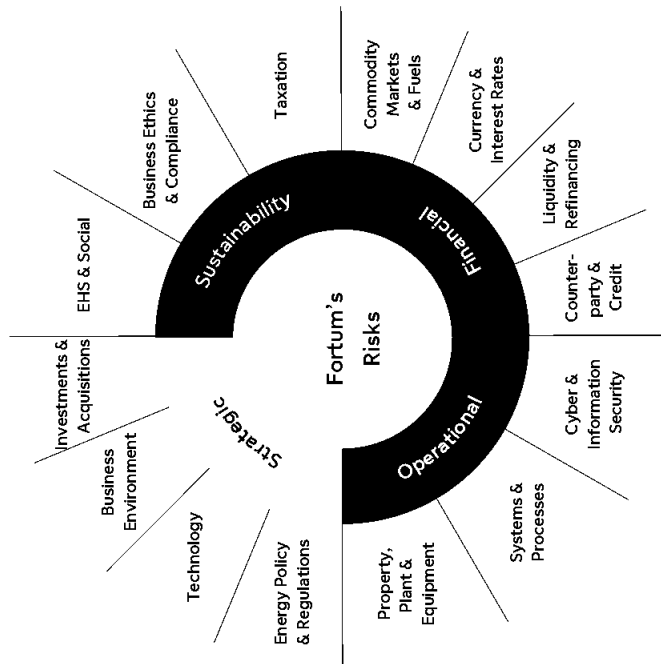
Strategic risks

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 assessed and analysed. It is part of Fortum's strategy to, in the long-term, build options to broaden the base of revenues into new businesses, technologies and markets.

Risks which could hinder Fortum in executing its strategy are continuously assessed, monitored and reported as part of the strategy work. These risks include an inability to identify and carry out successful investments and acquisitions with the related project and integration risks.

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. As operations expand to new geographical regions, markets and businesses, the operating environment becomes more complex and this risk may increase. The current trend of increasingly nationalistic policies and protectionism may lead to more trade restrictions which in



turn could affect demand for Fortum's products and services. Fortum continuously monitors how the business environment develops in operating countries in order to be able to react quickly to changes in consumer behaviour.

Investment and acquisition risks

Fortum's strategy includes growth of operations in new businesses, technologies and geographies. This includes an increasing number of partly-owned companies and joint ventures where Fortum necessarily have full operational control. Fortum is exposed to risks indirectly through these companies and joint ventures are monitored and followed-up through Fortum's representatives. The principal associated companies and joint ventures are Kraftgrupp AB, Kemijoki Oy, OKG AB, Stockholm Exergi AB, Teollisuuden Voima Oyj and Uniper SE. The most significant risk for Fortum is due to its size, complexity and the pace of the changes in the energy market. For more information about the risk exposures and the measures to manage these risks, please see each respective company's annual report and disclosures.

Fortum's recent and current investments, as well as any investment or acquisition, including possible future partnership risk such as:

- increased overall operating complexity and requirement management, personnel and other resources;
- inability to understand the value drivers and their uncertainty in investments or potential acquisition targets;
- inability to manage complex integrations of companies' cultures and processes, including possibly uncooperative companies;
- inability to understand and manage new markets and jurisdictions;
- inability to understand and manage legal frameworks in different cultural, ethical and legal frameworks;
- inability to understand and manage sustainability risks and issues related to new businesses, markets and technologies.

Risk management

These risks 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, and there is also a country entry process which includes a country risk assessment before decisions to enter into a new market can be made.

Energy policy and regulation risks

The energy business is 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 anticipate, identify and manage those changes efficiently.

Fortum maintains an active dialogue with the bodies involved in the development of laws and regulations in order to manage these risks and proactively contribute to the development of the energy policy and regulatory framework.

Nordic/EU

Fortum's strategy in the power and heat sectors is based on a market-driven development, which would mean more interconnections and competition supported by increasing policy harmonization. Even if the Nordic power market has a long tradition of harmonization, national policies vary considerably when it comes to e.g. taxation, permitting, subsidies and market model meaning that Fortum has to manage risks related to both EU regulation and national regulation. Potential risks related to the future energy, circular economy and climate policy framework include;

- increasing policy costs and uncoordinated national mechanisms hindering an integrated, flexible and dynamic power market,
- overlapping national carbon policies diluting the EU ETS and carbon price despite the ETS reform,
- increasing cost burden for hydro power in Finland, driven by fish obligations, grid costs and real estate taxation,
- unbalanced implementation of the EU Water Framework directive in Sweden leading to lower production volumes,
- stricter sustainability requirements for forest biomass leading to reduced availability and increasing costs,
- implementation of national waste incineration taxes or restrictive measures affecting the operational environment or the competitiveness of the waste-to-energy business as part of overall circular economy promotion,
- acceptability issues related to different fuels or technologies (bio, waste, nuclear, wind, CCS etc.) potentially limiting or slowing down new investments either in power production or transmission grids,
- substantial retroactive changes and/or discontinuation of prevailing CHP support schemes in the Baltic countries and Poland or deteriorating competitiveness of CHP due to fuel tax increases,
- undue heavy-touch price-regulation of district heating in order to enhance the affordability and other social aspects of protecting the end-customers.

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. The current economic sanctions may be enlarged and/or extended having direct and indirect impacts on the business environment. The main energy policy-related risks in Russia are linked to the development of the whole energy

sector, part of which, is liberalised, like the wholesale electricity market while other parts, like gas, heat, and retail electricity, are not. These sectors are inherently exposed to a risk of regulatory changes that could affect Fortum's operations.

Technology risks

Fortum's strategy includes developing or acquiring new technologies as well as digitalising the business. Fortum's R&D and innovation focus on the development of the energy system towards a low-carbon economy and developing circular economy solutions. Fortum's economy, other renewable energy concepts and innovative technologies for its customers. New technologies expose Fortum to risks of intellectual property rights, data privacy and viability of technologies. Technology risks are managed by assessing and monitoring the development of new technology throughout its development cycle, and developing and investing in a diversified portfolio of projects of different technologies.

Sustainability risks

Corporate social responsibility and sustainable development are parts of Fortum's strategy. Fortum gives balanced consideration to economic, environmental and social responsibility. Changes in regulations and the business environment can pose a risk to Fortum and managed effectively and the same applies to changes in stakeholder expectations. In order to identify and manage these risks, Fortum endorses a number of international voluntary standards, such as the ISO 26000 guidelines in the area of sustainability, conducts stakeholder dialogues annually in order to identify the most material issues for Fortum and has defined internal policies and instructions on how to manage sustainability risks. Divisions and Corporate Functions identify and assess sustainability risks related to their operations and define actions. Corporate Sustainability executes oversight as part of Group's risk management process.

Risk management

Environmental, health and safety and social risks

Operating power and heat generation plants 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 Fortum's supply chain are evaluated through supplier qualification as well as internal and external audits and risk assessments including partner and country risk assessments. Corrective and preventive actions are implemented when necessary. EHS and social risks related to investments are evaluated in accordance with Fortum's Investment Manual. Environmental risks and liabilities in relation to past actions have been assessed and, where necessary, provisions have been made for future remedial costs.

Tax risk

Fortum operates in a number of countries and is therefore exposed to changes in and conflicts between local and international taxation. Political pressure has resulted in numerous new laws and rules with unclear wording and wide scope creating differences in how tax authorities interpret new rules. This has led to a tax environment with increased tax burden and poor clarity of tax consequences. Clarity and predictability around how our operations are taxed has decreased due to the changing regulation. In addition, new regulation creates material volume of new complex compliance work.

Fortum aims to identify simple and cost-efficient solutions to manage taxes in a sustainable manner. Fortum's tax principle is that

tax is a consequence of business and that compliance with tax rules and legislation and transparency result in a correct tax contribution. This principle leaves no room for artificial or other aggressive solutions. Fortum is continuously following the development of tax related issues and their impact on the Group and maintains an active dialogue with tax authorities in unclear cases. Tax-related issues are communicated openly both internally and externally and Fortum's tax footprint is published annually.

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's ability to operate in certain countries may be affected by future changes to local laws and regulations.

Fortum's Code of Conduct enhances the understanding of the importance of business ethics for all Fortum employees, contractors and partners. Prevention of corruption is one of the Code of Conduct's focus areas. Fortum has procedures for anti-corruption including prevention, oversight, reporting and enforcement based on the requirements prescribed in international legislation. Fortum's supplier code of conduct sets sustainability requirements for suppliers of goods and services. The Supplier Code of Conduct is based on the principles of the United Nations Global Compact and is divided into four sections: business principles including anti-corruption, human rights, labour standards and environment.

Fortum systematically identifies, assesses, mitigates and reports compliance risks including risks related to business ethics. Internal controls are implemented to prevent the possibilities of unauthorised activities or non-compliance with Group policies and instructions. Fortum's rolling compliance programme includes a risk-based prioritisation of the development and implementation of mitigating actions. Training and communication play a key role in increasing the awareness in the organisation.

Financial risks

Commodity market and fuel risks

Fortum's business is exposed to fluctuations in prices and of commodities used in the production and sales of energy. The main exposure is toward electricity prices and volume of emissions and prices and availability of fuels. Fortum has exposure to commodity market risks in accordance with a Hedging Guidelines and Mandates. For further information on ratios, exposures, sensitivities and outstanding derivatives see ► **Note 4** Financial risk management.

Electricity price and volume risks

In competitive electricity markets, such as the Nordpool exchange in the Nordic region, the wholesale price of electricity is determined as the balance between supply and demand. Factors affecting electricity prices and volumes on the market include hydrological conditions, temperature, wind allowance prices, fuel prices, economic development, transmission capacity and the import/export situation.

Electricity price risks are mainly hedged by entering into derivatives contracts on the Nasdaq Commodities exchange to implement hedging strategies is dependent on a well-liquid derivatives market. There is a risk of decreasing liquidity in Nasdaq Commodities exchange, and alternatives including derivative contracts and products traded on other exchanges to mitigate this risk. Hedging strategies are continuously evaluated and other relevant parameters change. In 2019, the model for evaluating hedging strategies and reporting risk were developed to cover more parameters and improve the use of especially data. Hedging of the Generation segment's power sales is in EUR on a Nordic level covering both Finland and Sweden. currency component of these hedges in the Swedish entity.

Risk management

not hedged. In Russia, electricity and capacity prices are the main source of market risk. Electricity price exposure is partly mitigated through regulated fixed-price bilateral agreements, but the majority of electricity sales is exposed to spot price 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 2024 via capacity supply auctions which have already been conducted.

Emission and environmental value risks

The European Union has an emissions trading scheme to reduce the amount of CO₂ emissions. In addition to the emissions trading scheme, 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 CO₂ 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 CO₂ derivatives and environmental certificates.

Fuel price 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 bio-fuels, 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.

In the Nordic market, exposure to fuel prices is limited due to Fortum's flexible generation capacity which allows for switching between different fuels according to prevailing market conditions. The remaining 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.

Liquidity and refinancing risks

Fortum's business is capital intensive and there is a constant need to ensure efficient financing. 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's access to and cost of financing is dependent on having an investment-grade rating. The current investment in Uniper has increased Fortum's leverage, and with the announced increase in ownership, there is an increased risk of downgrade in the credit rating which could negatively impact Fortum's access to cost-efficient financing. After the closing of transaction, through which an additional minimum of 20.5% share in Uniper will be acquired, Fortum's key objective is to maintain an investment-grade rating and to strengthening its financial profile longer term. Fortum maintains an active dialogue with credit rating agencies to ensure understanding of Fortum's strategy and planned measures which target to achieve a financial and business profile that supports a solid investment grade rating.

Currency and interest rate risks

Fortum's debt portfolio consists of interest-bearing liabilities in various currencies. Fortum manages the duration of the debt portfolio on a fixed- and floating-rate basis with different profiles. Fortum manages the use of different types of financing contracts and interest rate contracts such as interest rate swaps.

Fortum's currency exposures are divided into transactional (foreign exchange exposures relating to contracted cash flows) and balance sheet items where changes in exchange rates will impact on earnings and cash flows) and translation exposures (exchange exposure that arises when profits and balance sheet items are consolidated at the Group level). The main risk is that material transaction exposures should be hedged when exposures are not hedged, or are hedged selectively. An example is the Generation segment's hedging of power sales in Sweden. The currency component is currently not hedged. The main risk is exposure toward the EUR/RUB, EUR/SEK and EUR/NOK continuously. Changes in these currency rates affect Fortum's equity when translating results and net assets to euro.

Counterparty and credit risks

Fortum is exposed to counterparty risk whenever there is an arrangement with an external counterparty including customers, suppliers, partners, banks, clearing houses and trading counterparties. Credit risk exposures relating to financial derivative instruments are often volatile. The majority of commodity derivatives are cleared through clearing houses such as Nasdaq Clearing AB through clearing banks. During 2019, Nasdaq Clearing AB implemented its risk management enhancement program to reduce the risk of member defaults. In addition, the use of futures contracts instead of forward contracts is decreasing credit exposure toward clearing houses. Derivatives contracts entered into directly with external counterparties and such as limited to high-credit-quality counterparties acting on the commodity markets.

Risk management

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 to Fortum's key relationship banks, which are highly creditworthy institutions, but also includes 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.

Credit risk exposures relating to customers is spread across a wide range of industrial counterparties, small businesses and private individuals over a range of geographic regions. The majority of exposure is to the Nordic market, Poland and Russia. The risk of non-payment in the electricity and heat sales business in Russia is higher than in the Nordic market. In order to manage counterparty credit risk, Fortum has routines and processes to identify, assess and control exposure. Credit checks are performed before entering into commercial obligations and exposure limits are set for larger individual counterparties. 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 payment 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.

Systems and Process Risks

System and 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

Property, plant and equipment risks are primarily managed through monitoring and maintenance planning. In addition, Fortum's industrial assets are covered by a Group Master Policy covering property damage and business interruption risks which mitigates the impact of internal and external events should they occur.

Combined heat and power (CHP) and recycling and waste

Operational events at CHP and recycling and waste facilities, or in the storage and transportation of fuels, waste and materials can lead to physical damages, business interruption, and environmental, health and safety and social impacts. Leakage and contamination of the surrounding environment could lead to clean-up costs and third-party liabilities. An explosion or fire at a facility could cause damages to the plant or third-parties and lead to possible business interruption. These risks are mitigated by condition monitoring, preventive maintenance and other operational improvements as well as competence development of personnel operating the plants. Furthermore, requirements for incoming waste are clearly specified and samples are tested for selected waste deliveries.

Hydro power

Operational events at hydro power generation facilities can lead to physical damages, business interruptions, and third-party liabilities. 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.

Nuclear power

Fortum owns the Loviisa nuclear power plant, and has minority interests in two Finnish and two Swedish nuclear power companies. In power plant, the assessment and improvement of nuclear continuous process performed under the supervision of the Nuclear Safety Authority of Finland (STUK).

Third-party liability relating to nuclear accidents is strictly operator's responsibility and must be covered by insurance. Insurance of the Loviisa power plant, Fortum has a statutory insurance policy of 600M SDR (Special Drawing Right) and of insurance policies are in place for the operators where a minority interest.

Wind and Solar

Fortum is involved in the construction, development and operation of several wind and solar power production projects in the Russia and in India. Operational incidents during both construction and operational phases can lead to accidents, delays in commissioning and business interruption. These risks are mitigated as part of planning and through maintenance and continuous training involved in constructing and operating the plants.

Cyber and information security risks

Fortum's business operations and customer related services are dependent on well-functioning IT and information management processes. Due to the nature of the business, large amounts of data are processed and used for decision-making, setting customer internal and external communication and reporting. Security and availability of the systems are essential for Fortum. Cyber risks, including risks related to information, operation technology and digitalisation, are managed centrally by Corporate Security and collaboration with Divisions and Corporate Functions, especially Business Technology function. The Group's cybersecurity model, instructions and procedures set requirements for mitigating cyber security risks.

Risk management

The Business Technology function, other support functions and outsourcing partners are responsible for identifying and mitigating operational IT/OT security related risks as well as managing IT/OT security incidents. 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. Successfully managing climate-related risks and opportunities is a key element in delivering on the strategy.

Management of climate-related risks is integrated into Fortum's risk management framework and follows the same governance and processes as Fortum's other material risk and uncertainties. Climate-related risks are identified and assessed by the various business areas through an annual bottom-up process. Risk owners are assigned for managing the risks and they are regularly reported and followed-up in business area and division management teams. In 2019, Fortum emphasized climate-related risks as part of the process including a specific top-down review of climate-related risks by Group experts. The key climate-related risks are reported to FEM and the ARC as part of the annual review of material risks and uncertainties for the Group.

Climate-related risks can be divided into two categories; transition risks and physical risks. The identified physical risks are generally found in the operational risk category whereas transition risks are generally longer-term and part of the strategic risk category

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 risks related to changes in energy and climate policy and regulation, technology development and the business environment in which Fortum operates. Additionally, Fortum's brand and reputation can be negatively impacted by changes in stakeholder perception about Fortum's ability to deliver on its strategy.

One of the key risks is that the transition develops faster and with policy tools or technologies that have not been anticipated or planned for. The key risks related to climate policy and regulation include the revision of the EU targets for greenhouse gas reduction, renewable energy and energy efficiency leading to overlapping or inefficient mechanisms, tighter restrictions on incineration and burning of various fuels and a more regulated electricity market due to the increase in intermittent renewable production. Fortum favours a market-based approach to decarbonisation with CO₂ pricing as a key tool and clear criteria for capacity remuneration. Fortum supports the use of waste and sustainable biomass as part of the EU circular economy. Additionally, increased flexibility in demand 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 development and invests into a broad portfolio of innovative technologies. Fortum also monitors the price development of renewables and evaluates both divestment and investment opportunities to optimise the portfolio with the aim of lower carbon emissions.

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

Stakeholder views on sustainability may lead to stricter demands by shareholders. Stricter definitions of sustainable finance set by the EU may also make it more difficult to access financing. Additionally, there is a risk of increasing activity by NGOs which could affect key stakeholder perception. Fortum's investment in Uniper is currently increasing the exposure to these risks. In order to mitigate these risks, Fortum focuses on the sustainability impacts of strategy and business

decisions, communicating transparently about strategy in line with the views of key stakeholders, ensuring a broad base of investors and financing including a diversified bond portfolio.

Physical risks

Fortum's operations and assets are exposed to external events such as frequency and magnitude of which may increase as a result of climate change. Changes in precipitation, inflows and temperature change. Hydropower production as well as bioenergy supply and distribution are vulnerable to intense storms with, e.g. flash floods could increase the risk of breaches as well as causing local damages and production losses. Warmer weather may also lead to a need for new cooling water sources and extreme warm and dry summer periods could lead to forest fires which potentially damage assets or lead to a need for restricting power supply. Fortum adapts its operations to the changing climate and takes it into consideration in production and investment planning and in evaluating growth and investment project change scenarios are, e.g. taken into account in the long-term investment program so that extreme flooding situations can be avoided.

Fortum share and shareholders

Fortum Corporation's shares have been listed on Nasdaq Helsinki since 18 December 1998. The trading code is FORTUM (until 25 January 2017: FUM1V). 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	
Number of	Share

EUR	2019	2018	2017	EUR million	shares	capital
Earnings per share	1.67	0.95	0.98	Registered shares at 1 January	888,294,465	3,046
Cash flow per share	2.27	0.91	1.12	Cancellation of treasury shares	-	72.5
Equity per share	14.61	13.33	14.69	Registered shares at 31 December	888,294,465	3,046
Dividend per share	1.10 ¹⁾	1.10	1.10			
Payout ratio, %	65.9 ¹⁾	115.8	112.2			
Dividend yield, %	5.0 ¹⁾	5.8	6.7			

Fortum Corporation has one class of shares. By the end of 2019, a total of 888,294,465 shares (20 888,294,465) had been issued. Each share entitles the holder to one vote at the Annual General Meeting.

1) Board of Directors' proposal for the planned Annual General Meeting 17 March 2020.

shareholders of Länsivoima Oyj that did not produce their share certificates and did not request the

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 22% during the last five years, while Dow Jones European Utility Index has increased 14%. During the same period Nasdaq Helsinki Cap index has increased 37%. During 2019 Fortum's share price appreciated approximately 15%, while Dow Jones European Utility index increased 26% and Nasdaq Helsinki Cap index increased 15%.

In 2019, a total of 372.3 million (2018: 474.7) Fortum Corporation shares, totalling EUR 7,467 million, were traded on Nasdaq Helsinki. The highest quotation of Fortum Corporation shares during 2019 was EUR 22.50, the lowest EUR 18.09, and the volume-weighted average EUR 20.14. The closing quotation on the last trading day of the year 2019 was EUR 22.00 (2018: 19.10). Fortum's market capitalisation, calculated using the closing quotation of the last trading day of the year, was EUR 19,542 million (2018: 16,966).

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. During 2019, approximately 73% (2018: 68%) of Fortum's shares were traded on markets other than the Nasdaq Helsinki Ltd.

Fortum Corporation's shares have been listed on Nasdaq Helsinki since 18 December 1998. The trading code

Share capital

Share key figures			
EUR	2019	2018	2017
Earnings per share	1.67	0.95	0.98
Cash flow per share	2.27	0.91	1.12
EUR million			
Registered shares at 1 January	888,294,465	888,294,465	888,367,046
Cancellation of treasury shares	-	-	72,5
Registered shares at 31 December	888,294,465	888,294,465	888,294,465
Number of shares	888,294,465	888,294,465	888,367,046
Share capital	3,046	3,046	3,046

Dividend per share	1.10	1.10
Payout ratio, %	65.9 [†]	112.2
Dividend yield, %	5.0 [†]	6.7

[†]) Board of Directors' proposal for the planned Annual General Meeting 17 March 2020.

For full set of share Key figures 2010–2019, see the section ► **Key figures** in the Financial Statements.

Shareholders value, share price performance and volumes

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Shareholders

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shares were traded on markets other than the Nasdaq Helsinki Ltd. The proportion of nominee registrations and direct foreign shareholders was 30.5% (2018: 30.8%)

Dividend distribution proposal

The distributable funds of Fortum Corporation as at 31 December 2019 amounted to EUR 4,219,128,198.51 including the profit of the financial period 2019 of EUR 213,409,797.80. 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 1.10 per share be paid for 2019.

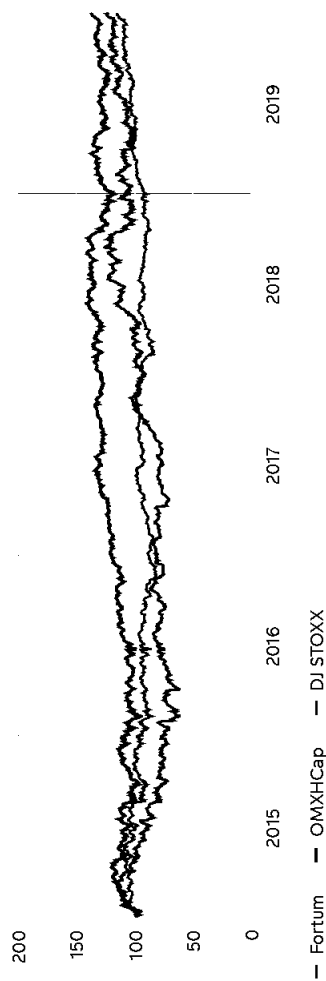
Based on the number of registered shares as at 5 February 2020 the total amount of dividend would be EUR 977,123,911.50. The Board of Directors proposes, that the remaining part of the distributable funds be retained in the shareholders' equity.

The Annual General Meeting will be held on 17 March 2020 at 11:00 EET at Finlandia Hall in Helsinki.

Market capitalisation, EUR billion

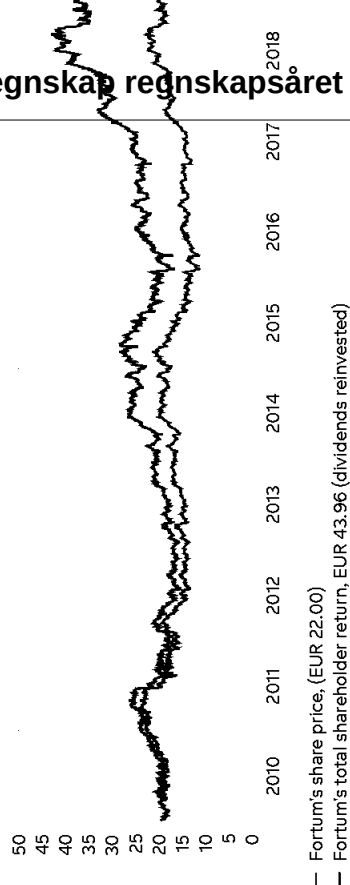


Share quotations, index 100 = quote on 2 January 2015



— Fortum — OMXHCap — DJ STOXX

Total shareholder return, EUR



— Fortum's share price, (EUR 22.00)
— Fortum's total shareholder return, EUR 43.96 (dividends reinvested)

Income statement

Consolidated income statement

EUR million	Note	2019	2018
Sales	6	5,447	5,242
Other income	9	110	130
Materials and services	10	-2,721	-2,795
Employee benefits	11	-480	-459
Depreciation and amortisation	6, 17, 18	-575	-536
Other expenses	9	-591	-594
Comparable operating profit	6	1,191	987
Items affecting comparability	7	-81	151
Operating profit	6	1,110	1,138
Share of profit of associates and joint ventures	6, 19	744	38
Interest expense		-167	-148
Interest income		28	34
Fair value gains and losses on financial instruments	8	8	-8
Other financial expenses - net		6	-15
Finance costs - net	12	-125	-136
Profit before income tax		1,728	1,040
Income tax expense	13	-221	-181
Profit for the year		1,507	858
Attributable to:			
Owners of the parent		1,482	843
Non-controlling interests		25	15
		1,507	858
Earnings per share for profit attributable to the equity owners of the company (EUR per share)	14		
Basic		1.67	0.95

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

EUR million

Comparable operating profit

Impairment charges

Capital gains and other

Changes in fair values of derivatives hedging future cash flow

Nuclear fund adjustment

Items affecting comparability

Operating profit

See ► Definitions for key ratios

Note

1,1

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6, 7

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Statement of comprehensive income

Consolidated statement of comprehensive income

EUR million	Notes	2019	2018
Profit for the year		1,507	858
Other comprehensive income			
Items that may be reclassified to profit or loss in subsequent periods:			
Cash flow hedges			
Fair value gains/losses in the year		82	-778
Transfers to income statement		635	15
Transfers to inventory/property, plant and equipment		-4	-2
Deferred taxes		-151	162
Net investment hedges			
Fair value gains/losses in the year		-24	32
Deferred taxes		5	-6
Exchange differences on translating foreign operations	4,6	259	-525
Share of other comprehensive income of associates and joint ventures	19	72	-37
Other changes		5	0
		877	-1,141
Items that will not be reclassified to profit or loss in subsequent periods:			
Actuarial gains/losses on defined benefit plans	31	-21	3
Actuarial gains/losses on defined benefit plans in associates and joint ventures		-208	43
		-229	46
Other comprehensive income for the year, net of deferred taxes		649	-1,094
Total comprehensive income for the year		2,155	-236
Total comprehensive income attributable to:			
Owners of the parent		2,120	-239
Non-controlling interests		36	3
		2,155	-236

Other comprehensive income (OCI) includes items of income and expense that are recognised in equity and are 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 associates and companies and translation differences.

Fair valuation of cash flow hedges mainly relates to fair valuation of derivatives, such as futures and forwards, when electricity price for future transactions, where hedge accounting is applied. When electricity 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.

Balance sheet

Consolidated balance sheet

EUR million	Note	31 Dec 2019	31 Dec 2018	EUR million	Note	31 Dec 2019	31 Dec 2018
ASSETS				EQUITY			
Non-current assets				Equity attributable to owners of the parent			
Intangible assets			1,143	Share capital		1,087	
Property, plant and equipment and right-of-use assets	17	10,123	9,981	Share premium		3,025	
Participations in associates and joint ventures	18	6,435	5,978	Retained earnings		9,928	
Share in State Nuclear Waste Management Fund	19	813	899	Other equity components		-1	
Other non-current assets	20	151	139	Total		12,950	
Deferred tax assets	28	77	70	Non-controlling interests		26	
Derivative financial instruments	4	180	229	Total equity		13,236	
Long-term interest-bearing receivables	21	651	683				
Total non-current assets		19,571	19,065	LIABILITIES			
Current assets				Non-current liabilities			
Inventories	22	230	233	Interest-bearing liabilities		6,111	
Derivative financial instruments	4	131	326	Derivative financial instruments		27	
Short-term interest-bearing receivables	21	384	409	Deferred tax liabilities		1	
Income tax receivables	28	133	172	Nuclear provisions		8	
Trade and other receivables	23	1,176	1,620	Other provisions		3	
Deposits and securities (maturity over three months)		76	29	Pension obligations		3	
Cash and cash equivalents		1,356	557	Other non-current liabilities		1	
Liquid funds	24	1,433	584	Total non-current liabilities		8,333	
Total current assets		3,486	3,344	Current liabilities			
Assets held for sale		307	-	Interest-bearing liabilities		5	
				Derivative financial instruments		2	
				Trade and other payables		3	
Total assets		23,364	22,409	Total current liabilities		10	
				Liabilities related to assets held for sale			
				Total liabilities		10,113	
				Total equity and liabilities		23,349	

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Statement of changes in total equity

Consolidated statement of changes in total equity

EUR million	Note	Share capital	Share premium	Retained earnings			Other equity components			Owners of the parent	Non-controlling interests
				Retained earnings and other funds	Translation of foreign operations	Cash flow hedges	Other OCI items	OCI items associates and joint ventures			
Equity 1 January 2019		3,046	73	11,937	-2,705	-638	99	30		11,841	236
Net profit for the year				1,482						1,482	25
Translation differences					247	7	0	-1		253	6
Other comprehensive income						561	-40	-136		385	5
Total comprehensive income for the year				1,482	247	568	-40	-137		2,120	36
Cash dividend	14			-977						-977	-23
Other				-2						-2	4
BS Equity 31 December 2019		3,046	73	12,441	-2,459	-70	60	-108		12,982	252
BS Equity 31 December 2017		3,046	73	12,062	-2,187	-40	70	24		13,048	239
Impact from change in accounting principle (IFRS 9 and 15)				7						7	
Equity 1 January 2018		3,046	73	12,069	-2,187	-40	70	24		13,055	239
Net profit for the year				843						843	15
Translation differences					-519	0	1	-1		-518	-7
Other comprehensive income				0		-599	28	6		-564	-5
Total comprehensive income for the year				843	-519	-598	29	6		-239	3
Cash dividend	14			-977						-977	-6
Other				2						2	0
BS Equity 31 December 2018		3,046	73	11,937	-2,705	-638	99	30		11,841	236

Translation differences

Translation of financial information from subsidiaries in foreign currency is done using average rate for the income statement and end rate for the balance sheet. The exchange rate differences occurring from translation to EUR are recognised in equity. Translation differences impacted equity attributable to owners of the parent company with EUR 253 million during 2019 (2018: -518). Translation differences are mainly related to RUB and SEK. Part of this translation exposure has been hedged and the foreign currency hedge result, amounting to EUR -14 million (2018: 24), is included in other OCI items.

For information regarding exchange rates used, see ► **Note 1** Significant accounting policies. For information about translation exposure see ► **Note 4.6** Interest rate risk and currency risk.

Cash flow hedges

The impact on equity attributable to owners of the parent from fair valuation of cash flow hedges, (2018: -598), mainly relates to fair valuation of derivatives, such as futures and forwards, hedging electricity price for future transactions, where hedge accounting is applied. When electricity price is higher (lower) than the hedging price, the impact on equity is negative (positive).

Cash dividends

A dividend for 2018 was decided in the Annual General Meeting on 26 March 2019 and paid on 4 April 2019. See ► **Note 14** Earnings and dividend per share.

Consolidated cash flow statement

EUR million	Note	2019	2018	Note
Cash flow from operating activities				
Profit for the year		1,507	858	
Adjustments:				
Income tax expense		221	181	
Finance costs - net		125	136	
Share of profit of associates and joint ventures		-744	-38	
Depreciation and amortisation		575	536	
Operating profit before depreciations (EBITDA)		1,685	1,674	
Items affecting comparability		81	-151	
Comparable EBITDA		1,766	1,523	
Non-cash flow items		-1	-90	
Interest received		29	23	
Interest paid		-177	-171	
Dividends received		239	61	
Realised foreign exchange gains and losses		14	231	
Income taxes paid		-165	-94	
Other items		-13	-9	
Funds from operations		1,691	1,474	
Change in settlements for futures		356	-524	
Change in working capital		-33	-146	
Net cash from operating activities		2,015	804	
Cash flow from investing activities				
Capital expenditures		-695	-579	
Acquisitions of shares	17, 18	-107	-4,088	
Proceeds from sales of fixed assets	6	35	38	
Divestments of shares		53	259	
Shareholder loans to associated companies and joint ventures		9	-24	
Change in cash collaterals and restricted cash		311	-36	
Change in other interest-bearing receivables		25	31	
Net cash used in investing activities		-369	-4,398	

EUR million	Note	2019	2018	Note
Cash flow before financing activities				
Cash flow from financing activities				
Proceeds from long-term liabilities		221	181	
Payments of long-term liabilities		125	136	
Change in short-term liabilities		-744	-38	
Dividends paid to the owners of the parent		575	536	
Dividends paid to non-controlling interests				14
Other financing items		81	-151	
Net cash from/used in financing activities		-8	-8	
Total net increase(+) / decrease(-) in liquid funds		1,687	-4,594	
Liquid funds at the beginning of the year		1,474	1,474	
Foreign exchange differences in liquid funds		-524	-146	
Liquid funds at the end of the year¹⁾		1,440	1,440	

1) Includes cash balances of EUR 2 million relating to assets held for sale at 31 December 2019. See **Note 3** Acquisitions, disposals and other non-current assets.

Realised foreign exchange gains and losses relate mainly to financing of Fortum's Russian and Swedish subsidiaries that the Group's main external financing currency is EUR. The foreign exchange gains and losses arise from roll-over exchange contracts hedging these internal loans as major part of the forwards are entered into with a short maturity of less than twelve months.

In Fortum's cash flow statement the daily cash settlements for futures are shown in cash flow from operating activities, the changes in cash collaterals for forwards are included in cash flow from investing activities. The daily cash settlements included in trade and other receivables and the cash collaterals are included in the short-term interest-bearing receivables. See **Note 21** Interest-bearing receivables for additional information.

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

Change in net debt

EUR million	Note	2019	2018
Net debt 1 January		5,509	988
Impact from change in accounting principle (IFRS 16 and IFRS 9)		99	1
Foreign exchange rate differences		-51	15
Comparable EBITDA		1,766	1,523
Non-cash flow items		-1	-90
Paid net financial costs		-142	77
Dividends received		239	61
Income taxes paid		-165	-94
Change in settlements for futures and working capital		323	-670
Capital expenditures		-695	-579
Acquisitions		-107	-4,088
Divestments and proceeds from sale of fixed assets		88	298
Shareholder loans to associated companies		9	-24
Change in other interest-bearing receivables		336	-5
Dividends to the owners of the parent		-977	-977
Dividends to non-controlling interests		-23	-5
Other financing activities		-4	-7
Net cash flow (-: increase in net debt)		646	-4,580
Impact of non-cash collateral arrangement		281	-
Fair value change of bonds, amortised cost valuation, acquired debt and other changes		-	-
Net debt 31 December	27	5,260	5,509

Additional cash flow information

Change in working capital

EUR million	2019	2018
Change in interest-free receivables, decrease(+)/increase(-)	63	-186
Change in inventories, decrease(+)/increase(-)	4	-3
Change in interest-free liabilities, decrease(-)/increase(+)	-100	43
CF Total	-33	-146

Capital expenditure in cash flow

EUR million	Note
Capital expenditure	7
Change in not yet paid investments, decrease(+)/increase(-)	6
Capitalised borrowing costs	6
CF Total	6

Capital expenditures for intangible assets and property, plant and equipment were in 2019 EUR 71 584). Capital expenditure in cash flow in 2019 EUR 695 million (2018: 579) is including payments related to the acquisition of shares in Uniper SE. For further information regarding the acquisition of shares in Uniper SE, see also information about the investments by segments and countries in ▶ **Note 6** Segment reporting.

Acquisition of shares in cash flow

Acquisition of shares, net of cash acquired, amounted to EUR 107 million during 2019 (2018: 4,088 million). During 2018, the acquisition of shares in Uniper SE. For further information regarding the acquisition of shares in Uniper SE, see also information about the investments by segments and countries in ▶ **Note 6** Segment reporting.

Divestment of shares in cash flow

EUR million	Note
Proceeds from sales of subsidiaries, net of cash disposed	20
Proceeds from sales of associates and joint ventures	19
Proceeds from sales of other investments	19
CF Total	58

During 2019 there were no material divestments. For further information regarding divestments during 2019, see ▶ **Note 3** Acquisitions and disposals and assets held for sale.

Basis of preparation

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.

The operations of Fortum Corporation and its subsidiaries (together the Fortum Group) focus on the Nordic and Baltic countries, Russia and Poland. Fortum's activities cover generation and sale of electricity, generation, distribution and sale of heat, and energy-related expert services. In addition Fortum has major shareholdings including a 49.99% participation in Uniper SE.

These financial statements were approved by the Board of Directors on 5 February 2020.

1.2 Basis of preparation

The consolidated financial statements of Fortum Group for the year ended 31 December 2019 have been prepared in accordance with International Financial Reporting Standards (IFRS) and IFRIC Interpretations as adopted by the European Union. The consolidated financial statements also comply with Finnish accounting principles and corporate legislation.

The consolidated financial statements have been prepared under the historical cost convention, except for financial assets and financial liabilities (including derivative instruments) 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.

1.2.1 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 in the financial target setting and forecasting, management follow-up of financial performance of segments and the Group, as well as 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 understandability of 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 valuation of financial derivatives hedging future cash flows where hedge accounting is not applied according to IFRS 9, Financial Instruments; and the effects from accounting for Fortum's share of the State Nuclear Waste Fund where the asset on the balance

sheet cannot exceed the related provision according to IFRIC 5, Rights to Interests Arising from Derivatives Restoration and Environmental Rehabilitation Funds. Further, business performance of operations compared from one period to another without adjusting for one-time items relating to capital gains impairments and transaction costs arising from acquisitions. Such items are also treated as items affecting comparability. According to IFRS 3, Business Combinations, transaction costs related to the acquisition of subsidiary shares are recognised in the consolidated income statement. Such costs are presented in the consolidated income statement. The main business performance measurements have been consistently since 2005.

Definitions are presented in the section ▶ **Definitions of key figures**.

1.3 Principles for consolidation

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

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

Acquisition of subsidiaries are accounted for using the acquisition method. The consideration transferred is measured as the aggregate of acquisition date fair values of assets given and liabilities incurred or assumed. Identifiable intangible assets acquired and liabilities assumed are measured initially at acquisition date fair value less the cost of any minority interest. The excess of the cost of acquisition over the fair value of identifiable net assets acquired is recorded as goodwill. If the cost of acquisition is less than the fair value of net assets of the subsidiary acquired, the difference is recognised directly in the consolidated income statement.

Subsidiaries are fully consolidated from the date on which control is transferred to the group and are consolidated from the date that control ceases.

Basis of preparation

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.

The Fortum Group subsidiaries are disclosed in ► **Note 40** Subsidiaries by segment on 31 December 2019.

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 19** 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 19** 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 initially measured at the non-controlling interests' proportionate share of the fair value of the acquiree's identifiable net assets. 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 Foreign currency transactions and translation

1.4.1 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.

1.4.2 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 financial income or

expenses, except when deferred to equity as qualifying cash flow hedges. Translation differences of assets through other comprehensive income are included in Other equity components in equity.

1.4.3 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, differences arising from the translation of the net investment in foreign entities, and of borrowings currency instruments designated as hedges for such investments, are taken to equity. When a foreign subsidiary 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 intangible assets 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 (ECB) at the closing date. The annual average exchange rate is calculated as an average of each month's end rate published by the ECB. The end rate of the previous year.

Key exchange rates in Fortum's consolidated financial statements

	Currency	Average rate		Balance sheet date
		2019	2018	
Sweden	SEK	10.5572	10.2591	31 Dec 2019
Norway	NOK	9.8524	9.6432	31 Dec 2019
Poland	PLN	4.2992	4.2614	31 Dec 2019
Russia	RUB	72.7949	73.8035	31 Dec 2019

1.4.4 Associates and joint ventures

The Group's interests in associated companies and joint ventures are accounted for by the equity method. Exchange rate differences arising from the translation of the equity of associated companies and joint ventures, whose measurement and reporting currencies are not euro, are translated into euro using the closing rate at the balance sheet date. Group reporting currency using the same principles as for subsidiaries.

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1.5 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
Segment reporting	6	IFRS 8, IFRS 15
Revenue recognition	6, 23	IFRS 15
Government grants	18	IAS 20
Share-based payments	11	IFRS 2
Income taxes	28	IAS 12
Joint arrangements	19	IFRS 11, IAS 28, IFRS 12
Investments in associates	19	IAS 28, IFRS 12
Other shares and participations	15, 20	IAS 32, IAS 36, IFRS 9
Intangible assets	17	IAS 38
Tangible assets	18	IAS 16, IAS 36, IAS 40
Leases	34	IFRS 16
Inventories	22	IAS 2
Earnings per share	14	IAS 33
Pensions and similar obligations	31	IAS 19
Decommissioning obligations for the nuclear plant and spent fuel	29	IFRIC 5
Provisions	30	IAS 37
Contingent liabilities	36	IAS 37
Financial instruments	4, 15, 16	IAS 32, IFRS 7, IFRS 9, IFRS 13
Liquid funds	24	IAS 7
Borrowings	27	IFRS 9

1.6 New accounting standards, amendments and interpretations

Fortum adopted IFRS 16. Leases on 1 January 2019. Other new standards, amendments and interpretations effective from 1 January 2019 did not have a material impact on Fortum's consolidated financial statements.

IFRS 16 Leases

Nature of change

IFRS 16 Leases replaced IAS 17 Leases and specifies how to recognise, measure, present and disclose lease liabilities. The standard provides a single lessee accounting model, requiring lessees to recognise lease liabilities for most leases on the balance sheet as the distinction between operating and finance leases was removed. For lessors, there are no significant changes.

Date of adoption and transition method

Fortum adopted IFRS 16 on 1 January 2019 using the modified retrospective method. In accordance with the IFRS 16 transition guidance, comparatives were not restated. Right-of-use assets were recognised at the value of lease liabilities, adjusted by the amount of any prepaid or accrued lease liabilities recognised on the balance sheet before initial application.

IFRS 16 Leases

IFRS 16 allows certain practical expedients to simplify the initial adoption of IFRS 16, as well as the ongoing application of IFRS 16. On adoption, Fortum adjusted the right-of-use assets by the difference between the carrying amount of lease liabilities and the carrying amount of right-of-use assets. The difference was recognised in the consolidated balance sheet in accordance with IAS 12. In accordance with IAS 37, Provisions, Contingent Liabilities and Contingent Assets. On an ongoing basis, Fortum will recognise the exemption of not recognising short-term leases and leases of low value assets in the consolidated balance sheet.

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Basis of preparation

Impact

The adoption of IFRS 16 had the following impact on the consolidated opening balance sheet:

Consolidated balance sheet		31 Dec 2018 (IAS 17)	Capitalisation of leases	Other	1 Jan 2019 (IFRS 16)
EUR million					
Property, plant and equipment and right-of-use assets		9,981	96		10,077
Other non-current assets		139		-1	138
Total assets		22,409	96	-1	22,504
Interest-bearing liabilities		6,093	99		6,192
Other provisions		91		-3	88
Trade and other payables		1,058		-1	1,057
Total equity and liabilities		22,409	99	-4	22,504
Reconciliation of lease liabilities and operating lease commitments on transition is presented below:					
EUR million					
Operating lease commitments 31 December 2018					216
Leases not yet commenced but to which Fortum is committed					-41
Leases with variable payments not included in the measurement of lease liabilities					-16
Exempted from recognition					-12
Discounting effect					-28
Other changes					-20
Lease liabilities 1 January 2019					99

The majority of right-of-use assets are office buildings and land areas. No new leases were identified as leases according to IFRS 16.

The weighted average incremental borrowing rate applied to lease liabilities on 1 January 2019 was 1.9%.

See ► **Note 34** Leases for lease accounting policy and required ongoing disclosures.

Other new standards and interpretations

Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)

In March 2019, IFRIC published an agenda decision on Physical settlement of contracts to buy or sell a non-financial item (IFRS 9). The decision clarifies how an entity applies IFRS 9 to fixed price contracts to buy or sell a non-financial item that are fair valued through profit or loss even though the contract is physically settled. The published agenda decision discusses the presentation of these contracts in the income statement and have an impact to net profit.

For Fortum the amount of contracts within the scope of the agenda decision is limited. Majority physical contracts are used for own expected purchase, sale or usage requirements and therefore are valued ("own use exemption" under IFRS 9). Physical contracts to buy or sell a non-financial item are through income statement when fair value option to off-set accounting mismatch is used, or when exemption or hedge accounting cannot be applied. Effects are treated as changes in fair values of hedging future cash flow and adjusted to sales and materials and services, EUR -31 million and EUR -31 million respectively, when calculating Fortum's alternative performance measures.

New standards, amendments and interpretations effective from 1 January 2020

Other new standards, amendments and interpretations issued by the balance sheet date and effective from 1 January 2020, or later, are not expected to have a material impact on Fortum's consolidated financial statements.

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
Assigned values and useful lives determined for intangible assets and property, plant and equipment: acquired in a business combination	17, 18
Assumptions related to impairment testing of property, plant and equipment and intangible assets as well as associated companies and joint ventures	17, 18
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	19
Assumptions and estimates regarding future tax consequences	28
Assumptions made to determine long-term cash flow forecasts of estimated costs for provision related to nuclear production	29
Assumptions made when estimating provisions	30
Assumptions made to determine future pension obligations	31
	Acquisitions, disposals and assets held for sale
	Intangible assets; Property, plant and equipment and right-of-use assets
	Intangible assets; Property, plant and equipment and right-of-use assets
	Participations in associated companies and joint ventures
	Income taxes on the balance sheet
	Nuclear related assets and liabilities
	Other provisions
	Pension obligations

3.1.1 Uniper investment

In September 2017, Fortum signed a transaction agreement with E.ON under which E.ON had the right to tender its 46.65% shareholding in Uniper SE into Fortum's public takeover offer. In November 2017, Fortum announced that it had received a request from E.ON to tender its 46.65% shareholding in Uniper SE into Fortum's public takeover offer. On 8 January 2018, E.ON announced that it had decided to tender its 46.65% shareholding in Uniper SE into Fortum's public takeover offer ("offer") to all Uniper shareholders. On 8 January 2018, Fortum announced that shareholders representing 99.99% of the shares in Fortum had accepted the offer. The completion of Fortum's offer was subject to several conditions, including regulatory approvals. The final regulatory decisions were received 15 June 2018. In 2018, the completion of the offer was subject to several conditions, including regulatory approvals. The final regulatory decisions were received 15 June 2018. In 2018, the completion of the offer was subject to several conditions, including regulatory approvals. The final regulatory decisions were received 15 June 2018.

Assets or disposal groups are classified as assets held for sale if their carrying amounts will be recovered prior to a sale transaction rather than through continuing use. For this to be the case, the asset, or the disposal group as a whole, must be available for immediate sale in its present condition subject only to terms that are usual and customary for such assets or disposal groups, and the sale must be highly probable. These assets, or in the case of disposal groups, 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 JUDGEMENTS: UNIPER PURCHASE PRICE ALLOCATION

Preparing purchase price allocation requires management to make judgements when determining the fair value of the acquired company's identifiable intangible assets and liabilities. In Uniper transaction the purchase price allocation has been based on publicly available information and management's best estimates. Since Uniper is a listed company and a competitor of Fortum, Due to the unique circumstances, preparing the purchase price allocation has required management judgement.

3.1 Acquisitions

EUR million	2019
Gross investments in shares in subsidiary companies	10
Gross investments in shares in associated companies and joint ventures	10
Gross investments in other shares	10
Total	30

3.1.1 Uniper investment

In September 2017, Fortum signed a transaction agreement with E.ON under which E.ON had the right to tender its 46.65% shareholding in Uniper SE into Fortum's public takeover offer. In November 2017, Fortum announced that it intended to launch a voluntary public takeover offer ("offer") to all Uniper shareholders. On 8 January 2018, E.ON exercised its option to tender its shares to Fortum's offer. In February 2018, Fortum announced that shareholder representatives had accepted the offer. The completion of Fortum's offer was subject to several conditions precedent and regulatory approvals. The final regulatory decisions were received 15 June 2018. In 2019, the offer was completed.

Basis of preparation

regulatory approvals, Fortum is allowed to purchase additional shares up to 50% of shares and voting rights in Uniper. The final settlement of the offer took place on 26 June 2018.

The shareholders who tendered their shares to Fortum's offer were paid EUR 21.31 per share. The shareholders also benefitted from Uniper's dividend that was paid following the Annual General Meeting in early June 2018. Fortum paid a total consideration of EUR 3.7 billion for all shares tendered. The total consideration was financed with existing cash resources of EUR 1.95 billion and bridge loan financing from committed credit facilities of EUR 1.75 billion. On 26 June 2018, Fortum closed the Uniper offer and became the company's largest shareholder with 47.35% of the shares. Since then Fortum acquired additional shares in Uniper and held 49.99% of the shares at 31 December 2018. There has been no change in the ownership during 2019.

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"), a total in excess of 20.5%. Fortum will pay approximately EUR 2.3 billion for the combined shareholding, corresponding to EUR 29.93 per share. Upon closing of the transactions, Fortum's share in Uniper will increase to more than 70.5% and the total investment in Uniper to approximately EUR 6.2 billion, representing an average acquisition price of EUR 23.97 per share. On 30 December 2019, Fortum received regulatory clearance in the United States for the transaction. Closing of the transaction is still subject to customary merger control clearances in Russia, and is expected by the end of the first quarter of 2020. Fortum will fully consolidate Uniper as a subsidiary in its financial statements from closing of the transaction.

Uniper is an international energy company with activities in Europe, Russia and other markets worldwide. Uniper's businesses are well aligned with Fortum's core competencies. The company operates power plants in Europe and Russia, with a total installed generation capacity of around 36 gigawatts, and it runs extensive energy trading operations as well as maintains gas storage facilities in Germany, Austria and the UK.

In 2018, Uniper's sales totaled EUR 78.2 billion and adjusted EBITDA was EUR 1.5 billion. Uniper employs around 12,000 people and had total assets of EUR 51 billion at the end of 2018. Uniper is listed on the Frankfurt stock exchange.

Fortum consolidates Uniper as an associated company from 30 June 2018 with three months time lag. For additional information see ► **Note 19** Participations in associated companies and joint ventures.

Uniper purchase price allocation	EUR million
Total acquisition cost	3,968
Acquired net assets at 30 June 2018	5,512
Fortum's share of goodwill on the balance sheet of Uniper at 30 June 2018	-930
Fair value adjustment at 30 June 2018	-613
Fair value of the acquired net assets at 30 June 2018	3,968

The purchase price allocation was finalised during Q2/2019. Uniper's balance sheet at 30 June 2018 was the starting point for the purchase price allocation, however a fair value adjustment of EUR 613 million has been made for the acquired assets and liabilities. The total acquisition cost including direct costs related to the acquisition, EUR 3,968 million, is reported in the 'Participations in associates and joint ventures'.

Fortum's share of the goodwill on Uniper's balance sheet, EUR 930 million, is derecognised as it is not identifiable asset according to IFRS. Potential future impairments of goodwill (existing at 30 June 2018) will thereby be reversed to Fortum's share of profits of associates and joint ventures.

Fair value adjustment, EUR 613 million, relates mainly to political and regulatory risks that are related to the fair value of certain generation and production assets. The fair value adjustment will be reversed to Fortum's share of profits of associates and joint ventures over a period of 20 years from 1 January 2019, approximately million on annual basis. If Uniper reports negative impacts relating to these generation and production assets, Fortum will assess potential need to use this fair value adjustment to reverse these negative impacts. Remaining fair value adjustment post tax at 31 December 2019 amounted to EUR 582 million.

Preparing purchase price allocation requires management to make judgements when determining the fair value of the assets and liabilities acquired. In Uniper transaction the purchase price allocation has been based on publicly available information since Uniper is a listed company and a competitor of Fortum. Due to circumstances, preparing the purchase price allocation has required management judgement.

For information about Fortum's share of profit from Uniper, see ► **Note 19** Participations in associated companies and joint ventures. See also ► **Note 35** Capital and other commitments.

3.1.2 Acquisitions of subsidiary companies 2019

In May 2019, Fortum announced the restructuring of Fortum's and Skellefteå Kraft's ownership in the owned Swedish wind parks Solberg and Blaiken. Through an asset swap arrangement Fortum became the sole owner of the 76-MW Solberg wind park and Skellefteå Kraft the sole owner of the 233-MW Blaiken wind park. Both the investments in Solberg and divestment of Blaiken includes shares and assets. The asset swap arrangement was finalised in August 2019 and had only a minor impact on Fortum's cash flow and equity.

3.1.3 Acquisitions of subsidiary companies 2018

In August 2018, Fortum acquired all shares of three independent Latvian heat producers SIA BK Enerģijas, SIA Enerģija and SIA Enerģija. Fortum also acquired the shares of SIA Lake Development. The acquisition of these companies will continue to deliver heat to Daugavpils's municipal district heating company Siltumtikli.

In October 2018, Fortum acquired the metal recycling business in Fincumet Group. In the transaction Fortum acquired shares in three companies: Fincumet Oy, Niemen Romukauppa Oy and NJS-Patenti Oy.

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Operating and financial review	Consolidated financial statements	Notes	Key figures	Parent company financial statements	Proposal for the use of the profit shown on the balance sheet	Auditor's report	Key figures 2010–2019	Quarterly financial information																				
Basis of preparation																												
3.1.4 Other share transactions In April 2017, Fortum and RUSNANO, a Russian state-owned development company, signed a 50/50 investment partnership in order to secure the possibility of a Russian Capacity Supply Agreement (CSA) wind portfolio in Russia. The wind investment fund 50/50 owned by Fortum and RUSNANO was awarded 1,000 MW wind capacity in Russian wind CSA auction in June 2017. The investments decisions will be made on a case-by-case basis within the total mandate of the wind investment fund. Fortum's equity stake in the wind investment fund totals a maximum of RUB 15 billion (EUR 214 million). The amount is invested over time (within approximately 5 years) as it is subject to positive investment decisions. During 2019 Fortum invested EUR 66 million (2018: 61) in the fund.																												
3.2 Disposals <table><tr><th>EUR million</th><th>2019</th><th>2018</th></tr><tr><td>Gross divestments of shares in subsidiary companies</td><td>15</td><td>147</td></tr><tr><td>Gross divestments of shares in associated companies and joint ventures</td><td>10</td><td>160</td></tr><tr><td>Gross divestments of other investments</td><td>4</td><td>0</td></tr><tr><td>Total</td><td>30</td><td>306</td></tr></table>									EUR million	2019	2018	Gross divestments of shares in subsidiary companies	15	147	Gross divestments of shares in associated companies and joint ventures	10	160	Gross divestments of other investments	4	0	Total	30	306					
EUR million	2019	2018																										
Gross divestments of shares in subsidiary companies	15	147																										
Gross divestments of shares in associated companies and joint ventures	10	160																										
Gross divestments of other investments	4	0																										
Total	30	306																										
3.2.1 Disposals of subsidiary companies During 2019 there were no material divestments. On 20 December 2019, Fortum and Credit Suisse Energy Infrastructure Partners (CSEIP) signed an agreement whereby funds advised by CSEIP are to acquire an 80% stake in Fortum's Nordic wind portfolio. The total consideration of the divestment of the 80% stake on a debt- and cash-free basis is expected to be approximately EUR 250 million (including Sørfjord wind park which is still under construction), of which EUR 170 million is related to the first quarter of 2020. The transaction is subject to regulatory approvals in the EU and is expected to close in the first quarter of 2020. The sale will have a minor positive effect on the Generation segment's first-quarter 2020 comparable operating profit. On 20 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 and the cash was received at the completion of the divestment on 10 January 2020. See ▶ Note 39 Events after the balance sheet date for additional information. On 31 August 2018, Fortum sold a 54% share of its solar power company operating four solar power plants in India to UK Climate Investments (40%) and Elite Alfred Berg (14%). In line with Fortum's 'capital recycling' business model, the result from the transaction, EUR 26 million, is recognised in Other operations' Comparable operating profit. The total consideration from the divestment on a debt- and cash-free basis, including the effect of deconsolidating Fortum's minority part of the net debt, is EUR 147 million. In April 2019, Elite Alfred Berg used their option to buy an additional 2% from Fortum.																												
3.2.2 Other disposals In August 2019, the restructuring of Fortum's and Skellefteå Kraft's ownership in the two jointly owned wind parks Solberg and Blaiken was finalised. See ▶ Note 3.1.1 Acquisitions of subsidiary companies for additional information. In June 2018, Fortum sold its 10% ownership in Hafslund Produksjon Holding AS to Svenska Kraftnät, a Norwegian company owned by the Finnish energy companies Vantaan Energia Oy, Oyj and Tuusula Energia Ab and Oulun Seudun Sähkö. As part of the restructuring of the Hafslund ownership in 2017, Fortum's ownership in Hafslund Produksjon. The sales price for the shares was EUR 160 million and Fortum's gain of EUR 77 million in the Generation segment 2018 results.																												
3.3 Assets held for sale At 31 December 2019 assets relating to the disposal of Fortum's share in the Nordic wind portfolio, the Sørfjord wind park which is still under construction, (Generation segment) and assets relating to the district heating business in Joensuu, Finland (City Solutions segment), have been classified as assets held for sale. <table><tr><th>EUR million</th><th>Assets held for sale</th></tr><tr><td></td><td>Intangible assets, property, plant and equipment and right-of-use assets</td></tr><tr><td></td><td>Other non-current and current assets</td></tr><tr><td></td><td>Liquid funds</td></tr><tr><td>Total</td><td></td></tr><tr><td></td><td>Liabilities related to assets held for sale</td></tr><tr><td></td><td>Lease liabilities</td></tr><tr><td></td><td>Deferred tax liabilities</td></tr><tr><td></td><td>Other liabilities and provisions</td></tr><tr><td>Total</td><td></td></tr></table>									EUR million	Assets held for sale		Intangible assets, property, plant and equipment and right-of-use assets		Other non-current and current assets		Liquid funds	Total			Liabilities related to assets held for sale		Lease liabilities		Deferred tax liabilities		Other liabilities and provisions	Total	
EUR million	Assets held for sale																											
	Intangible assets, property, plant and equipment and right-of-use assets																											
	Other non-current and current assets																											
	Liquid funds																											
Total																												
	Liabilities related to assets held for sale																											
	Lease liabilities																											
	Deferred tax liabilities																											
	Other liabilities and provisions																											
Total																												
Divestments of shares in subsidiaries - Impact on financial position <table><tr><th>EUR million</th><th>2019</th></tr><tr><td>Gross divestments of shares in subsidiary companies</td><td></td></tr><tr><td>Intangible assets and property, plant and equipment</td><td></td></tr><tr><td>Other non-current and current assets</td><td></td></tr><tr><td>Liquid funds</td><td></td></tr><tr><td>Interest-bearing loans</td><td></td></tr><tr><td>Other liabilities and provisions</td><td></td></tr><tr><td>Net assets divested</td><td></td></tr><tr><td>Reclassified to participations in associates and joint ventures</td><td></td></tr><tr><td>Result from transaction</td><td></td></tr></table>									EUR million	2019	Gross divestments of shares in subsidiary companies		Intangible assets and property, plant and equipment		Other non-current and current assets		Liquid funds		Interest-bearing loans		Other liabilities and provisions		Net assets divested		Reclassified to participations in associates and joint ventures		Result from transaction	
EUR million	2019																											
Gross divestments of shares in subsidiary companies																												
Intangible assets and property, plant and equipment																												
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Interest-bearing loans																												
Other liabilities and provisions																												
Net assets divested																												
Reclassified to participations in associates and joint ventures																												
Result from transaction																												

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Risks

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).

4.1 Commodity market and fuel risks

Fortum's business is exposed to fluctuations in prices and volume of commodities used in the production and sales of energy products. The main exposure is toward electricity prices and volumes, prices of emissions and prices and availability of fuels. Fortum hedges its exposure to commodity market risks in accordance with approved Hedging Guidelines and Mandates.

4.2 Electricity price and volume risk

Electricity price risk in the Nordic region is mainly hedged by entering into electricity derivatives contracts on Nasdaq Commodities exchange. The main objective of hedging is to reduce the effect of electricity price volatility on earnings. Hedging strategies cover several years in the short to medium term and are executed within approved mandates. These 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. The currency component of these hedges in the Swedish entity is currently not hedged.

Fortum's sensitivity to the Nordic electricity market price is dependent on the hedge level for a given time period. As per 31 December 2019, approximately 75% of the Generation segment's estimated Nordic power sales volume was hedged for the calendar year 2020 with a price 34 EUR/MWh and approximately 40% for the calendar year 2021 with a price 33 EUR/MWh. Assuming no changes in production volumes, hedge ratios or cost structure a 1 EUR/MWh change in the market price of electricity would affect Fortum's 2020 comparable operating profit by approximately EUR 11 million and for 2021 by approximately EUR 27 million. The volume used in this sensitivity analysis is 45 TWh which includes the electricity production sold to the spot market in Sweden and Finland in the Generation segment without minority owner's shares of electricity or other pass-through sales, and excluding the volume of Fortum's coal-condensing generation. This volume is heavily dependent on price level, the hydrological situation, the length of annual maintenance periods and availability of power plants. Sensitivity is calculated only for electricity market price movements. Hydrological conditions, temperature, wind, CO₂ allowance prices, fuel prices, economic development, transmission capacity and the import/export situation all affect the electricity price on short-term basis and effects of individual factors cannot be separated.

In Russia, 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 electricity sales is exposed to spot price risk.

4.2.1 Sensitivity arising from financial instruments according to IFRS 7

Sensitivity analysis shows the sensitivity arising from financial electricity derivatives as defined in IFRS 7. Derivatives are used for hedging purposes within Fortum. Sensitivities are calculated based on 31 December (31 December 2018) position. Positions are actively managed in the day-to-day business operations and the sensitivities vary from time to time. Sensitivity analysis includes only the market risks arising from i.e. the underlying physical electricity sales and purchases are not included. Sensitivity is calculated on assumption that electricity forward and futures quotations in Nasdaq Commodities and in EEX would be EUR/MWh for the period Fortum has derivatives.

Sensitivity according to IFRS 7

+/- 1 EUR/MWh change in electricity forward and futures quotations, EUR million	Effect on Profit before income tax	Effect on Equity
	-/-	-/-

4.2.2 Electricity derivatives

The tables below disclose the Group's electricity derivatives used mainly for hedging electricity price risk. The values represent the values disclosed on the balance sheet.

See also ▶ **Note 15** Financial assets and liabilities by categories for accounting principles and basis of estimations and ▶ **Note 8** Fair value changes of derivatives and underlying items in income statement

Electricity derivatives by instrument 2019

	Volume, TWh			Fair value, EUR million	
	Under 1 year	1–5 years	Over 5 years	Positive	Negative
Electricity derivatives	31	22	0	46	5
Total				53	
Netting against electricity exchanges ¹⁾				-37	
Total				16	

Risks

Electricity derivatives by instrument 2018

	Volume, TWh			Fair value, EUR million	
	Under 1 year	1–5 years	Over 5 years	Positive	Negative
Electricity derivatives	29	26	0	848	1,712
Total					-864
Netting against electricity exchanges ¹⁾					
Total				-701	-701

¹⁾ Receivables and liabilities against electricity exchanges arising from standard derivative contracts with same delivery period are netted.

Maturity analysis of commodity derivatives

Amounts in the table are fair values.

EUR million	2019			2018		
	Under 1 year	1–5 years	Over 5 years	Under 1 year	1–5 years	Over 5 years
Electricity derivatives, liabilities	147	52	0	199	706	305
Electricity derivatives, assets	82	13	0	95	94	53
Other commodity derivatives, liabilities	52	11	0	63	77	13
Other commodity derivatives, assets	34	10	0	44	116	24
Total						

4.3 Fuel price risks

Exposure to fuel prices is limited due to Fortum's flexible generation capacity, which allows for switching between different fuels according to prevailing market conditions. The remaining exposure to fuel price risk is mitigated through fixed-price physical delivery contracts or derivative contracts, such as coal and gas derivatives. These derivatives are included in the table above as part of "Other commodity derivatives".

4.4 Emission allowance price and volume risk

Part of Fortum's power and heat generation is subject to requirements of emission trading schemes. Fortum hedges its exposure to emission prices and volumes through the use of CO₂ futures. Most of these CO₂ futures are own use contracts valued at cost and some are treated as derivatives in the accounts included in the table above as part of "Other commodity derivatives".

4.5 Liquidity and refinancing risk

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

Financing is primarily raised on parent company level and distributed internally through various financing arrangements. For example Fortum's Russian operations are financed via intra group interest RUB denominated loans. The internal RUB loan receivables are hedged via external forward contracts the currency exposure for the internal lender. On 31 December 2019, 89% (2018: 95%) of the Group's external financing was raised by the parent company Fortum Corporation.

On 31 December 2019, the total interest-bearing debt was EUR 6,688 million (2018: 6,093). Interest was EUR 5,260 million (2018: 5,509) including EUR 4 million relating to assets held for sale at 31 December 2019.

Fortum manages liquidity and refinancing risks through a combination of cash positions and committed credit facilities with its core banks. The Group shall at all times have access to cash, marketable securities and committed credit facilities including overdrafts, to cover all loans maturing within the next period. However, cash/marketable securities and unused committed credit facilities shall always amount to EUR 500 million.

On 31 December 2019, loan maturities for the coming twelve-month period amounted to EUR 513 million (2018: 1,086). Liquid funds amounted to EUR 1,433 million (2018: 584).

In the fourth quarter of 2019, Fortum signed new committed credit facilities of an additional EUR 1 billion. The purchase of Uniper shares announced on 8 October 2019. At the end of December 2019, the undrawn credit facilities amounted to EUR 10.1 billion (Dec 31 2018: 1.8). On 7 January 2020, Fortum EUR 3 billion of these new committed credit facilities.

Maturity of loans

EUR million
2020
2021
2022
2023
2024
2025 and later
Total

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

Risks

Maturity of undiscounted lease liabilities

EUR million	2019
Due within a year	20
Due after one year and within five years	52
Due after five years	65
Total	137

For more information on leases, see ► **Note 34** Leases.

Liquid funds, major credit lines and debt programmes 2019

EUR million	Total facility	Drawn amount	Available amount
Liquid funds			
Cash and cash equivalents			1,357
Deposits and securities over 3 months			76
Total			1,433
of which in Russia (PAO Fortum)			201
Committed credit lines			
EUR 1,750 million syndicated credit facility	1,750	-	1,750
EUR 8,300 million syndicated credit facility ¹⁾	8,300	-	8,300
Bilateral overdraft facilities	50	-	50
Total	10,100	0	10,100

Debt programmes (uncommitted)

Fortum Corporation, CP programme EUR 1,000 million	1,000	10	990
Fortum Corporation, CP programme SEK 10,000 million	957	0	957
Fortum Corporation, EMTN programme EUR 8,000 million	8,000	4,196	3,804
Total	9,957	4,206	5,751

¹⁾ In the fourth quarter of 2019, Fortum signed new committed credit facilities of an additional EUR 8.3 billion for the purchase of Uniper shares announced on 8 October 2019. On 7 January 2020, Fortum cancelled EUR 3.0 billion of these new committed credit facilities.

Liquid funds, major credit lines and debt programmes 2018

EUR million	Total facility	Drawn amount
Liquid funds		
Cash and cash equivalents		
Deposits and securities over 3 months		
Total		
of which in Russia (PAO Fortum)		
Committed credit lines		
EUR 1,750 million syndicated credit facility	1,750	
Bilateral overdraft facilities	50	
Total	1,800	
Debt programmes (uncommitted)		
Fortum Corporation, CP programme EUR 500 million	1,000	
Fortum Corporation, CP programme SEK 5,000 million	975	
Fortum Corporation, EMTN programme EUR 8,000 million	8,000	
Total	9,975	2,600

Liquid funds amounted to EUR 1,433 million (2018: 584), including PAO Fortum's cash and bank deposits amounting to EUR 201 million (2018: 317).

See also ► **Note 24** Liquid funds.

Risks

Maturity analysis of interest-bearing liabilities and derivatives

Amounts disclosed below are non-discounted expected cash flows (future interest payments and amortisations) of interest-bearing liabilities and interest rate and currency derivatives excluding leases.

EUR million	2019			2018		
	Under 1 year	1–5 years	Over 5 years	Under 1 year	1–5 years	Over 5 years
Interest-bearing liabilities	661	3,207	3,333	7,201	1,212	3,616
Interest rate and currency derivatives liabilities	4,163	807	91	5,061	3,665	682
Interest rate and currency derivatives receivables	-4,117	-821	-99	-5,037	-3,736	-726
Total	707	3,193	3,325	7,225	1,141	3,572
					1,788	6,501

On the balance sheet date, the average rate of outstanding currency and interest rate derivatives done in SEK and RUB was 10.534 and 71.230, respectively.

4.6 Interest rate risk and currency risk

4.6.1 Interest rate risk

Fortum risk mandates state that the average duration of the net debt portfolio shall always be kept within a range of 12 and 36 months and that the flow risk i.e. changes in interest rates shall not affect the net interest payments of the Group by more than EUR 50 million for the next rolling 12-month period. Within these mandates, strategies are evaluated and developed in order to find an optimal balance between risk and financing cost.

On 31 December 2019, the average duration of the net debt portfolio (including derivatives) was 2.6 years (2018: 1.6). Approximately 65% (2018: 79%) of the debt 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 net interest cost estimate and the worst-case scenario estimate for Fortum's net debt portfolio for the coming 12 months, was EUR 10 million (2018: 13).

The average interest rate for the portfolio consisting mainly of EUR loans and including derivatives was 1.6% at the balance sheet date (2018: 1.7%). Part of the external loans EUR 787 million (2018: 686) have been swapped to RUB and the average interest cost for these loans, including cost for hedging the RUB, was 7.8% at the balance sheet date (2018: 8.3%). The average interest rate on loans and derivatives on balance sheet date, 31 December 2019, was 2.3% (2018: 2.4%). Average interest rate on loans and derivatives for 2019 was 2.7% (2018: 3.0%).

The average interest rate on deposits and securities excluding Russian deposits on 31 December 2019 was -0.13% (2018: -0.11%). Liquid funds held by PAO Fortum amounted to EUR 201 million (2018: 317) and the average interest rate for this portfolio was 3.9% at the balance sheet date.

4.6.2 Currency risk

Fortum's policy is to hedge major transaction exposures on a local level in the reporting currency of the entity in order to avoid exchange differences in the profit and loss statement. These exposures are with forward contracts. An exception is the Generation segment's hedging of power sales in Sweden where a currency component is currently not hedged.

Translation exposures in the Fortum Group are generally not hedged as the majority of these assets are considered to be long-term strategic holdings. In Fortum this means largely entities operating in Sweden, Norway and Poland, whose base currency is not euro.

The currency risk relating to transaction exposures is measured using absolute EUR equivalent at the balance sheet date. The mandate for the open transaction exposure is EUR 50 million. On 31 December 2019, the translation exposure, excluding Generation segment's EUR/SEK exposure, was EUR 1 million (2018: 7,723).

Had EUR been 5% weaker/stronger on closing date, then the impact from transaction exposure on the profit and loss statement would have been EUR +0.04/-0.04 million (2018: +0.3/-0.3 million) and impact from exposure to group's equity EUR +414/-414 million (2018: +386/-386 million).

Group Treasury's transaction exposure

EUR million	2019			2018		
	Net Position	Hedge	Open	Net Position	Hedge	Open
RUB	570	-570	0	544	-544	0
SEK	1,439	-1,440	-1	966	-966	0
PLN	439	-439	1	361	-361	0
NOK	245	-244	0	298	-298	0
INR	132	-132	0	91	-91	0
USD	-147	147	0	-111	111	0
Other	-4	5	1	-1	1	0
Total	2,674	-2,673	1	2,134	-2,134	0

Transaction exposure is defined as already contracted or forecasted foreign exchange dependent cash flows. Transaction exposure is divided into balance sheet exposure and cash flow exposure. Balance sheet exposure reflects currency denominated assets and liabilities for example loans, deposits and accounts payable in currencies other than the company's base currency. Cash flow exposure reflects future cash flows or contracted currency flows in foreign currency deriving from business activities such as sales, purchases or investments. Net foreign exchange differences from transaction exposure are entered under financial

Risks

or expense when related to financial items or when related to accounts receivable/payable entered under items included in operating profit. Conversion differences related to qualifying cash flow hedges are deferred to equity. Fortum's policy is to hedge balance sheet exposures in order to avoid exchange rate differences in the income statement. The Group's balance sheet exposure mainly relates to financing of non-euro subsidiaries and the fact that the Group's main external financing currency is EUR. For derivatives hedging this balance exposure Fortum does not apply hedge accounting, because they have a natural hedge in the income statement. Realized cash flows from derivatives however cause impact in group's consolidated cash flow statement. In 2019 positive effect was 14 million (2018: 231).

Contracted cash flow exposures shall be 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, which do not qualify for hedge accounting are mainly hedging electricity derivatives. Unrealised hedges create volatility in the operating profit.

Group translation exposure

EUR million	2019			2018		
	Net Investment	Hedge	Open	Net Investment	Hedge	Open
RUB	2,612	-222	2,391	2,364	-144	2,220
SEK	3,964	-144	3,821	3,704	-244	3,460
NOK	1,662	-	1,662	1,625	-	1,625
PLN	266	-	266	291	-	291
Other	154	-	154	128	-	128
Total	8,656	-365	8,292	8,111	-388	7,723

Translation exposure position includes net investments in foreign subsidiaries and associated companies. 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 253 million in 2019 (2018: -518). Part of this translation exposure has been hedged and the foreign currency hedge result amounted to EUR -14 million in 2019 (2018: 24).

Interest rate and currency derivatives by instrument 2019

EUR million	Notional amount Remaining lifetimes			Fair value	
	Under 1 year	1–5 years	Over 5 years	Positive	Negative
Forward foreign exchange contracts	3,925	359	-	4,284	11
Interest rate swaps	-	2,715	1,525	4,240	153
Interest rate and currency swaps	104	263	-	367	8
Total	4,029	3,337	1,525	8,891	172
Of which long-term					156
Short-term					16

Interest rate and currency derivatives by instrument 2018

EUR million	Notional amount Remaining lifetimes			Fair value	
	Under 1 year	1–5 years	Over 5 years	Positive	Negative
Forward foreign exchange contracts	3,240	310	-	3,550	4
Interest rate swaps	1,515	2,242	225	3,982	15
Interest rate and currency swaps	383	265	-	648	6
Total	5,137	2,817	225	8,179	26
Of which long-term					15
Short-term					11

4.7 Credit risk

Fortum is exposed to counterparty risk whenever there is a contractual arrangement with an external party. Credit risk exposures relating to financial derivative instruments are often volatile. The majority of derivatives are exchange-traded and cleared through clearing houses such as Nasdaq Clearing AB and clearing banks. Derivatives contracts are also entered into directly with external counterparties and are limited to high-credit-quality counterparties active on the financial or commodity markets. Current interest rate derivative counterparties are limited to investment grade banks and financial institutions with most of these counterparties. Commodity derivative counterparties are limited to those considered creditworthy. Master agreements, such as ISDA, FEMA and EFET, which include netting clauses, are entered into with the majority of the counterparties.

Risks

Deposits and securities

The following tables present bank deposits, commercial papers and fair values of derivatives by rating classes.

EUR million	2019	2018
Counterparties with external credit rating from Standard & Poor's, Fitch and/or Moody's		
Investment grade ratings		
AAA	-	-
AA+/AA/AA-	198	62
A+/A/A-	545	30
BBB+/BBB/BBB-	356	76
Total investment grade ratings	1,099	168
Non-investment grade ratings		
BB+/BB/BB-	60	260
B+/B/B-	-	-
Below B-	-	-
Total non-investment grade ratings	60	260
Counterparties without external credit rating from Standard & Poor's, Fitch or Moody's		
Government or municipality	-	-
Fortum Rating 5 - Lowest risk	156	46
Fortum Rating 4 - Low risk	-	-
Fortum Rating 3 - Normal risk	-	-
Fortum Rating 2 - High risk	-	-
Fortum Rating 1 - Highest risk	-	-
No rating	-	-
Total non-rated counterparties	156	46
Total	1,315	474

In addition, cash in other bank accounts totalled EUR 118 million on 31 December 2019 (2018: 110).

See ► **Note 24** Liquid funds.

Interest rate and currency derivatives

EUR million	2019	Netted amount ¹⁾
Counterparties with external credit rating from Standard & Poor's, Fitch and/or Moody's		
Investment grade ratings		
AAA	-	-
AA+/AA/AA-	14	0
A+/A/A-	137	15
BBB+/BBB/BBB-	20	10
Total investment grade ratings	172	24
Total associates and joint ventures	-	-
Counterparties without external credit rating from Standard & Poor's, Fitch or Moody's		
Total	172	24

1) The netted amount includes the cash received in accordance with Credit Support Annex agreements EUR 65 million (2018: 75 million).

Electricity, coal, gas and oil derivatives and CO₂ emission allowances treated as derivatives

EUR million	2019		2018	
	Receivables	Netted amount	Receivables	Netted amount
Counterparties with external credit rating from Standard & Poor's, Fitch and/or Moody's Investment grade ratings				
AAA	-	-	-	-
AA+/AA/AA-	1	1	-	-
A+/A/-	3	1	56	60
BBB+/BBB/BBB-	0	0	2	2
Total investment grade ratings	4	2	58	62
Non-investment grade ratings				
BB+/BB/BB-	0	0	0	0
B+/B/B-	2	0	-	-
Below B-	-	-	-	-
Total non-investment grade ratings	2	0	0	0
Total associates and joint ventures	4	0	22	0
Counterparties without external credit rating from Standard & Poor's, Fitch or Moody's				
Government or municipality	2	0	12	0
Fortum Rating 5 - Lowest risk	21	19	12	1
Fortum Rating 4 - Low risk	9	3	13	5
Fortum Rating 3 - Normal risk	13	11	3	1
Fortum Rating 2 - High risk	0	0	3	3
Fortum Rating 1 - Highest risk	0	0	-	-
No rating	24	18	10	3
Total non-rated counterparties	69	51	53	13
Total	79	53	133	75

For derivatives, the receivable is the sum of the positive fair values, i.e. the gross amount. Netted amount includes negative fair values where a valid netting agreement is in place with the counterparty. When the netted amount is less than zero, it is not included. In cases where a parent company guarantee is in place, the exposure is shown on the issuer of the guarantee.

All counterparties for currency and interest rate derivatives and the majority of counterparties for electricity, coal, gas and oil derivatives have an external rating from Standard & Poor's, Fitch and/or Moody's credit agencies. The above ratings are based on external credit ratings from other credit agencies. The rating from Standard & Poor's, the rating from Fitch and the rating from Moody's are translated to the equivalent Standard and Poor's and Fitch rating category. For counterparties rated by one rating agency, the lowest of the ratings is used.

In the commodity derivatives and commercial paper market, there are a number of counterparties by Standard & Poor's, Fitch or Moody's. For these counterparties, Fortum assigns an internal rating. The rating is based on external credit ratings from other credit agencies. The rating from Standard & Poor's, the rating from Fitch and the rating from Moody's are translated to the equivalent Standard and Poor's and Fitch rating category. For counterparties rated by one rating agency, the lowest of the ratings is used.

5 Capital risk management

Fortum updated its strategy and reconfirmed the dividend policy and long-term financial targets in 2018. The update was a continuation of the strategy execution towards Fortum's vision for a clear strategy aims at strengthening Fortum's competitiveness and ensuring a benchmark portfolio for the power distribution business. This has enabled stronger focus on power and heat generation, through investment in Uniper, and growth in sustainable bio and waste-based combined heat and power generation. Furthermore, Fortum has created a solid base in solar and wind power, expanded in the consumer services, the recycling and waste business.

Pursuing operational excellence and increased flexibility as well as ensuring value creation from portfolio optimization are the key priorities. Benchmark performance is essential for long-term competitive advantage. For the next 2–3 years, Fortum prioritises profit creation from the current business portfolio. This will be achieved through operational excellence and increased flexibility. All sources of flexibility, both flexible generation and the demand response of large customers and consumers, will be needed to balance the high demand for electricity. Operational excellence and increased flexibility will contribute to improved financial performance and cash flows to create additional financial headroom. In addition, Fortum will prioritise and scrutinize capital expenditure. Through these measures, the target is to steer leverage ratio towards the long-term target ratio of around 2.5 times.

Risks

Over the recent years Fortum has made several sizeable investments and aims to further improve its financial performance by ensuring value creation from them. The investment in Uniper, currently accounted for as an associated company, will contribute to Fortum's financial performance both through Fortum's share of Uniper's result and its dividend. As Uniper's largest shareholder, Fortum's ambition is to increase value for both companies and their stakeholders.

In addition, Fortum continues to review its business portfolio in line with its strategic priorities emphasising CO₂-free assets, flexibility, and low operating cost to fit the changing business environment. Fortum will also drive focused growth in the power value chain and seek to build options for significant new businesses for the future.

Financial targets give guidance on Fortum's view of the company's long-term value creation potential, its growth strategy and business activities. The long-term over-the-cycle financial targets are Return on capital employed, ROCE at least 10% and Comparable net debt to EBITDA around 2.5 times. These measures are considered as Alternative Performance Measures.

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 per share 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 target is to pay a stable, sustainable and over time increasing dividend, in the range of 50–80% of earnings per share, excluding one-off items.

Following Fortum's announcement to acquire an additional stake of more than 20.5% of Uniper's shares, Standard & Poor's and Fitch reviewed the credit rating of Fortum. In October 2019, Standard & Poor's placed Fortum's long-term credit rating of BBB on CreditWatch Negative. The short-term rating is at level A-2. In October 2019, Fitch Ratings placed Fortum's long-term credit rating of BBB and short-term credit rating of F2 on Rating Watch Negative. Both rating agencies are expected to update the credit ratings after the closing of the acquisition of at least an additional 20.5% of Uniper shares.

Fortum's key objective is to have a solid investment-grade rating of at least BBB, to preserve financial flexibility and good access to capital markets post-closing of the above mentioned acquisition of Uniper shares, and to strengthen its financial profile longer term. This will provide appropriate financial stability and support to the enlarged group.

Fortum's key financial targets will be revisited in due course to ensure alignment with a commitment to retain a solid investment grade rating of at least BBB.

Comparable net debt/EBITDA ratio

EUR million	Note
Interest-bearing liabilities	6,6
Less: Liquid funds ¹⁾	1,4
Net debt	27
Operating profit	1,1
Add: Depreciation and amortisation	5
EBITDA	1,6
Less: Items affecting comparability	-
Comparable EBITDA	1,7
Comparable net debt/EBITDA	1,6

1) Net debt is calculated as interest-bearing liabilities minus liquid funds without deducting interest-bearing receivables amounting to 1,4 million (2018: 1,092).

Return on capital employed, %

EUR million	Note
Profit before income tax	1,7
Interest expenses	1
Other financial expenses	1
+ Interest and other financial expenses	1
Profit before taxes + interest and other financial expenses	1,9

Capital employed

Total assets	23,3
Total liabilities	10,1
- Interest-bearing liabilities	6,6
- Total interest-free liabilities	3,4
Capital employed	19,9
Capital employed at the end of previous period	18,1
Average capital employed	19,0
Return on capital employed, %	10

See ▶ Definitions of key figures.

6 Segment reporting

Income statement

SIGNIFICANT ACCOUNTING POLICIES

REVENUE RECOGNITION

Fortum's operations comprise electricity, heating, cooling and waste management services. Revenue streams can be divided into four groups: power sales to wholesale markets, power sales to retail customers, heating sales and waste treatment sales.

Revenue is recognized when goods are transferred or services are performed, i.e. when (or as) 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 is presented net of rebates, discounts, value-added tax and selective taxes, such as electricity tax.

The accounting policies for the different revenue streams are described below.

POWER SALES TO WHOLESALE MARKETS

Physical electricity trades to Nord Pool or other wholesale markets are made either the day before delivery or during the same day, hence contract duration is very short. Transaction price is the spot price, there are no variable elements. Electricity sales are recognised on delivery at the price defined in Nord Pool or other wholesale market. 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, 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 if well. There is only one performance obligation, which is to stand-ready to supply heat to the customer. The fee the customer generally comprise a fixed monthly charge and a variable fee based on the volume of heat supplied. The promise is to stand ready to deliver heat, the fixed and variable components are recognised based on the fee from the customer. In Russia, Baltics 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 supply heat and revenue is recognised based on the volume of heat that Fortum is entitled to charge from the customer.

WASTE TREATMENT SALES

Majority of revenue from waste management services arises from fees charged for receiving waste (from customers and gate fees). The fee is usually determined based on the volume of waste received, there are no variable elements. Fortum is required to treat the waste and this performance obligation is satisfied when treatment has been completed. Transportation of the waste forms another performance obligation. Fees for waste treatment and transportation are separately agreed in the contract and correspond to the price that would be charged for these services separately 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 construction sites. Fees charged are invoiced based on payment schedules agreed with the customer. The customer obtains 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.

COSTS FOR OBTAINING CUSTOMERS

Incremental costs for obtaining new customers as well as renewing existing customer contracts are recognised when the division are capitalised as intangible asset and amortised over the expected contract duration.

NETTING AND INTER-SEGMENT TRANSACTIONS

Generation segment sells its production to Nord Pool and Consumer Solutions segment buys its electricity from Nord Pool. Eliminations of sales include eliminations of sales and purchases with Nord Pool that are netted at group level. Sales and purchases are recorded on a net basis and posted either as revenue or cost depending on if Fortum is a net seller or net buyer during any period. Segment sales, expenses and results for the different business segments are affected by intragroup deliveries and eliminations on consolidation. Inter-segment transactions are based on commercial terms.

Join the change	Operating and financial review	Consolidated financial statements	Notes	Key figures	Parent company financial statements	Proposal for the use of the profit shown on the balance sheet	Auditor's report	Key figures 2010–2019	Quarterly financial information
	Income statement								
	6.1 Business structure Fortum's business divisions are Generation, City Solutions, Consumer Solutions and Russia. Other Operations includes corporate functions, R&D and technology development projects, as well as Fortum's shareholding in Uniper SE. 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. These were included in Other Operations until 31 December 2018. 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.								
	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 the type of business operation, combined with one segment based on geographical area. Fortum's segments are the business divisions Generation, City Solutions, Consumer Solutions and Russia.								
	Description of reportable segments:								
	Group								
Divisions	Generation	City Solutions			Consumer Solutions			Russia	Russia ⁽¹⁾
	 Generation is responsible for Nordic power production. The segment comprises nuclear, hydro, wind, and thermal power production, as well as power portfolio optimisation, trading, industrial intelligence, and global nuclear services.	 City Solutions is responsible for developing sustainable solutions for urban areas into a growing business for Fortum. The segment comprises heating, cooling, waste-to-energy, biomass, and other circular economy solutions, as well as solar power production. The business operations are located in the Nordics, the Baltic countries, Poland, and India. The segment also includes Fortum's 50% holding in Stockholm Exergi, which is a joint venture and is accounted for using the equity method.			 Consumer Solutions is responsible for the electricity and gas retail businesses in the Nordics and Poland, including the customer service, invoicing, and debt collection businesses. Fortum is the largest electricity retail business in the Nordics, with approximately 2.4 million customers across different brands in Finland, Sweden, Norway, and Poland. The business provides electricity as well as related value-added and digital services.			 The Russia segment comprises power and gas generation and sales in Russia. The segment includes Fortum's over 29% holding in Tyumenenergo, an associated company and is accounted for using the equity method.	
	Generation	City Solutions			Consumer Solutions			Russia	Russia ⁽¹⁾
	Reporting segments	Reporting segments			Reporting segments			Reporting segments	Reporting segments

Income statement

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. These measurements that are considered as Alternative Performance Measures, such as Comparable operating profit and Comparable return on net assets, have been used consistently since 2005. See ► **Note 1** Significant accounting policies.

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

6.4 Segment information Consolidated income statement

EUR million	Note	Generation ¹⁾		City Solutions ¹⁾		Consumer Solutions		Russia		Other Operations	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Power sales ²⁾		2,006	1,771	153	134	1,630	1,547	924	872	0	4,770
Heat sales		0	0	615	604	0	0	145	193	0	7
Waste treatment sales		0	0	250	211	0	0	0	0	0	2
Other sales		135	71	181	161	206	212	2	4	115	109
Sales		2,141	1,842	1,200	1,110	1,835	1,759	1,071	1,069	115	107
Internal eliminations		-259	2	-45	-37	3	-11	0	0	-86	-7
Netting of Nord Pool transactions ³⁾											-5
IS External sales		1,883	1,844	1,155	1,073	1,839	1,748	1,071	1,069	29	5,4
Comparable EBITDA		939	763	309	310	141	110	469	417	-91	1,7
IS Depreciation and amortisation		-145	-135	-188	-175	-62	-57	-153	-147	-28	-2
IS Comparable operating profit		794	628	121	135	79	53	316	271	-119	1,1
Impairment charges	7	-3	-4	0	0	0	0	0	0	-6	-
Capital gains and other	7	3	77	5	-1	0	0	1	2	-2	2
Changes in fair values of derivatives hedging future cash flow	7.8	-15	79	2	-4	-59	22	0	0	0	-
Nuclear fund adjustment	7.29	-9	-45	0	0	0	0	0	0	0	-
IS Items affecting comparability	7	-23	108	7	-5	-59	22	1	2	-8	-
IS Operating profit		771	736	127	130	20	75	317	273	-127	1,1
IS Share of profit/loss of associates and joint ventures	19, 29	10	-72	37	74	0	0	59	36	638	7
IS Finance costs - net											-1
IS Income taxes											-2
IS Profit for the year											1,5

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.

²⁾ Power sales contains realised result from commodity derivatives, which have not had hedge accounting status under IFRS 9, but have been considered operatively as hedges.

³⁾ Sales and purchases with Nord Pool are netted at 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.

Income statement

Segment assets and liabilities

EUR million	Note	Generation		City Solutions		Consumer Solutions		Russia		Other Operations	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Non-interest-bearing assets		6,433	6,861	3,728	3,582	942	1,044	2,630	2,408	192	173
BS Participations in associates and joint ventures		838	854	584	641	0	0	681	495	4,331	3,988
Eliminations											-1
Total segment assets		7,271	7,715	4,312	4,223	942	1,044	3,311	2,903	4,523	4,161
Interest-bearing receivables	21										1,0
BS Deferred tax assets	28										5
Other assets											1,4
BS Liquid funds	24										23,3
Total assets											
Segment liabilities		1,124	1,230	419	429	302	396	107	114	167	138
Eliminations											-1
Total segment liabilities											
BS Deferred tax liabilities	28										2,0
Other liabilities											8
Total liabilities included in capital employed											3,4
Interest-bearing liabilities	27										6,6
BS Total equity											13,2
Total equity and liabilities											23,3

Segment assets and liabilities include assets held for sale. See ► **Note 3** Acquisitions, disposals and assets held for sale.

Gross investments / divestments

EUR million	Note	Generation		City Solutions		Consumer Solutions		Russia		Other Operations	
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Gross investments in shares	19, 3	13	14	9	33	0	0	66	63	18	1
Capital expenditure	17, 18	247	248	313	209	55	47	67	54	31	2
Gross divestments of shares	3	12	160	2	147	0	0	0	0	16	7

Income statement

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

EUR million	Note	Generation		City Solutions		Consumer Solutions		Russia		Other
		2019	2018	2019	2018	2019	2018	2019	2018	
Comparable operating profit		794	628	121	135	79	53	316	271	-1
Share of profit/loss of associates and joint ventures	19	10	-72	37	74	0	0	59	36	6
Adjustment to share of profit/loss of associates and joint ventures ¹⁾		-13	94	22	0	0	0	0	0	-4
Comparable operating profit including share of profit of associates and joint ventures		791	650	179	209	79	53	375	307	
Segment assets at the end of the year		7,271	7,715	4,312	4,223	942	1,044	3,311	2,903	4,511
Segment liabilities at the end of the year		1,124	1,230	419	429	302	396	107	114	1
Comparable net assets		6,147	6,485	3,892	3,794	640	648	3,205	2,789	4,300
Comparable net assets average ²⁾		6,190	6,019	3,823	3,808	602	671	3,041	2,976	4,100
Comparable return on net assets, %		12.8	10.8	4.7	5.5	13.2	7.8	12.3	10.3	

1) See ▶ Definitions of key figures.

2) Average net assets are calculated using the opening balance of the financial year and each quarter's closing value.

Segment assets and liabilities include assets held for sale. See ▶ Note 3 Acquisitions, disposals and assets held for sale.

Employees

	Generation		City Solutions		Consumer Solutions		Russia		Other Operations	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Number of employees 31 Dec	1,109	1,091	1,970	2,017	1,327	1,399	2,955	2,941	830	830
Average number of employees	1,122	1,107	1,979	1,994	1,379	1,473	2,942	3,378	816	816

6.5 Group-wide disclosures

The Group's operating segments operate mainly in the Nordic countries, Russia, Poland and other parts of the Baltic Rim area. Generation operates mainly in Finland and Sweden; Consumer Solutions operates mainly in the Nordic countries and Poland; whereas City Solutions operates in all of these geographical areas except Russia. Other countries include mainly Estonia, Latvia, Lithuania and India. The Group's domicile is Finland.

The table below presents sales by geographical area based on customer location. Assets, capital expenditure 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	2019	2018
Nordic	3,770	3,770
Russia	1,000	1,000
Poland	300	300
Other countries	200	200
IS Total	5,400	5,400

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

Income statement

Capital expenditure by country

EUR million	2019	2018
Finland	199	215
Sweden	114	89
Norway	115	97
Russia	67	54
Poland	47	86
Other countries	171	43
Total	713	584

Segment assets by country

EUR million	2019	2018
Finland	4,130	4,589
Sweden	4,125	4,202
Norway	1,605	1,622
Russia	2,630	2,408
Poland	671	645
Other countries and eliminations	656	488
Non-interest bearing assets	13,817	13,955
BS Participations in associates and joint ventures	6,435	5,978
Total	20,252	19,933

Segment assets in Finland include EUR 169 million (2018: 590) settlements paid for futures. Segment assets and liabilities include assets held for sale. See ► **Note 3** Acquisitions, disposals and assets held for sale.

Number of employees on 31 December by country

	2019	2018
Finland	2,234	2,238
Sweden	985	981
Norway	660	667
Russia	2,955	2,941
Poland	560	754
Other countries	797	705
Total	8,191	8,286

7 Items affecting comparability

EUR million

Impairment charges	20
Capital gains and other	-
Changes in fair values of derivatives hedging future cash flow	-
Nuclear fund adjustments	-

IS Total

Fortum uses Alternative performance measures (APMs) in the financial target setting and forecast management's follow up of financial performance of segments and the Group as well as allocation of the Group's performance management process. The business performance of the operations cannot from one period to another without adjusting for items affecting comparability and therefore they are from Comparable operating profit and Comparable EBITDA. The main business performance measures have been used consistently since 2005.

Definitions are presented in the section ► **Definitions of key figures**.

Impairment charges

Impairment charges are recognised in items affecting comparability and include impairment charges on provisions (mainly dismantling). Impairment charges are adjusted from depreciation and amortisation impairment charges during 2019 amounted to EUR -8 million (2018: -4).

Capital gains and other

Capital gains and other include capital gains and transaction costs from acquisitions, which are adjusted to other income and other expenses, respectively. Capital gains and other in 2019 amounted to EUR 710 million (2018: 102). The comparison year includes the capital gain of EUR 77 million from the sale of Fortum's 10% stake in Hafslund Produktion Holding AS and EUR 26 million from the sale of Espoo head office. For more information regarding disposals of shares, see ► **Note 3** Acquisitions, disposals and assets held for sale.

Fair value changes on derivatives

Changes in the fair values of financial derivative instruments hedging future cash flows to be sold or used for hedge accounting, or own use exemption cannot be applied, or physical contracts to buy or sell a derivative item, which are fair value using fair value option to offset accounting mismatch, are recognised in items affecting comparability. This is done to improve the understanding of the financial performance with comparability from one period to another. For more information regarding fair value changes of derivatives, see ► **Note 3** Acquisitions, disposals and assets held for sale.

Income statement

Nuclear waste management fund adjustment

Nuclear fund adjustment includes effects from the accounting principle of Fortum's part of the State Nuclear Waste Management Fund where the assets on the balance sheet cannot exceed the nuclear related provisions according to IFRIC 5. As long as the Fund is overfunded from an IFRS perspective, the effects to the operating profit from this adjustment will be positive if the provisions increase more than the Fund and negative if actual value of the fund increases more than the provisions. In addition adjustments are made for accounting effects from valuation according to IFRS.

The nuclear cost estimates and technical plan was updated during 2019 which led to a decrease in provision of EUR 100 million. The reduced provision led to negative nuclear fund adjustment of EUR 54 million. The periodisation of the fund target led to a positive fund adjustment of EUR 51 million which is booked as an interest-free receivable.

Fortum reassessed assumptions used for all nuclear related assets and liabilities during 2018. The increase of the nuclear provision for the Lovisa nuclear power plant in Finland lead to recognition of an additional share of the Finnish nuclear fund. The increase of the provision due to the reassessment and the additional share in the fund were both included in items affecting comparability in 2018. The net profit impact from all these nuclear related adjustments was close to zero.

For more information regarding nuclear waste management, see ► **Note 29** Nuclear related assets and liabilities.

8 Fair value changes of derivatives and underlying items in income statement

Fair value changes in operating profit presented below are arising from financial derivatives hedging flows where hedge accounting is not applied according to IFRS 9 and the ineffectiveness from cash flows. Table includes also fair value changes from physical contracts to buy or sell a non-financial items, valued through income statement when fair value option to off-set accounting mismatch is used, or exemption or hedge accounting cannot be applied.

Fair value changes of currency derivatives in net financial expenses arise mainly from balance sheet without hedge accounting status according to IFRS 9, because they are natural hedges of loans and Fair value change of interest rate hedges without hedge accounting is EUR -2 million (2018: -8).

EUR million	2019
In operating profit	
Fair value changes from derivatives not getting hedge accounting status	
Electricity derivatives	
Currency derivatives	
Other commodity derivatives	
Total effect in operating profit	

In finance costs

Exchange gains and losses on loans and receivables ¹⁾	
Fair value changes of derivatives not getting hedge accounting status	
Gross currency interest rate derivatives ¹⁾	
Foreign currency derivatives ¹⁾	
Rate difference on forward contracts	
Currency derivatives	
Interest rate derivatives	
Fair value change of hedging derivatives in fair value hedge relationship	
Fair value change of hedged items in fair value hedge relationship	
Total ²⁾	

Total effect in finance costs

Total effect on profit before income tax

1) Exchange gains and losses on loans, receivables and derivatives totaling EUR 0 million (2018: -1).

2) Including fair value gains and losses on hedged financial instruments and foreign currency and interest rate derivatives EUR -1 million (2018: -1).
See also ► **Note 12** Finance costs - net.

Income statement

9 Other income and other expenses

ACCOUNTING POLICIES

OTHER INCOME

Revenue from activities outside normal operations is reported in other income. This includes recurring items, such as rental income and subsidies and non-recurring items, such as insurance compensation. In addition, profits from the capital recycling business model are presented in other income, because the business results are realised through divesting the shareholding, either partially or totally.

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.

9.1 Other income

EUR million	2019	2018
Rental income	23	12
Insurance compensation	8	1
Subsidies	28	47
Other items	54	71
IS Total	110	130

In 2018, other included a profit of EUR 26 million from the partial sale of Fortum's solar power company in India according to the 'capital recycling' business model. See also ▶ **Note 3** Acquisitions, disposals and assets held for sale.

9.2 Other expenses

EUR million	2019	2018
Operation and maintenance costs	134	130
Property taxes	71	109
IT and telecommunication costs	94	77
Other items	292	278
IS Total	591	594

The major components recorded in other expenses are the external operation and maintenance costs and heat plants. Property taxes include taxes relating to directly owned hydropower production of (2018: 65). Other includes expenses relating to properties and other operative expenses.

Principal auditor's fees

EUR million	2019
Audit fees	1
Audit-related assignments	1
Tax assignments	1
Other assignments	1
Total	4

Deloitte Oy is the appointed auditor until the next Annual General Meeting in 2020. Audit fees include audit of the consolidated financial statements, review of interim reports, as well as fees for the audit of the Corporation and its subsidiaries. Audit-related assignments include fees for assurance of sustainability and other assurance and associated services related to the audit. Tax assignments include fees for services. Other assignments consist of advisory services.

Income statement

10 Materials and services

EUR million	2019	2018
Materials	2,200	2,296
Materials purchased from associates and joint ventures	369	372
Transmission costs	42	41
External services	110	86
IS Total	2,721	2,795

Materials consists mainly of coal, gas and nuclear fuels used for producing power and heat.

Materials purchased from associates and joint ventures consist of nuclear and hydropower purchased at production cost (including interest costs and production taxes) and purchased steam.

Total materials and services include production taxes of EUR 60 million (2018: 62), including hydro power related property taxes of EUR 13 million (2018: 13). Taxes related to nuclear and hydro production are included in taxes paid through purchases from associates and joint ventures.

See ► **Note 19** Participations in associated companies and joint ventures.

11 Employee benefits and Board remuneration

EUR million	2019	2018
Wages and salaries	2,200	2,296
Pensions	369	372
Defined contribution plans	42	41
Defined benefit plans	110	86
Social security costs	110	86
Share-based incentives ¹⁾	110	86
Other employee costs	110	86
IS Total	2,721	2,795

¹⁾ Share-based incentives increased in 2019 mainly due to the higher earnings outcome from settled plans.

The compensation package for Fortum employees consists of salaries, fringe benefits, short-term incentives sharing paid to the Personnel Fund (in Finland) and share-based long-term incentives for selected key employees. The remuneration policy is determined by the Board of Directors. The Nomination and Remuneration Committee of the Board of Directors discusses, assesses and makes recommendations as proposed by the Board of Directors on the remuneration policy, remuneration of the President and CEO and the Fortum Management; and company-wide incentive arrangements for senior management and key personnel as monitors these plans annually. Additionally, the Committee contributes to the Group's nomination proposing to the Board of Directors any nominations regarding the members of Fortum Executive Management. For further information on pensions see ► **Note 31** Pension obligations.

11.1 Short-term incentives (STI)

Fortum's STI programme is designed to support the achievement of the Group's financial and other targets on an annual basis. As a main principle, all employees are covered by the programme or alternative business specific or a comparable local variable pay arrangement.

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 performance and individual targets. The target incentive opportunity is 20% and the maximum incentive opportunity annual base salary. The Board of Directors assesses the performance of the President and CEO and the Fortum Executive Management on a regular basis.

Awards for other employees are based on a combination of Group, divisional, functional and personal targets. The targets are set in annual performance discussions held at the beginning of the year. Awards for STI programme are paid solely in cash.

Income statement

11.2 Share-based long-term incentives (LTI)

The purpose of Fortum's share-based long-term incentive programme 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.

Fortum's 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 exceeded, 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 2013 to 2016, any shares awarded to Fortum Executive Management members are subject to a three-year lock-up period. Subject to a decision by the Board of Directors, the lock-up period can be reduced to one year for those Fortum Executive Management members whose aggregate ownership of Fortum shares is greater than or equal to their annual salary. For other participants the lock-up period is one year. If the value of the shares decreases or increases during the lock-up or retention period, the participant will carry the potential loss or gain. For LTI plans commencing in 2017 and later, the share awards will not be subject to a minimum lock-up period. However, Fortum Executive Management 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.

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 and for the transactions settled in shares in the equity. The social charges related to the arrangement payable by the employer are accrued as a liability. The LTI liability including social charges at the end of the year 2019 was EUR 14 million (2018: 14), including EUR 7 million (2018: 8) recorded in equity.

Plans	2013	2014	2015	2016	2017	2018	2019	2020	2021
2013–2018	1	2	3	4	5	6			
2014–2019		1	2	3	4	5	6		
2015–2020			1	2	3	4	5	6	
2016–2021				1	2	3	4	5	6
2017–2019					1	2	3		
2018–2020						1	2	3	
2019–2021							1	2	3

■ Earnings period ■ Additional lock-up period for FEM
 ■ Lock-up period ■ Share delivery

At year end 2019 approximately 160 key employees are participants in at least one of the six on LTI plans (plans 2014–2019, 2015–2020, 2016–2021, 2017–2019, 2018–2020 and 2019–2021).

Shares granted

	Plan 2016–2021	Plan 2015–2020	Plan 2014–2019	Plan 2013–2018
Grant date	21 Feb 2019	13 Feb 2018	13 Feb 2017	13 Feb 2016
Grant price, EUR	19.33	17.04	14.2	14.2
Number of shares granted	293,534	73,377	92,32	92,32
Number of shares subsequently forfeited or released from lock-up and other changes	-21,415	-71,498	-92,15	-92,15
Number of shares under lock-up 31 December 2019	272,119	1,879	17	17

In addition to the shares granted above, share rights have been granted to participants that will receive payments instead of shares after the lock-up period. The gross amount of share rights outstanding the year 2019 for plan 2016–2021 was 148,040, for plan 2015–2020 18,310, for plan 2014–2019 plan 2013–2018 32,066 share rights.

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11.3 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. Persons included in Fortum's long-term incentive schemes are not eligible to be members of this fund. Members of the personnel fund are the permanent and fixed-term employees of the Group. The membership of employees joining the company starts at the beginning of the next month after the employment relationship has been ongoing for five months. An employee is entitled to make withdrawals right from the beginning of the membership. The membership in the fund terminates when the member has received his/her share of the fund in full.

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 amount available for withdrawal (maximum 15% of the tied amount) is decided each year by the council of the fund and it is paid to members who want to exercise their withdrawal rights.

The fund's latest financial year ended at 30 April 2019 and the fund then had a total of 2,280 members (2018: 2,233). At the end of April 2019 Fortum contributed EUR 2.4 million (2018: 2.0) to the personnel fund as an annual profit-sharing bonus based on the financial results of 2018. The combined amount of members' shares in the fund was EUR 20 million (2018: 19).

The contribution to the personnel fund is expensed as it is earned.

11.4 The President and CEO and the Fortum Executive Management remuneration

The Fortum Executive Management (FEM) consists of ten 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

EUR thousand	2019		2018	
	Pekka Lundmark, President and CEO	Other FEM members	Pekka Lundmark, President and CEO	Other FEM members
Salaries and fringe benefits	1,057	3,382	1,048	3,382
Performance bonuses ¹⁾	200	661	228	661
Share-based incentives ¹⁽²⁾	898	3,506	297	3,506
Pensions (statutory)	207	748	250	748
Pensions (voluntary)	265	265	252	265
Social security expenses	39	344	36	344
Total	2,666	9,287	2,112	9,287

1) Based on estimated amounts.

2) Share-based incentives increased in 2019 mainly due to the higher earnings outcome from settled plans.

The annual contribution for the President and CEO Pekka Lundmark's pension arrangement is 25% salary. The annual salary consists of base salary and fringe benefits. The President and CEO's retirement salary. In case his assignment is terminated before the retirement age, the President and CEO is entitled to benefits accrued in the arrangement.

For the other members of the FEM the retirement age varies between 62 and 65. According to the all new supplementary pension arrangements are defined contribution plans. For the members of the FEM who have defined contribution arrangements, the maximum pension premium percentage can be 25% of salary. Members, who have joined Fortum prior to 1 January 2009, are participating in defined benefit arrangements, where the benefit is 60–66% of the final pensionable salary with the pension provided by an insurance company or Fortum's Pension Fund.

A pension liability of EUR 824 thousand (2018: 624) related to the defined benefit plan for FEM has been recognised on the balance sheet. The additional pension arrangement for the President and CEO has been recognised on the balance sheet and thus no liability has been recognised on the balance sheet.

In the event that Fortum decides to give notice of termination to the President and CEO, he is entitled to a severance pay equal to 12 months' salary. In the event that Fortum decides to give notice of termination to the President and CEO, he is entitled to a severance pay equal to 12 months' salary. In the event that Fortum decides to give notice of termination to the President and CEO, he is entitled to a severance pay equal to 12 months' salary.

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Number of shares delivered to the management

The table below shows the number of shares delivered during 2019 and 2018 to the President and CEO and other FEM members under the LTI arrangements. Shares delivered under the plans are subject to a lock-up period under which they cannot be sold or transferred to a third party.

FEM members at 31 December 2019		2019 ²⁾	2018 ³⁾
Pekka Lundmark, CEO		25,765	6,453
Arun Aggarwal (member of FEM from 17 Oct 2018)		-	-
Alexander Chuvaev ¹⁾		33,522	15,930
Per Langer		5,057	1,621
Risto Penttinen		6,232	1,767
Markus Rauramo		11,137	2,103
Arto Rätty		4,931	-
Mikael Rönöblad		3,435	-
Sirpa-Helena Sormunen		6,012	1,879
Tiina Tuomela		7,206	2,117
Former FEM members			
Kari Kauppinen (member of FEM until 30 September 2018)		N/A	2,059
Total		103,297	33,929

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 after the three-year lock-up period.

²⁾ Share delivery based on share plan 2016–2021.

³⁾ Share delivery based on share plan 2015–2020.

11.5 Board of Directors and management shareholding

On 31 December 2019, the members of the Board of Directors owned a total of 8,540 shares (2018: 8,540), which corresponds to 0.00% (2018: 0.00%) of the company's shares and voting rights.

Number of shares held by members of the Board of Directors

Board members at 31 December 2019	
Matti Lievonen, Chairman	1,500
Klaus-Dieter Maubach, Deputy Chairman	4,000
Eva Hamilton	
Kim Ignatius	
Essimari Kairisto	
Anja McAlister	
Veli-Matti Reinikkala	
Philipp Rösler	
Total	8,500

The President and CEO and other members of the FEM owned a total of 263,002 shares (2018: 19,000), which corresponds to approximately 0.03% (2018: 0.02%) of the company's shares and voting rights.

Number of shares held by members of the Fortum Executive Management

FEM members at 31 December 2019	
Pekka Lundmark	92,900
Arun Aggarwal	22,000
Alexander Chuvaev	38,200
Per Langer	18,500
Risto Penttinen	45,200
Markus Rauramo	4,900
Arto Rätty	3,400
Mikael Rönöblad	12,600
Sirpa-Helena Sormunen	24,800
Tiina Tuomela	
Total	263,000

11.6 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 of 2019 the Board of Directors consists of eight members.

Total	529	483
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Interest expenses include interest expenses on interest-bearing loans, interest on interest-bearing loans and forward foreign exchange contracts hedging loans and receivables. Interest expenses on forward foreign exchange contracts hedging loans and receivables amounted to EUR 167 million (2018: 148). Interest expenses in 2019 include the remaining amortised cost of EUR 19 million (2018: 19 million) due to the prepayment of the bridge financing for the acquisition of Uniper shares in 2019.

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Interest income were EUR 28 million (2018: 34) including EUR 12 million (2018: 12) from shareholders' loans to co-owned Swedish nuclear companies, and EUR 11 million (2018: 17) from deposits and commercial papers.

Fair value gain and losses were EUR 8 million (2018: -8). Fair value gains and losses on financial instruments include change in clean price of interest rate and cross-currency swaps not getting hedge accounting and fair value changes of interest rate derivatives in hedge relationship and hedged items. Accrued interest on these derivatives is entered in interest expenses of borrowings. Fair value gains and losses include also rate difference from forward contracts hedging loans and receivables without hedge accounting.

Exchange gains and losses were net zero including exchange rate differences arising from valuation of foreign currency loans and receivables and exchange rate differences from forward foreign exchange contracts and interest rate and currency swaps.

Unwinding of discount on nuclear provisions were EUR 7 million (2018: 11) including in 2019 the positive impact of EUR 40 million related to the regular nuclear technical update in Finland and in 2018 positive effect from changes in assumptions of EUR 49 million due to the adjustment to past unwinding of interest. For additional information see Note 29 Nuclear related assets and liabilities.

Other financial income EUR 17 million (2018: 11) includes EUR 8 million from a receivable from SIBUR (2018: 10), a Russian gas processing and petrochemicals company regarding divested shares of OOO Tobolsk CHP and EUR 6 million, which was returned from Nasdaq default fund in 2019. Other financial expenses were EUR 15 million (2018: 26) including EUR 10 million cost for the new committed credit facilities related to the acquisition of an additional minimum stake of 20.5% in Uniper and in 2018 EUR 20 million cost regarding replenishment to Nasdaq default fund.

Interest rate and currency derivatives in finance costs - net

EUR million	2019	2018
Interest rate and cross currency swaps		
Interest expenses on borrowings	20	27
Exchange rate difference from derivatives	30	8
Rate difference in fair value gains and losses on financial instruments ¹⁾	25	-32
Total fair value change of interest rate derivatives in finance costs - net	75	3
Forward foreign exchange contracts		
Interest expenses on borrowings	-57	-52
Exchange rate difference from derivatives	-120	91
Rate difference in fair value gains and losses on financial instruments	-1	3
Total fair value change of currency derivatives in finance costs - net	-178	42
Total	-103	45

¹⁾ Fair value gains and losses on financial instruments include fair value changes from interest rate swaps not getting hedge accounting amounting to EUR -2 million (2018: -8) and fair value change of hedging derivatives in fair value hedge relationship to EUR 27 million (2018: -24).

13 Income tax expense

13.1 Profit before tax

EUR million	2019
Finnish companies	3
Swedish companies	3
Russian companies	3
Other companies ¹⁾	7
IS Total	17

¹⁾ Includes share of profits from Uniper of EUR 632 million (2018: -2).

Profit before tax split by country represents the respective countries' part of the profit before tax for the Group according to IFRS, i.e. based on the same accounting principles as for the Consolidated Financial Statements. This means that the respective country profits include such items as for example share of associates and effects of accounting for nuclear provisions, which are not included in taxable profit subsidiaries.

13.2 Major components of income tax expense by major countries

EUR million	2019
Current taxes	
Finnish companies	-
Swedish companies	-
Russian companies	-
Other companies	-
Total	-2
Deferred taxes	
Finnish companies	-
Swedish companies	-
Russian companies	-
Other companies	-
Total	-
Adjustments recognised for current tax of prior periods	
Finnish companies	-
Swedish companies	-
Russian companies	-
Other companies	-
Total	-
IS Income tax expense	-2

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13.3 Income tax rate

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	2019	%	2018	%
Profit before tax	1,728		1,040	
Tax calculated at nominal Finnish tax rate	-346	20.0	-208	20.0
Tax rate changes	-3	0.2	17	-1.6
Differences in tax rates and regulations	-62	3.6	6	-0.6
Tax exempt capital gains	2	-0.1	15	-1.5
Expenses not deductible for tax purposes	-8	0.4	-13	1.3
Share of profit of associates and joint ventures	220	-12.7	7	-0.7
Taxes related to dividend distributions	-17	1.0	-14	1.4
Changes in tax valuation allowance related to not recognised tax losses	-5	0.3	11	-1.0
Other items	1	-0.1	-2	0.2
Adjustments recognised for taxes of prior periods	-3	0.2	0	0.0
IS income tax expense	-221	12.8	-181	17.5

Key tax indicators:

- The weighted average applicable income tax rate for 2019 is 23.6% (2018: 19.4%)
- The effective income tax rate in the income statement for 2019 is 12.8% (2018: 17.5%)
- The comparable effective income tax rate (excluding the share of profits from associates and joint ventures as well as tax exempt capital gains, tax rate changes and other major one time income tax effects) for 2019 is 22.4% (2018: 22.0%).

See ▶ **Definitions of key figures.**

The major items affecting the effective income tax rate are as follows:

Share of profit of associates and joint ventures during 2019 reduced the effective income tax rate with 12.7%, main item being the share of profit from Uniper EUR 632 million. This share of profit has also largely impacted the difference in tax rates and regulations increasing the rate with 3.6% overall.

Effective income tax rate impacted by gains or losses on sale of shares. In many countries like in Finland, Sweden, Netherlands and Norway income on capital gains and losses is treated as tax exempt. The purpose of this is to tax the operative income of the company and avoid taxing the same income twice in case of the sale of the shares. Taxation of capital gains or losses is in line with the taxation of dividend income.

Fortum has had tax audits ongoing during 2019. Based on earlier audits Fortum has received income tax assessments in Belgium for the years 2008–2012. In previous years, Fortum has appealed all assessments

received. Based on legal analysis, no provision has been accounted for in the financial statements in Belgium 2008–2012 tax audits.

For further information regarding the ongoing tax appeals see ▶ **Note 37** Legal actions and official During 2019 entities primarily in Sweden and Belgium used a portion of the deferred tax asset re loss carry forwards.

Fortum has a material deferred tax liability owing to its investments in non-current assets. These depreciated more rapidly for tax than for accounting purposes resulting in lower current tax payable of an asset's lifetime and higher tax payments at the end of its lifetime. This difference results in a liability.

See also ▶ **Note 28** Income taxes on the balance sheet.

Income statement

14 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.

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

14.2 Dividend per share

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.

A dividend in respect of 2019 of EUR 1.10 per share, amounting to a total dividend of EUR 977 million, was decided on 17 March 2020. These Financial statements do not reflect this dividend.

A dividend for 2018 of EUR 1.10 per share, amounting to a total of EUR 977 million, was decided on 26 March 2019 and the dividend was paid on 4 April 2019.

A dividend for 2017 of EUR 1.10 per share, amounting to a total of EUR 977 million, was decided on 28 March 2018 and the dividend was paid on 10 April 2018.

14.1 Earnings per share

Earnings per share, basic

	2019	2018
IS Profit attributable to owners of the parent (EUR million)	1,482	843
Weighted average number of shares (thousand)	888,294	888,312
Basic earnings per share (EUR)	1.67	0.95

In the merger of Länsivoima Oyj (former Lounais-Suomen Sähkö Oy) to Fortum Corporation in 2000, those shareholders of Länsivoima Oyj that did not produce their share certificates and did not request their rights to be registered in the book-entry system, received their respective shares of Fortum Corporation as merger consideration to a joint book-entry account opened on their behalf (the "Joint Account"). The Annual General Meeting 2018 of Fortum Corporation decided, that the rights to all such shares entered in the Joint Account and to the rights attached to such shares that had not been requested to be registered in the book-entry system prior to the decision by the Annual General Meeting 2018, were forfeited. In addition to the shares, the rights attached to such shares, such as undrawn dividend, were forfeited. The provisions applicable to treasury shares held by the company were applied to the forfeited shares. On 17 December 2018, Board of Directors decided to cancel all these 72,580 Fortum shares owned by the company without decreasing the share capital. The cancellation was entered in the Trade Register on 21 December 2018. In 2018 these shares had minor impact on weighted average number of shares.

15 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 and 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 and loss category.

Financial assets are presented as non-current assets unless they are held for trading, expected to be realized 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. Gains and losses from derecognition of the asset are recognised in profit and loss.

FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT AND LOSS

Financial assets at fair value through profit and loss include financial assets held for trading in the short term, financial assets designated upon initial recognition irrevocably as fair value through profit and loss and financial assets mandatorily recognised at fair value through profit and loss according to IFRS 9. Fortum has also elected to classify equity investments (i.e. other investments) irrevocably as financial assets at fair value through profit and loss. These are mainly comprised of shares in unlisted companies. 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 investments designated at fair value through other comprehensive income are not subject to impairment and are never recycled to profit and loss. Dividends received are recognised in profit and loss.

Fortum currently does not have material other investments that have been irrevocably classified as financial value through other comprehensive income.

DERECOGNITION

Fortum derecognises financial assets when the rights to receive cash flows from the assets have expired or substantially transferred the risks and rewards of the assets outside of the Group.

IMPAIRMENT

Fortum recognizes 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 4.7.1** Credit quality of major financial assets and in **Note 4.7.2** and other receivables.

Financial assets measured at fair value through profit or loss are not included in ECL assessment as they are measured at fair value which takes into account expected credit losses. A financial asset is written off when 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, interest transaction costs are deducted. In subsequent periods, all non-derivative financial liabilities are measured at amortised cost less any difference between proceeds (net of transaction costs) and the redemption value is recognised as interest expense in 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 measured at fair value through profit and loss. Amortisation of the effective interest rate and gains and losses are recognised in the statement of profit and loss.

Group's financial liabilities include trade and other payables, loans and borrowings and derivative financial liabilities. Borrowings or portion of borrowings being hedged with a fair value hedge are recognised at fair value through profit and loss. Derivatives are classified as held for trading unless they are designated as effective hedging instruments.

Derecognition of financial liabilities takes place when the Group has fulfilled the contractual obligations.

Balance sheet

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. The majority of these transactions take the form of 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 ("own use exemption"). Such contracts are not within the scope of IFRS 9. 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 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. The method of recognising the resulting gain or loss 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 (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 (for instance 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 (for example, 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 in the income statement when the forecast transaction is ultimately also recognised in the income statement for forecasted transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is recognised in the income statement.

Fortum hedges its exposure to commodity market risks and applies hedge accounting by risk component. Accounting is applied to Nordic electricity price risk, where the Nordic area priced physical electricity delivery is divided into three risk components: (1) system price risk, (2) electricity price area difference risk (EPAD) and (3) For each of these separate risk components there are specific derivative contracts available, which each are hedged without any ineffectiveness for the associated risk component.

FAIR VALUE HEDGE

Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recognised in the income statement, together with any changes in the fair value of the hedged asset or liability that are attributable to the same risk. If the hedge no longer meets the criteria for hedge accounting, the adjustment to the carrying amount of the hedged asset or liability for which the effective interest method is used is amortised to profit and loss for the period to maturity.

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 a 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 transferred to the income statement when the foreign operation is disposed of.

DERIVATIVES THAT DO NOT QUALIFY FOR HEDGE ACCOUNTING

Certain derivative instruments hedging future cash flows do not qualify for hedge accounting. Fair value changes of commodity derivative instruments are recognised in items affecting comparability in the income statement, value changes of interest rate and currency derivative instruments are recognised in finance costs or net.

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 is provided in the Notes mentioned in the table.

See ► **Note 1.6** Physical settlement of contracts to buy or sell non-financial item (IFRS 9)

Balance sheet

Financial assets by category 2019

EUR million	Note	hedge accounting, fair value hedges	Non-hedge accounting	Other financial assets	Cash flow hedges
Financial instruments in non-current assets					
Other non-current assets	20	75		75	
Derivative financial instruments	4				
Electricity derivatives			12		1
Interest rate and currency derivatives		153	2		1
Other commodity future and forward contracts			10		
Long-term interest-bearing receivables	21	628		23	
Financial instruments in current assets					
Derivative financial instruments	4				
Electricity derivatives			40		42
Interest rate and currency derivatives			7		9
Other commodity future and forward contracts			34		
Trade receivables	23	736			
Short-term interest-bearing receivables	21	69			
Liquid funds	24	1,433		315	
Total		2,941	105	413	53

Financial assets by category 2018

EUR million	Note	Hedge accounting, fair value hedges	Non-hedge accounting	Other financial assets	Cash flow hedges
Financial instruments in non-current assets					
Other non-current assets	20	90		49	1
Derivative financial instruments	4				26
Electricity derivatives			52		
Interest rate and currency derivatives		122	4		
Other commodity future and forward contracts			24		
Long-term interest-bearing receivables	21	642		41	
Financial instruments in current assets					
Derivative financial instruments	4				10
Electricity derivatives			84		19
Interest rate and currency derivatives			97		0
Other commodity future and forward contracts			116		
Trade receivables	23	800			
Short-term interest-bearing receivables	21	379		30	
Liquid funds	24	584			
Total		2,495	377	120	56

Balance sheet

Financial liabilities by category 2019

MEUR	Note	fair value hedges	Non-hedge accounting	Other financial liabilities	Net investment and cash flow hedges	Lease liabilities
Financial instruments in non-current liabilities						
Interest-bearing liabilities	27	3,736	2,293 ¹⁾			89
Derivative financial instruments	4					
Electricity derivatives				22	30	
Interest rate and currency derivatives		25	3		47	
Other commodity future and forward contracts			11			
Financial instruments in current liabilities						
Interest-bearing liabilities	27	270		281		19
Derivative financial instruments	4					
Electricity derivatives			62		85	
Interest rate and currency derivatives			49		4	
Other commodity future and forward contracts			52			
Trade payables	33	316				
Other liabilities	33	168				
Total		4,490	2,318	199	281	166
						108

t) Fair valued part of bond in fair value hedge relationship.

Financial liabilities by category 2018

MEUR	Note	Hedge accounting, fair value hedges	Non-hedge accounting	Cash flow hedges
Financial instruments in non-current liabilities				
Interest-bearing liabilities	27	4,077	930 ³¹	
Derivative financial instruments	4			
Electricity derivatives				285
Interest rate and currency derivatives			70	16
Other commodity future and forward contracts			2	
			13	
Financial instruments in current liabilities				
Interest-bearing liabilities	27	1,086		
Derivative financial instruments	4			
Electricity derivatives			65	641
Interest rate and currency derivatives			45	1
Other commodity future and forward contracts	33	334	77	0
Trade payables		212		
Other liabilities	33			
Total		5,709	955	893

t) Fair valued part of bond in fair value hedge relationship.

16 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 some commodity derivatives traded in active markets (such as publicly traded electricity options, coal, gas and oil futures) are market quotes at the closing date.

FAIR VALUES UNDER LEVEL 2 MEASUREMENT HIERARCHY

The fair value of financial instruments including electricity derivatives traded in active markets is based on 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. In fair valuation, credit spread has not been adjusted, as quoted market prices of the instruments used are believed to be consistent with the objective of a fair value measurement.

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. Commodity derivatives are generally cleared through exchanges such as for example NASDAQ Commodities and financial derivatives done with creditworthy financial institutions with investment grade ratings.

FAIR VALUES UNDER LEVEL 3 MEASUREMENT HIERARCHY

Investments in unlisted shares classified as other investments for which the fair value can't be reliably measured. Fair value gains and losses of other investments are booked through profit and loss.

Balance sheet

Financial assets

EUR million	Note	Level 1		Level 2		Level 3		Netting ¹⁾	
		2019	2018	2019	2018	2019	2018	2019	2018
In non-current assets									
Other investments	20	0	0			75	49		
Derivative financial instruments	4								
Electricity derivatives									
Hedge accounting				9	23			-8	-22
Non-hedge accounting				26	146			-15	-94
Interest rate and currency derivatives									
Hedge accounting				154	149				
Non-hedge accounting				2	4				
Other commodity future and forward contracts									
Non-hedge accounting				1					
Interest-bearing receivables		10	29			23	41	-1	-5
In current assets									
Derivative financial instruments	4								
Electricity derivatives									
Hedge accounting				101	93			-59	-82
Non-hedge accounting		1	2	304	585			-265	-501
Interest rate and currency derivatives									
Hedge accounting				9	19				
Non-hedge accounting				7	97				
Other commodity future and forward contracts									
Non-hedge accounting		314	203	2				-282	-8
Interest-bearing receivables		281				34	30		
Total		606	234	615	1,116	132	120	-630	-79

¹⁾ Receivables to and liabilities from electricity and other commodity exchanges arising from standard derivative contracts with same delivery period are netted.

Balance sheet

Financial liabilities

EUR million	Note	Level 1		Level 2		Level 3		Netting ¹⁾	
		2019	2018	2019	2018	2019	2018	2019	2018
In non-current liabilities									
Interest-bearing liabilities ²⁾	27			2,293	930				2,222
Derivative financial instruments	4								
Electricity derivatives									
Hedge accounting				38	257			-8	-22
Non-hedge accounting				37	163			-15	-94
Interest rate and currency derivatives									
Hedge accounting				72	42				
Non-hedge accounting				3	2				
Other commodity future and forward contracts									
Non-hedge accounting		11	18	0	0			-1	-5
In current liabilities									
Interest-bearing liabilities	27			281					
Derivative financial instruments	4								
Electricity derivatives									
Hedge accounting				143	724			-59	-86
Non-hedge accounting			1	328	566			-265	-506
Interest rate and currency derivatives									
Hedge accounting				4	1				
Non-hedge accounting				49	45				
Other commodity future and forward contracts									
Non-hedge accounting		334	158		7			-282	-8
Total		345	177	3,248	2,737	0	0	-630	-790

¹⁾ Receivables to and liabilities from electricity and other commodity exchanges arising from standard derivative contracts with same delivery period are netted.

²⁾ Fair valued part of bonds when hedge accounting is applied (fair value hedge).

Net fair value amount of interest rate and currency derivatives is EUR 45 million, including assets EUR 172 million and liabilities EUR 127 million. Fortum has cash collaterals based on Credit Support Annex agreements with counterparties. At the end of December 2019 Fortum had received EUR 65 million from Credit Support Annex agreements. The received cash has been booked as short-term interest-bearing liability.

Balance sheet

17 Intangible assets

ACCOUNTING POLICIES

Intangible assets, except goodwill, are stated at the historical cost less accumulated amortisation and impairment losses. They are amortised on a straight-line method over their expected useful lives.

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 yearly 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 tested annually for impairment and 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.

COMPUTER SOFTWARE

Acquired computer software licences are capitalised on the basis of the costs incurred when bringing the software into use. Costs associated with developing or maintaining computer software are recognised as an expense as incurred. Costs that are directly associated with the production of identifiable and unique software products controlled by the Group, and that will generate economic benefits exceeding costs beyond one year, are recognised as intangible assets. Direct costs include the software development employee costs and an appropriate portion of relevant overheads. Computer software costs recognised as assets are amortised over their estimated useful lives (three to five years).

TRADEMARKS AND LICENSES

Trademarks and licences are shown at historical cost less accumulated amortisation and impairment losses, as applicable. Amortisation is calculated using the straight-line method to allocate the cost of trademarks and licences over their estimated useful lives (15–20 years).

CONTRACTUAL CUSTOMER RELATIONSHIPS

Contractual customer relationships acquired in a business combination are recognised at fair value on acquisition date. The contractual customer relationships have a finite useful life and are carried at costs less accumulated amortisation. Amortisation is calculated using the straight-line method over the expected duration of the customer relationship.

COSTS FOR OBTAINING CUSTOMERS

Incremental costs for obtaining new customers as well as renewing existing customer contracts are capitalised as intangible assets and amortised over the expected contract duration.

EMISSION ALLOWANCES

The Group accounts for emission allowances based on currently valid IFRS standards where purchased emission allowances are accounted for as intangible assets at cost, whereas emission allowances received free of charge are accounted for at nominal value. For CO₂ emissions from power and heat production, a provision is recognised. CO₂ emission cost is recognised when the emission allowances are used. To the extent that the Group already holds allowances to cover emission cost, the carrying amount of those allowances is reduced. Any shortfall of allowances held over the obligation is measured at the current market value of allowances. The emission cost is recognised in the income statement within materiality. The sales gains and losses of emission allowances not used for covering the obligation from CO₂ emissions, are recognised in other income.

IMPAIRMENT TESTING OF NON-FINANCIAL ASSETS

The individual assets' carrying values are reviewed continuously to determine whether there is an indication that the carrying amount of an asset or cash-generating unit may be higher than its recoverable amount. If it is greater than the recoverable amount, an impairment loss is recognised.

In addition, impairment needs are assessed and documented once a year in connection with the long-term business plan. Indications for impairment are analysed separately by each division as they are different for each business. Indicators include risks such as changes in electricity and fuel prices, regulatory/political changes relating to energy tax regulations etc. Impairment testing needs to be performed if any of the impairment indications exist. Assets with indefinite useful life and goodwill, are not subject to amortisation and are tested annually for impairment.

Value in use is determined by discounting the future cash flows expected to be derived from an asset. If it is not possible to estimate the cash flows generated by an individual asset, the impairment testing is performed on a cash-generating unit (CGU) as the smallest business area where the tested assets generate cash flows. Goodwill is allocated to the cash flows generated by other assets in other business areas. Goodwill is allocated to the cash flows of the generating unit or lowest level of groups of cash-generating units that benefit from the synergies of the acquisition. Cash flow projections are based on the most recent long-term forecast that has been approved by the Board of Directors. Cash flows arising from future investments such as new plants are excluded from cash flows of the started projects. The cash outflow needed to complete the started projects is included.

Non-financial assets other than goodwill that suffered an impairment charge are reviewed for possible impairment at each reporting date.

Balance sheet

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 described above.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS RELATED TO IMPAIRMENT TESTING

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 described in the notes. The recoverable amounts of cash-generating units have been determined based on value in use calculations. These calculations are based on estimated future cash flows from most recent approved long-term forecast. Preparation of these estimates requires management to make assumptions relating to future expectations. Assumptions vary depending on the business the tested assets are in. For power and heat generation business the main assumptions relate to the estimated future operating cash flows and the discount rates that are used in calculating the present value.

Estimates are also made in an acquisition when determining the fair values and remaining useful lives of acquired intangible and tangible assets.

EUR million	Goodwill		Other intangible assets	
	2019	2018	2019	2018
Cost 1 January	588	613	869	796
Translation differences and other adjustments	24	-27	0	-21
Acquisition of subsidiary companies	0	0	12	22
Capital expenditure	0	0	75	53
Changes in emissions rights	0	0	14	16
Disposals	0	0	-43	-24
Sale of subsidiary companies	0	0	0	-6
Transfer to assets held for sale ¹⁾	0	-	-12	-
Reclassifications	0	3	40	35
Cost 31 December	612	588	954	869
Accumulated depreciation 1 January	0	0	370	325
Translation differences and other adjustments	0	0	-1	-12
Acquisition of subsidiary companies	0	0	0	0
Disposals	0	0	-43	-24
Sale of subsidiary companies	0	0	0	0
Transfer to assets held for sale ¹⁾	0	-	-1	-
Reclassifications	0	0	14	8
Depreciation for the period	0	0	84	84
Accumulated depreciation 31 December	0	0	422	372
BS Carrying amount 31 December	612	588	531	497

1) See ▶ Note 3 Acquisitions, disposals and assets held for sale.

Goodwill in groups of cash-generating units

EUR million	2019	2018
Consumer Solutions	2	2
City Solutions	2	2
Russia	1	1
Total	6	6

Balance sheet

Other intangible assets

Other intangible assets include capitalised sales commissions for customer acquisition with a carrying amount totalling EUR 79 million at the end of 2019 (2018: 63). The carrying amount consists of capitalised sales commission costs totalling EUR 186 million (2018: 111) and accumulated depreciations totalling EUR 108 million (2018: 49).

Other items in other intangible assets include customer contracts, costs for software products and software licenses, bought emission rights and emission rights received free of charge, which are recognised to the lower of fair value and historical cost.

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. The assumptions are determined by management as part of the long-term forecasting process for the Fortum Group.

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

The cash flows used in determining the value in use for each cash generating unit are based on the most recent long-term forecasts and are determined in local currency. 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. 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 rate takes into account the risk profile of the country in which the cash flows are generated. There have not been any major changes in the discount rate components or in the methods used to determine them. The long-term pre-tax discount rate used were: City Solutions 7.3%, Consumer Solutions 5.2%-7% depending on location and Russia 11.4%.

The net operating assets of the CGUs and group of CGUs with allocated goodwill are tested yearly for impairment. The tested net operating assets include both the goodwill and fair value adjustments a acquisition. At 31 December 2019, the recoverable values were greater than their carrying values a impairments were booked.

The Group has considered the sensitivity of key assumptions as part of the impairment testing. Any consequential effect of the change on the other variables has also been considered. The calculation is sensitive to changes in estimated future EBITDA levels and changes in discount rate.

Management estimates that a reasonably possible change in the discount rate used or in future estimates of the carrying amount to exceed its recoverable amount in any of the tested units.

Based on the sensitivity analysis done, if the estimated future EBITDA were 10% lower than management estimates or pre-tax discount rate applied was 10% higher than the one used, the Group would not recognise impairment losses for tested items.

18 Property, plant and equipment and right-of-use assets

ACCOUNTING POLICIES

Property, plant and equipment comprise mainly power and heat producing buildings and machinery, waterfall rights, district heating network and buildings and machinery as well as landfill sites and treatment areas used in waste treatment operations.

Property, plant and equipment are stated at historical cost less accumulated depreciation and accumulated impairment losses as applicable in the consolidated balance sheet. Historical cost includes expenditure that is directly attributable to the acquisition of an item and capitalised borrowing costs. Cost may also include transfers from equity of any gains or losses on qualifying cash flow hedges of foreign currency purchases of property, plant and equipment. Acquired assets on the acquisition of a new subsidiary are stated at their fair values at the date of acquisition.

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.

Additionally the cost of an item of property, plant and equipment includes the estimated cost of its dismantlement, removal or restoration.

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:

Hydro power plant buildings, structures and machinery	40–50 years
Thermal power plant buildings, structures and machinery	25 years
Nuclear power plant buildings, structures and machinery	25 years
CHP power plant buildings, structures and machinery	15–25 years
Recycling and waste treatment facility buildings, structures and machinery	15–40 years
Solar and Wind power plant structures and machinery	25 years
District heating network	30–40 years
Other buildings and structures	20–40 years
Other tangible assets	20–40 years
Other machinery and equipment	3–20 years
Other non-current investments	5–10 years

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 immediately to its recoverable amount if the asset's carrying amount is greater than its recoverable amount. See further information on the impairment testing in ► **Note 17** Intangible assets.

GOVERNMENT GRANTS

Grants from the government are recognised at their fair value when there is a reasonable assurance that the grants will be received and the Group will comply with all attached conditions. Government grants relating to costs are deducted from the income statement over the period necessary to match them with the costs that they are intended to compensate. Government grants relating to the purchase of property, plant and equipment are deducted from the cost of the asset and are recognised as income by reducing the depreciation charge of the asset they relate to.

BORROWING COSTS

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets are recognised as part of the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. Qualifying assets that necessarily take a substantial period of time to get ready for their intended use or sale are recognised as part of the cost of the asset. All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Balance sheet

	Land and waterfall rights		Buildings, plants and structures		Machinery and equipment		Other tangible assets		Advances paid and construction in progress	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
EUR million										
Cost 31 December	2,591	2,694	3,851	3,805	7,979	8,335	170	163	631	626
Impact from change in accounting principle (IFRS 16) ¹⁾	27	-	57	-	12	-	0	-	0	-
Cost 1 January	2,617	2,694	3,908	3,805	7,992	8,335	170	163	631	626
Translation differences and other adjustments	-55	-104	114	-208	253	-328	-1	-3	6	-82
Acquisition of subsidiary companies	0	0	1	3	3	8	5	0	4	1
Capital expenditure	12	1	8	5	181	3	2	0	435	522
Additions and decreases in right-of-use assets	4	-	25	-	3	-	0	-	0	-
Nuclear asset retirement cost	0	0	0	0	-14	16	0	0	0	0
Disposals	-1	0	-29	-33	-85	-30	-3	0	0	-1
Sale of subsidiary companies	-4	-1	-22	-3	-1	-132	0	0	0	0
Transfer to assets held for sale ²⁾	-6	-	-71	-	-250	-	-14	-	-30	-
Reclassifications	11	1	170	281	386	107	42	9	-627	-436
Cost 31 December	2,578	2,591	4,103	3,851	8,467	7,979	201	170	419	631

Accumulated depreciation 1 January	0	0	1,678	1,629	3,427	3,349	135	133	0	0
Translation differences and other adjustments	0	0	28	-86	83	-177	-1	-2	0	0
Acquisition of subsidiary companies	0	0	0	0	0	0	0	0	0	0
Disposals	0	0	-27	-33	-54	-29	-3	0	0	0
Sale of subsidiary companies	0	0	-18	0	-1	0	0	0	0	0
Transfer to assets held for sale ²⁾	0	-	-27	-	-64	-	-2	-	0	0
Depreciation for the period	2	0	130	113	356	340	3	3	0	0
Reclassifications	0	0	0	54	-4	-55	1	1	0	0
Accumulated depreciation 31 December	1	0	1,765	1,678	3,745	3,427	132	135	0	0
BS Carrying amount 31 December	2,577	2,591	2,339	2,173	4,721	4,552	68	35	419	631

1) See additional information in ▶ **Note 1** Significant accounting policies and ▶ **Note 34** Leases.
2) See ▶ **Note 3** Acquisitions, disposals and assets held for sale.

Capitalised borrowing costs

Property, plant and equipment that are subject to restrictions in the form of real estate mortgages amount to EUR 139 million (2018: 158).
See ▶ **Note 36** Pledged assets and contingent liabilities.
Borrowing costs of EUR 9 million were capitalised in 2019 (2018: 10).
The interest rate used for capitalisation varied between 2%-7% (2018: 2%-6%).

	Buildings, plants and structures		Machinery and equipment		Advances paid and construction in progress	
	2019	2018	2019	2018	2019	2018
EUR million						
1 January	56	59	146	175	12	11
Translation differences and other adjustments	5	-6	17	-20	0	-1
Increases / disposals	0	0	1	0	8	10
Sale of subsidiary companies	0	0	0	-4	0	0
Transfer to assets held for sale ¹⁾	0	-	-2	-	0	0
Reclassification	1	3	8	6	-17	-
Depreciation	-2	0	-8	-11	0	-
31 December	59	56	162	146	3	2

1) See ▶ **Note 3** Acquisitions, disposals and assets held for sale.

Balance sheet

19 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. If the cost of acquisition is less than the fair value of the net assets of the associate or joint venture acquired, the difference is recognised directly in the income statement.

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 associates or joint ventures 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.

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. 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 and financing of the arrangements.

Management judgement is required when testing the carrying amounts for participations in associated companies and joint ventures for impairment. See **Note 17** Intangible assets for more information.

19.1 Principal associated companies and joint ventures

Nature of the relationship	Forsmarks				TGC-1	TVO
	OKG AB	Kraftgrupp AB	Kemijoki Oy	Uniper SE		
Classification	Co-owned nuclear company	Co-owned nuclear company	Co-owned hydro company	International energy company (listed)	Energy nu company (listed)	Co-own com
Segment	Associated company Generation	Associated company Generation	Associated company Generation	Associated company Other Operations	Associated company Russia	ve Gen
Domicile	Sweden	Sweden	Finland	Germany	Russia	Fin
Ownership interest, % ¹⁾	46	26	58	49.99	29	29
Votes, %	46	26	28	49.99	29	29

1) Kemijoki and TVO have different series of shares. The ownership interest varies due to the changes in equity assigned to the series. The ownership interests for 2018 for Kemijoki Oy and TVO were 58% and 25%, respectively.

Shareholdings in power production companies

Power plants are often built jointly with other power producers. Under the consortium agreements, the Group is entitled to electricity in proportion to its share of ownership or other agreements and each owner for an equivalent portion of costs. The production companies are not profit making, since the owner electricity at production cost including interest cost and production taxes. The share of profit of the value adjustments from historical acquisitions since the companies are not profit making under local principles.

Fortum has material shareholdings in such power production companies (mainly nuclear and hydro) consolidated using equity method either as associated companies (OKG AB, Forsmarks Kraftgrupp Kemijoki Oy) or in some cases as joint ventures (Teollisuuden Voima Oyj (TVO)).

In Sweden nuclear production company shareholdings are 45.5% ownership of the shares in OKG 25.5% ownership of the shares in Forsmarks Kraftgrupp AB. Excluding non-controlling interests in the Fortum's participation in the companies are 43.4% and 22.2% respectively, which reflects the share produced that Fortum can sell further to the market. The minority part of the electricity purchased further to each minority owner according to their respective shareholding and treated as pass-through

Balance sheet

In Finland Fortum has an ownership in power production company TVO that has three 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 presently being built, Olkiluoto 3, and Fortum's ownership in this share series is 25%. Series C entitles to electricity produced in TVO's share of the coal condensing power plant Meri-Pori. Fortum acquired on 1 January 2019 all remaining C-shares of TVO and owns now 100% of these shares. The Meri-Pori power plant is mainly used in Fingrid's capacity reserve and as back-up capacity. The Meri-Pori power plant is accounted for as a joint operation in Fortum.

See also Associated companies in ► **Note 37** Legal actions and official proceedings and Joint operations in the accounting principles in ► **Note 18** Property, plant and equipment and right-of-use assets.

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.

Shareholding in Uniper

During 2018 Fortum acquired 49.99% of the shares in Uniper, see ► **Note 3** Acquisitions, disposals and assets held for sale. As Uniper is a listed company and publishes its interim reports later than Fortum, Fortum's share of Uniper's results is accounted for with a time-lag of one quarter with potential adjustments.

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 interim information is not normally available.

In Sweden Fortum has a 50% ownership in Stockholm Exergi AB (publ) that is co-owned with the City of Stockholm through Stockholms Stadshus AB. Stockholm Exergi produces district heating, district cooling and electricity and supplies heat and cooling to customers in the Stockholm area.

Balance sheet

Summarised financial information of the principal associated companies in 2019

EUR million	Forsmarks			Uniper SE		
	OKG AB	Kraftgrupp AB	Kemijoki Oy	30 Sept 2019	30 Sept 2019	30 Sept 2019
Balance sheet						
Non-current assets	683	2,473	474	23,917	2,162	2,162
Current assets	230	388	4	16,728	312	312
Non-current liabilities	827	2,704	295	12,507	395	395
Current liabilities	73	124	131	16,012	152	152
Equity	13	33	52	12,125	1,926	1,926
Attributable to the owners of the parent	13	33	52	11,547	1,775	1,775
Attributable to NCI	0	0	0	578	152	152
Statement of comprehensive income						
Sales	289	536	48	77,895	1,357	1,357
Profit or loss	1	-1	-5	1,085	176	176
Attributable to the owners of the parent	1	-1	-5	1,107	173	173
Attributable to NCI	0	0	0	-22	3	3
Total comprehensive income	1	-1	-5	856	178	178
Attributable to the owners of the parent	1	-1	-5	850	175	175
Attributable to NCI	0	0	0	6	3	3

Reconciliation to carrying amount in Fortum

Group						
Group's interest in the equity of the associate 1 January 2019	6	9	33	5,512	421	421
Change in share of profit and OCI items	0	0	-3	473	54	54
Dividends received	0	0	0	-165	-10	-10
Translation differences and other adjustments	0	0	0	0	56	56
Group's interest in the equity of the associate 31 December 2019	6	8	30	5,820	523	523
Fair values on acquisitions and different accounting principles ¹⁾	-6	77	153	-1,514	-18	-18
Carrying amount 31 December 2019	0	86	182	4,306	505	505
Market value of listed shares²⁾				5,399	209	209

1) Impact of different accounting principles include mainly IFRS adjustments for Nuclear liabilities and assets, capitalised borrowing costs and for Uniper the derecognition of goodwill in Uniper's balance sheet and fair value adjustment for the acquired assets and liabilities. For additional information about the Uniper purchase price allocation, see **Note 3** Acquisitions, disposals and assets held for sale. 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 Lovisa power plant, see accounting principles in **Note 29** Nuclear related assets and liabilities.

2) The market quotation for the TGC-1 share is affected by the low liquidity of the TGC-1 shares in the Russian stock exchanges. During 2019 trading volumes of TGC-1 shares in relation to the number of shares of the company were approximately 19% (2018: 11%).

Summarised financial information of the principal associated companies in 2018

EUR million	Forsmarks			Uniper SE		
	OKG AB	Kraftgrupp AB	Kemijoki Oy	30 Sept 2018	30 Sept 2018	30 Sept 2018
Balance sheet						
Non-current assets	581	2,336	472	33,211	8	8
Current assets	273	412	8	27,311	21,077	21,077
Non-current liabilities	760	2,603	352	27,811	11,631	11,631
Current liabilities	82	112	71	11,021	57	57
Equity	13	34	57	11,021	57	57
Attributable to the owners of the parent	13	34	57	11,021	57	57
Attributable to NCI	0	0	0	600	0	0
Statement of comprehensive income						
Sales	426	637	42	17,091	17,091	17,091
Profit or loss	1	-1	-11	-1	-11	-11
Attributable to the owners of the parent	1	-1	-11	-1	-11	-11
Attributable to NCI	0	0	0	0	0	0
Total comprehensive income	1	-1	-11	-1	-11	-11
Attributable to the owners of the parent	1	-1	-11	-1	-11	-11
Attributable to NCI	0	0	0	-1	-1	-1

Reconciliation to carrying amount in Fortum

Group						
Group's interest in the equity of the associate 1 January 2018	6	9	41	5,511	41	41
Change in share of profit and OCI items	0	0	-7	473	-7	-7
Dividends received	0	0	0	-165	0	0
Acquired net assets	0	0	0	0	0	0
Translation differences and other adjustments	0	0	0	0	0	0
Group's interest in the equity of the associate 31 December 2018	6	9	33	5,511	33	33
Fair values on acquisitions and different accounting principles	-6	82	155	-1,541	155	155
Difference compared to acquisition price	-	-	-	-	-	-
Carrying amount 31 December 2018	0	90	188	4,390	188	188
Market value of listed shares				4,131	4,131	4,131

Balance sheet

Summarised financial information of the principal joint ventures in 2019 and 2018

EUR million	2019		2018	
	TVO Oyj group 30 Sept 2019	Stockholm Exergi AB group 31 Dec 2019	TVO Oyj group 30 Sept 2018	Stockholm 1 Jan 2018
Balance sheet				
Non-current assets	7,200	2,541	7,231	338
Current assets	669	305	420	-55
of which cash and cash equivalents	203	0	115	12
Non-current liabilities	5,466	1,356	5,108	-44
of which non-current interest-bearing liabilities	4,472	983	4,033	0
Current liabilities	636	365	776	-10
of which current financial liabilities	514	223	603	7
Equity	1,767	1,126	1,767	-2
Attributable to the shareholders of the company	1,767	1,125	1,767	-2
Attributable to NCI	0	1	0	0
Statement of comprehensive income				
Sales	287	658	338	338
Depreciation and amortisation	-46	-199	-55	-55
Interest income	13	0	12	12
Interest expense	-36	-18	-44	-44
Income tax expense or income	0	-11	0	0
Profit or loss	29	41	-10	-10
Other comprehensive income	-18	-17	7	7
Total comprehensive income	10	24	-2	-2
Attributable to the shareholders of the company	10	24	-2	-2
Reconciliation to carrying amount in Fortum Group				
Group's interest in the equity of the joint venture 31 December	448	602	280	280
Impact from change in accounting principle (IFRS 9)	-	-	145	145
Group's interest in the equity of the joint venture 1 January	448	602	425	425
Change in share of profit and OCI items	1	12	-1	-1
Dividends received	0	-40	0	0
Investments	0	0	25	25
Divestments and capital returns	0	0	-2	-2
Translation differences and other adjustments	2	-11	0	0
Group's interest in the equity of the joint venture 31 December	451	563	448	448
Fair values on acquisitions and different accounting principles ¹⁾	-9	-63	-9	-9
Carrying amount 31 December	442	500	439	439

¹⁾ Impact of different accounting principles include mainly IFRS adjustments for Nuclear liabilities and assets 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 revaluation is the carrying amount of the assets and liabilities at the time of acquisition.

Balance sheet

19.2 Participations and shares of profits in associated companies and joint ventures

Participations in associated companies and joint ventures on the balance sheet

EUR million	2019	2018
Principal associates	5,079	4,649
Principal joint ventures	942	973
Other associates	65	60
Other joint ventures	348	295
BS Total	6,435	5,978

Changes in participation during the year

EUR million	2019		2018	
	Associated companies	Joint ventures	Associated companies	Joint ventures
Historical cost				
Historical cost 31 December		831	680	598
Impact from change in accounting principle (IFRS 9)	4,549	-	20	145
Historical cost 1 January	4,549	831	699	743
Translation differences and other adjustments	27	12	-33	-17
Investments	0	75	3,969	97
Reclassifications	-1	0	-3	20
Divestments and capital returns	0	-29	-83	-12
Historical cost 31 December	4,576	889	4,549	831
Equity adjustments				
Equity adjustments 1 January	160	437	190	432
Translation differences and other adjustments	29	-11	-29	-19
Share of profits of associates and joint ventures	696	48	-32	71
Reclassifications	-11	-4	41	0
Divestments	0	2	0	0
Dividends received	-176	-63	-10	-51
OCI items associates and joint ventures	-130	-8	1	5
Equity adjustments 31 December	569	401	160	437
Carrying amount at 31 December	5,144	1,290	4,709	1,269

During 2019 Fortum received EUR 239 million (2018: 61) in dividends from associates and joint ventures of which EUR 165 million (2018:0) was received from Uniper and EUR 40 million (2018: 39) was received from Stockholm Exergi.

For information about investments and divestments of shares in associated companies, see ► **Note** disposals and assets held for sale.

Share of profit of associates and joint ventures

EUR million	2019
Principal associates	
Uniper SE	
OKG AB	
Forsmarks Kraftgrupp AB	
Kemijoki Oy	
TGC-1	

Principal associates, total	
Principal joint ventures	
Stockholm Exergi AB	
TVO Oyj	

Principal joint ventures, total

Other associates	
Other joint ventures	

IS Total

There are no unrecognised share of losses of associated companies and joint ventures.

Uniper

Uniper's share of profit is based on reported Net income/loss attributable to shareholders of Uniper. The impact from Non-operating results e.g. fair value measurement of derivative financial instruments is subject to volatility. Non-operating results impacted the share of profits in 2019 with EUR 392 million. Fortum's 2019 share of profits from Uniper include Fortum's share of Uniper's Q4 2018 and Q1-Q3 2019 and the impact from reinstatement of UK capacity market in October 2019, as well as EUR 31 million the fair value adjustment. The remaining fair value adjustment post tax at 31 December 2019 amount to 582 million. See more information in ► **Note 3** Acquisitions, disposals and assets held for sale.

Other associates and joint ventures

In 2019 the share of profit from Stockholm Exergi includes the EUR -22 million effect of the impairment of the share of profit from Stockholm Exergi relating to the early decommissioning of combined heat and power (CHP) plant 6. Fortum reassessed assumptions used for all nuclear related assets and liabilities at 31 December 2019. Assumptions were changed for the respective balances of the co-owned nuclear companies in Finland, Sweden, i.e. Teollisuuden Voima Oyj (TVO), Oskarshamn Kraft Grupp AB (OKG), and Forsmarks Kraft AB. The total impact of the change to share of profit from these associated companies a joint ve

Balance sheet

EUR -37 million, net of tax, and including additional nuclear waste liability related to legacy waste obligations for Swedish nuclear. The net profit impact from all these nuclear related adjustments was close to zero. For additional information see ► **Note 29** Nuclear related assets and liabilities.

19.3 Transactions and balances

Associated company transactions

EUR million	2019	2018
Sales to associated companies	1	0
Interest income on loan receivables to associated companies	12	12
Purchases from associated companies	259	256

Purchases from associated companies include mainly purchases of nuclear and hydro power at production cost including interest costs and production taxes.

Associated company balances

EUR million	2019	2018
Receivables from associated companies		
Long-term interest-bearing loan receivables	564	581
Trade receivables	0	1
Liabilities to associated companies		
Long-term loan payables	1	0
Trade payables	0	2

For more info about interest-bearing receivables from associated companies, see ► **Note 21** Interest-bearing receivables.

Joint venture transactions

EUR million	2019	2018
Sales to joint ventures	23	39
Purchases from joint ventures	113	124

Purchases from joint ventures include mainly purchases of nuclear and hydro power at production cost including interest costs and production taxes.

Joint venture balances

EUR million
Receivables from joint ventures
Long-term interest-bearing loan receivables
Trade receivables
Other receivables

Liabilities to joint ventures

Long-term loan payables
Trade payables
Other payables

For more info about interest-bearing receivables from joint ventures, see ► **Note 21** Interest-bearing receivables.

20 Other non-current assets

EUR million

Other investments
Interest-free receivables

BS Total

Other investments, i.e. shares which are not classified as associated companies or joint ventures, consist of shares in unlisted companies of EUR 75 million (2018: 49). This includes Fortum's indirect shareholding in Fennovoima of EUR 33 million (2018: 33).

Balance sheet

21 Interest-bearing receivables

EUR million	2019		2018	
	Carrying amount	Fair value	Carrying amount	Fair value
Long-term loan receivables from associated companies	564	599	581	601
Long-term loan receivables from joint ventures	61	69	60	68
Other long-term interest bearing receivables	26	27	43	43
BS Total long-term interest-bearing receivables	651	695	683	712
Collateral arrangement securities	281	281	-	-
Other short-term interest-bearing receivables	103	103	409	409
BS Total short-term interest-bearing receivables	384	384	409	409
Total	1,035	1,079	1,092	1,121

Long-term interest-bearing receivables include receivables from associated companies and joint ventures of EUR 625 million (2018: 641). These receivables include EUR 558 million (2018: 575) from Swedish nuclear companies, OKG AB and Forsmarks Kraftgrupp AB, which are mainly funded with shareholder loans, pro rata each shareholder's ownership.

During Q1 2019 Fortum entered into a non-cash collateral arrangement to release pledged cash from Nordic power exchange. Fortum has borrowed securities which have replaced pledged cash. At the end of December 2019 Fortum booked a short-term interest-bearing receivable of EUR 281 million and a corresponding short-term liability. See ► **Note 27** Interest-bearing liabilities.

Other interest-bearing receivables include EUR 57 million (2018: 70) from SIBUR, a Russian gas processing and petrochemicals company regarding divested shares of OOO Tobolsk CHP.

Short-term interest-bearing receivables include EUR 65 million (2018: 379) restricted cash mainly given as collateral for commodity exchanges. The European Market Infrastructure Regulation (EMIR) came into force in 2016 requiring fully-backed guarantees.

For further information regarding credit risk management, see ► **Note 4.7** Credit risk.

Interest-bearing receivables

EUR million	Effective interest rate, %	Carrying amount 2019	Repricing			Fair value 2019	Carrying amount 2018	Fair value 2018
			Under 1 year	1–5 years	Over 5 years			
Long-term loan receivables	1.8	651	607	21	23	668	683	712
Short-term receivables	1.1	384	384			384	409	409
Total	1.6	1,035	991	21	23	1,052	1,092	1,121

22 Inventories

ACCOUNTING POLICIES

Inventories mainly consist of fuels consumed in the production process or in the rendering of services. Inventories are valued at the lower of cost and net realisable value being the estimated selling price for the end product, less applicable selling expenses and other production costs. Cost is determined using the first-in, first-out (FIFO) method. Inventories which are acquired primarily for the purpose of trading are stated at fair value less selling expenses.

EUR million
Nuclear fuel
Coal
Oil
Biofuels
Materials and spare parts
Other inventories
BS Total

Write-downs in inventories amounted to EUR 4 million (2018: 6).

Balance sheet

23 Trade and other receivables

ACCOUNTING POLICIES

Trade receivables include revenue based on an estimate of electricity, 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. 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. 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 probability of default and expected recovery rate. These estimates are based on the customer's rating and adjusted 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	2019	2018
Trade receivables	736	800
Accrued interest income	1	1
Accrued income and prepaid expenses	106	59
Cash settlements for futures	177	592
Other receivables	156	168
BS Total	1,176	1,620

Accrued income and prepaid expenses include the receivable of EUR 51 million related to the periodisation of the Finnish nuclear waste management fund target, for additional information see ► **Note 29** Nuclear relates assets and liabilities. Cash settlements for futures has decreased mainly due to lower electricity prices for the hedging period. Futures are cash settled daily on Nasdaq Commodities exchange.

Trade receivables

Ageing analysis of trade receivables

EUR million	2019		2018	
	Gross	Expected credit loss allowance	Gross	Expected credit loss allowance
Not past due	653	3	712	0
Past due 1–30 days	58	2	63	3
Past due 31–90 days	18	5	17	28
Past due 91–180 days	11	5	15	45
Past due more than 181 days	95	84	77	88
Total	836	99	885	12

Changes in expected credit loss allowance

EUR million	2019
Expected credit loss allowance recognised during the period	
Write-offs	
Translation differences and other changes	
31 December	

The majority of impaired trade receivables EUR 72 million (2018: 61) relate to the Russian segment.

Trade receivables by currency (Gross)

EUR million	2019	2018
EUR	2	2
SEK	1	1
RUB	2	2
NOK	1	1
PLN		
Other		
Total	8	8

Trade receivables are arising from a large number of customers mainly in EUR, SEK, RUB and NOK concentration of risk.

For further information regarding credit risk management and credit risks, see ► **Country party risk** Operating and financial review and ► **Note 4.7** Credit risk.

Balance sheet

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 maturities of three months or less. Deposits and securities with maturity more than 3 months include fixed term deposits and commercial papers with maturity more than three months but less than twelve months. Deposits and securities are measured at amortised cost.

Bank overdrafts are shown within borrowings in current liabilities on the balance sheet. Cash collaterals or otherwise restricted cash are treated as short-term interest-bearing receivables.

EUR million	2019	2018
Cash at bank and in hand	118	203
Deposits and securities with maturity under 3 months	1,239	353
Cash and cash equivalents	1,356	556
Deposits and securities with maturity more than 3 months	76	29
B5 Total ¹⁾	1,433	584

¹⁾ Excluding cash balances of EUR 2 million relating to assets held for sale at 31 December 2019. See ► **Note 3** Acquisitions, disposals and assets held for sale.

Liquid funds consists of deposits and cash in bank accounts amounting to EUR 893 million and commercial papers of EUR 540 million. The average interest rate on deposits and securities excluding Russian deposits on 31 December 2019 was -0.13% (2018: -0.11%). Liquid funds held by PAO Fortum amounted to EUR 201 million (2018: 317), of which EUR 151 million (2018: 316) was held as bank deposits. The average interest rate for this portfolio was 3.9% at the balance sheet date.

Liquid funds totalling EUR 1,099 million (2018: 168) are placed with counterparties that have an investment grade rating. In addition, EUR 334 million (2018: 416) have been placed with counterparties separately reviewed and approved by the Group's credit control department.

In the fourth quarter of 2019, Fortum signed new committed credit facilities of an additional EUR 8.3 billion for the purchase of Uniper shares announced on 8 October 2019. At the end of December 2019, the committed and undrawn credit facilities amounted to EUR 10.1 billion (Dec 31 2018: 1.8). On 7 January 2020, Fortum cancelled EUR 3 billion of these new committed credit facilities.

For further information regarding credit risk management and credit risks, see ► **Note 4.7** Credit risk.

25 Share capital

EUR million	2019	2018
Registered shares 1 January	888,294,465	888,367,072
Cancellation of Treasury shares	-	-
Registered shares 31 December	888,294,465	888,294,465

Fortum Corporation has one class of shares. By the end of 2019, 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 dividend. At the end of 2019 Fortum Corporation's share capital, paid in its entirety and entered in the register, was EUR 3,046,185,953.00.

In the merger of Länsivoima Oyj (former Lounais-Suomen Sähkö Oyj) to Fortum Corporation in 2017, the shareholders of Länsivoima Oyj that did not produce their share certificates and did not request the new certificates to be registered in the book-entry system, received their respective shares of Fortum Corporation in consideration to a joint book-entry account opened on their behalf (the "Joint Account"). The Annual Meeting 2018 of Fortum Corporation decided, that the rights to all such shares entered in the Joint Account to the rights attached to such shares that had not been requested to be registered in the book-entry system, were forfeited. In addition to the shares, the rights to the shares, the company were applied to the forfeited shares. On 17 December 2018, Board of Directors decided to cancel these 72,580 Fortum shares owned by the company without decreasing the share capital. The cancellation was entered in the Trade Register on 21 December 2018.

Fortum Corporation's shares are listed on Nasdaq Helsinki. The trading code is FORTUM:HEX. The shares are in the Finnish book entry system maintained by Euroclear Finland. Details on the President and CEO and other members of the Fortum Executive Management Team and interest in the equity incentive schemes is presented in ► **Note 11** Employee benefits and Board of Directors.

Balance sheet

25.1 Authorisations from the Annual General Meeting 2019

On 26 March 2019, 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 of 20,000,000 shares, which corresponds to approximately 2.25% of all the shares in the company. It was also decided that the repurchases or disposals could not be made for the purposes of the company's incentive and remuneration schemes. The authorisation cancelled the authorisation resolved by the Annual General Meeting of 2018. The authorisation is effective until the next Annual General Meeting and, in any event, for a period no longer than 18 months. The authorisation had not been used by the end of 2019.

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	2019	2018
PAO Fortum Group	34	33
AS Fortum Tartu Group	37	37
Fortum Oslo Varme AS Group	166	152
Other	16	14
BS Total	252	236

27 Interest-bearing liabilities

Net debt

EUR million	Net debt 2019	Classified as assets held for sale ¹⁾	BS Total
Interest-bearing liabilities	6,694	-6	6,6
Liquid funds	1,435	-2	1,4
Net debt	5,260	-4	5,2

¹⁾ See ▶ Note 3 Acquisitions, disposals and assets held for sale.

Net debt is calculated as interest-bearing liabilities less liquid funds without deducting interest-bearing receivables. Interest-bearing liabilities less liquid funds without deducting interest-bearing receivables amounting to EUR 1,035 million (2018: 1,092). Interest-bearing receivables mainly consist of shares partly owned nuclear companies regarded as long-term financing. For more information see ▶ Note 3 Acquisitions, disposals and assets held for sale.

Interest-bearing liabilities

EUR million	2019	2018
Loans	6,5	6,5
Lease liabilities ¹⁾	1	1
Total	6,6	6,6

¹⁾ Excludes lease liabilities of EUR 6 million relating to assets held for sale at 31 December 2019. See ▶ Note 3 Acquisitions, disposals and assets held for sale.

Balance sheet

EUR million	2019	2018
Bonds	4,251	1,746
Loans from financial institutions	329	1,799
Reborrowing from the Finnish State Nuclear Waste Management Fund	1,145	1,158
Lease liabilities	89	-
Other long-term interest-bearing liabilities	304	303
BS Total long-term interest-bearing liabilities	6,118	5,007
Current portion of long-term bonds	0	750
Current portion of loans from financial institutions	33	48
Current portion of other long-term interest-bearing liabilities	40	5
Commercial paper liabilities	10	207
Current portion of lease liabilities	19	-
Collateral arrangement liability	281	-
Other short-term interest-bearing liabilities	187	76
BS Total short-term interest-bearing liabilities	570	1,086
Total	6,688	6,093

Loans

EUR million	Effective interest rate, %	Carrying amount	Repricing			Fair value	Fair value
			Under 1 year	1–5 years	Over 5 years		
Bonds	2.3	4,251	96	2,539	1,616	4,478	2,629
Loans from financial institutions	1.3	362	307	39	16	378	1,901
Reborrowing from the Finnish State Nuclear Waste Management Fund	0.5	1,185	1,185			1,250	1,218
Other long-term loans ¹⁾	3.3	304	202		102	346	351
Total long-term loans²⁾	1.9	6,102	1,790	2,578	1,734	6,452	6,099
Collateral arrangement liability	0.8	281	281			281	-
Commercial paper liabilities	0.2	10	10			10	207
Other short-term loans	2.6	187	187			187	76
Total short-term loans	1.5	478	478	2,578	1,734	478	283
Total³⁾	1.9	6,580	2,268	2,578	1,734	6,930	6,382

¹⁾ Includes loans from Finnish pension institutions of EUR 33 million (2018: 38) and other loans of EUR 271 million (2018: 270).

²⁾ Including current portion of long-term debt of EUR 73 million (Dec 31 2018: 803).

³⁾ The average interest rate on loans and derivatives on 31 December 2019 was 2.3% (2018: 2.4%).

The interest-bearing debt increased in 2019 by EUR 595 million to EUR 6,688 million (2018: 6,093). Part of short-term financing increased with EUR 195 million, and at the end of the year the amount of short-term financing EUR 478 million (2018: 283) included 65 million (2018: 75) from Credit Support Annex agreement. During the first quarter of 2019 Fortum issued new bonds under its Euro Medium Term Note (EMTN) programme with a total nominal amount of EUR 2.5 billion: EUR 1.0 billion, four-year bond with 0.8% coupon and two EUR 750 million bonds for seven- and ten-years with 1.625%/ 2.125% fixed coupon.

In March 2019, Fortum repaid maturing bond of EUR 750 million and prepaid the bridge loan of EUR 27 million to EUR 1,185 million. Further Fortum signed a five-year EUR 300 million bilateral agreement which was drawn at the beginning of April 2019.

During the first quarter of 2019 Fortum entered into a non-cash collateral arrangement to release from Nordic power exchange. At end of December Fortum booked a short-term interest-bearing debt of EUR 27 million to the lender of the securities, which are included in interest-bearing receivables. See ▶ Note 36 and contingent liabilities.

The average interest rate for the portfolio consisting mainly of EUR loans was 1.6% at the end of 2018 (2018: 1.7%). Part of the external loans EUR 787 million (2018: 686) have been swapped to RUB and interest cost for these loans including cost for hedging the RUB was 7.8% at the balance sheet date. The average interest rate on total loans and derivatives at the balance sheet date was 2.3% (2018: 2.4%). For more information, see ▶ Note 4 Financial risk management ▶ Note 34 Leases and ▶ Note 36 and contingent liabilities.

Balance sheet

Reconciliation of interest-bearing liabilities

EUR million	31 Dec 2018	Impact from change in accounting policy (IFRS 16) ¹⁾	1 Jan 2019	Cash flow from financing activities ²⁾	Non-cash collateral arrangement	Non-cash changes			
						Exchange rate differences	Lease liabilities	Fair value changes and amortised cost	
Bonds	2,496		2,496	1,729		-2		28	
Loans from financial institutions	1,848		1,848	-1,497		-3		14	
Reborrowing from the Finnish State									
Nuclear Waste Management Fund	1,158		1,158	27			25		
Lease liabilities ³⁾	-	99	99	-15					
Other interest-bearing liabilities	592		592	-88	281	-3			
Total	6,093	99	6,192	156	281	-8	25	42	

1) See ► **Note 1** Significant accounting policies and ► **Note 34** Leases.

2) Repayments and borrowings.

3) Excludes lease liabilities of EUR 6 million relating to assets held for sale at 31 December 2019. See ► **Note 3** Acquisitions, disposals and assets held for sale.

EUR million	31 Dec 2017	Cash flow from financing activities ¹⁾	Non-cash changes			Fair value changes and amortised cost
			Divestments	Exchange rate differences		
Bonds	2,943	-413				21
Loans from financial institutions	283	1,571				21
Reborrowing from the Finnish State	1,129	29				
Nuclear Waste Management Fund						
Other interest-bearing liabilities	530	126	-58	-6		
Total	4,885	1,313	-58	-29		42

1) Repayments and borrowings.

27.1 Bond issues

Issued/Maturity	Interest basis	Interest rate, %	Effective interest, %	Currency	Nominal value million
Fortum Corporation EUR 8,000 million EMTN Programme¹⁾					
2011/2021	Fixed	4.000	4.123	EUR	500
2012/2022	Fixed	2.250	2.344	EUR	1,000
2019/2023	Fixed	0.875	0.996	EUR	1,000
2019/2026	Fixed	1.625	1.638	EUR	1,000
2019/2029	Fixed	2.125	2.247	EUR	700
2013/2023	Floating	Stibor 3M+1.13		SEK	1,000
2013/2043	Fixed	3.500	3.719	EUR	100
Total outstanding carrying amount 31 December 2019					

1) EMTN = Euro Medium Term Note

Balance sheet

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 will be 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 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 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 laws and rates will remain unchanged into foreseeable future. Fortum believes that it has prudent assumptions regarding its deferred tax balances.

Assumptions and estimates regarding uncertain tax positions are supported by external legal counsel or by the actual final outcome (regarding tax disputes) would differ negatively from management's estimates. If the actual final outcome (regarding tax disputes) would differ negatively from management's estimates, Group would need to increase the income tax liability by EUR 11 million at 31 December 2019. For more information regarding tax disputes, see ► **Note 37** Legal actions and official proceedings.

28.1 Deferred income taxes on the balance sheet

EUR million	2019			1 Jan 2019	31 Dec 2019	1 Jan 2018
	1 Jan	Change	31 Dec			
BS Deferred tax assets	70	7	77	73	77	73
BS Deferred tax liabilities	-720	-144	-865	-822	-865	-749
Net deferred taxes	-651	-137	-788	-749	-788	-749

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset assets against current tax liabilities and when the deferred income taxes relate to the same fiscal year.

Balance sheet

Movement in deferred tax assets and liabilities 2019

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
1 Jan 2019	-106	-788	20	-15	169	70	-1
Charged to income statement	-5	-30	0	1	19	-5	35
Charged to other comprehensive income	7	1	5	0	-156	0	-2
Exchange rate differences, reclassifications and other changes	1	-29	1	-3	0	-1	6
Acquisitions and disposals	-1	-1	0	0	0	0	0
Transfer to assets held for sale ¹⁾	0	24	0	0	0	-2	-1
31 Dec 2019	-104	-823	25	-17	33	63	36

¹⁾ See **Note 3** Acquisition, disposals and assets held for sale.

Movement in deferred tax assets and liabilities 2018

EUR million	Intangible assets	Property, plant and equipment	Pension obligations	Provisions	Derivative financial instruments	Tax losses and tax credits carry-forward	Other
31 Dec 2017	-101	-806	21	7	35	116	-20
Impact from change in accounting principle (IFRS 15)	-3	-	-	-	-	-	-
1 Jan 2018	-104	-806	21	7	35	116	-20
Charged to income statement	0	-24	0	-23	-7	-42	10
Charged to other comprehensive income	0	0	-2	0	159	0	5
Exchange rate differences, reclassifications and other changes	3	41	-1	1	-18	-3	4
Acquisitions and disposals	-5	1	0	0	0	0	0
31 Dec 2018	-106	-788	20	-15	169	70	-1

Retained earnings when distributed as dividends are subject to withholding tax (e.g. Russia) or distribution tax (e.g. Estonia). Provision has been made for these taxes only to extent that it is expected that these earnings will be payable in the foreseeable future. At the end of the year deferred income tax liabilities of EUR 13 million (2018:32) have been recognised for the withholding tax and other taxes that would be payable on the distributions.

Change in deferred taxes 2019 and 2018 are mainly related to change in derivative financial instruments through other comprehensive income.

Balance sheet

Deferred income tax assets recognised for tax loss carry-forwards

Deferred income tax assets are recognised for tax loss carry-forward to the extent that realisation of the related tax benefit through future profits is probable. The recognised tax assets relate to losses carry-forward with no expiration date and partly with expiry date as described below.

	2019		2018	
EUR million	Tax losses	Deferred tax asset	Tax losses	Deferred tax asset
Losses without expiration date	171	36	197	43
Losses with expiration date	170	29	110	28
Total	340	65	307	70

Deferred tax assets of EUR 14 million (2018: 10) have not been recognised in the consolidated financial statements, because the realisation is not probable. The major part of the unrecognised tax asset relates to loss carry-forwards that are unlikely to be used in the foreseeable future.

28.2 Income tax receivables

EUR million	2019	2018
Sweden	0	41
Belgium	114	114
Other	19	17
Total	133	172

Income tax receivables reflect payments of corporate income tax done in relation to the year 2019 as well as payments according to received tax audit assessments in relation to previous years.

The income tax receivable in Sweden in 2018 of EUR 41 million relate to overpayment of preliminary income tax.

In Belgium, Fortum has in previous years received income tax assessments for the years 2008–2012. The additional taxes of EUR 114 million have been paid during prior years and based on supporting legal opinions has been booked as an income tax receivable.

See ► **Note 37** Legal actions and official proceedings.

Balance sheet

29 Nuclear related assets and liabilities

ACCOUNTING POLICIES

Fortum owns Loviisa nuclear power plant in Finland. In Fortum's consolidated balance sheet, Share in the State Nuclear Waste Management Fund and the Nuclear provisions relate to Loviisa nuclear power plant. Fortum's nuclear related provisions and the related part of the State Nuclear Waste Management Fund are both presented separately on the balance sheet. Fortum's share in the State Nuclear Waste Management Fund is 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 State Nuclear Waste Management Fund. The Nuclear Waste Management Fund is 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 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 taken to 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 the corresponding period.

The timing factor is taken into account by recognising the interest expense related to discounting the nuclear provisions. The interest on the State Nuclear Waste Management Fund assets is presented as financial income.

Fortum's actual share of the State Nuclear Waste Management Fund, related to Loviisa nuclear power plant, is higher than the carrying value of the Fund on the balance sheet. The legal nuclear liability should, according to the Finnish Nuclear Energy Act, be fully covered by payments and guarantees to the State Nuclear Waste Management Fund. The legal liability is not discounted while the provisions are, and since the future cash flow is spread over a very long time horizon, the difference between the legal liability and the provisions are material.

The annual fee to the Fund is based on changes in the legal liability, the interest income generated in the State Nuclear Waste Management Fund and incurred costs of taken actions.

Fortum also has minority interests in nuclear power companies, i.e. Teollisuuden Voima Oyj (TVO) in Finland, Aktiebolag (OKG) 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 companies are non-profit making, i.e. electricity production is invoiced to the owners at cost including depreciation costs and production taxes accounted for according to local GAAP. Accounting policies of the associates registered assets and liabilities have been changed where necessary to ensure consistency with the policies adopted by Fortum.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS: ASSUMPTIONS MA ESTIMATING PROVISIONS RELATED TO NUCLEAR PRODUCTION

The provision for future obligations for nuclear waste management including decommissioning of Fortum's nuclear plant 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 governmental authorities.

Any changes in the assumed discount rate would affect the provision. If the discount rate used would be lower, the provision would increase. Fortum has contributed cash to the State Nuclear Waste Management Fund based on discounted legal liability, which leads to that the increase in provision would be offset by an increase in the re Fortum's part of the State Nuclear Waste Management Fund on the balance sheet. The total effect on the income would be positive since the decommissioning part of the provision is treated as an asset retirement obligation. The will prevail as long as the legal obligation to contribute cash to the State Nuclear Waste Management Fund is not discounted liability and IFRS is limiting the carrying value of the assets to the amount of the provision since Fortum have control or joint control over the fund.

Based on the Nuclear Energy Act in Finland, Fortum has a legal obligation to fully fund the legal liability of governmental authorities, for decommissioning of the power plant and disposal of spent fuel through the State Nuclear Waste Management Fund.

Both in Finland and in Sweden nuclear operators are legally obligated for the decommissioning of the plant and disposal of spent fuel (nuclear waste management). In both countries the nuclear operators are obligated to funding of nuclear waste management by paying to government operated nuclear waste funds. The nuclear operators have to give securities to guarantee that sufficient funds exist to cover future expenses of decommissioning plant and the disposal of spent fuel.

Balance sheet

29.1 Nuclear related assets and liabilities for 100% owned nuclear power plant, Loviisa

EUR million	2019	2018
Carrying values on the balance sheet		
BS Nuclear provisions	813	899
BS Share in State Nuclear Waste Management Fund	813	899
Short term receivable from the State Nuclear Waste Management Fund	51	-
Legal liability and actual share of the State Nuclear Waste Management Fund		
Liability for nuclear waste management according to the Nuclear Energy Act	1,214	1,180
Funding obligation target	1,135	1,180
Fortum's share in the State Nuclear Waste Management Fund	1,180	1,153
Share of the fund not recognised on the balance sheet	316	254

Legal liability for Loviisa nuclear power plant

Finnish nuclear operators have submitted updated technical plan and cost estimates to the Ministry of Economic Affairs and Employment in June 2019. The legal liability on 31 December 2019, decided by the Ministry of Economic Affairs and Employment in November 2019, was EUR 1,214 million.

The legal liability is based on a cost estimate, which is done every year, and a technical plan, which is made every third year. The cost estimate and technical plan was updated in 2019. The legal liability is determined by assuming that the decommissioning would start at the beginning of the year following the assessment year. The provisions are based on the same cash flows for future costs as the legal liability, but the legal liability is not discounted to net present value.

Fortum's share in the State Nuclear Waste Management 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. Based on the law, Fortum applied for a periodisation of the fund target, due to a change in the legal liability. The application was approved by the Ministry of Economic Affairs and Employment in November 2019 confirming the fund target at EUR 1,135 million.

Nuclear provisions

EUR million

BS 1 January	899
Additional provisions	-
Provision used	-1
Provision reversed	-
Unwinding of discount	-
BS 31 December	813

Fortum's share in the State Nuclear Waste Management Fund

Nuclear provision and fund accounted according to IFRS

Nuclear provisions include the provision for decommissioning and the provision for disposal of spent carrying value of the nuclear provisions, calculated according to IAS 37, decreased by EUR 86 million 31 December 2018, totalling EUR 813 million on 31 December 2019. The decrease in provision during 2019 was EUR 86 million. The decrease was EUR 100 million, of which the part relating to the provision for decommissioning was EUR 10 million. The decrease was recognised immediately to the income statement and the part relating to decommissioning was recognised in the balance sheet. The reduced provision led to negative nuclear fund adjustment of EUR 40 million and positive effect to other financial expenses - net of EUR 40 million. The periodisation of the fund and positive fund adjustment of EUR 51 million, but did not have any impact on the provision. The increase in 2018 is mainly arising from changes in assumptions used for the provision.

The carrying value of the Fund on the balance sheet cannot exceed the carrying value of the nuclear provisions. The Fund is from an IFRS perspective overfunded with EUR 316 million, since of the Fund on 31 December 2019 was EUR 1,180 million, while the carrying value of the fund on the balance sheet was EUR 813 million and the short-term receivable from the fund EUR 51 million, see Note 29.1.

Fortum's share of the Finnish Nuclear Waste Management Fund in Fortum's balance sheet can be equal to the amount of the provisions according to IFRS. As long as the Fund is overfunded from perspective, the effects to operating profit from this adjustment will be positive if the provisions increase more than the Fund and negative if actual value of the fund increases more than the provisions. This adjustment is not included in Comparable operating profit in Fortum's financial reporting. For more information on items affecting comparability, see Note 29.1.

Balance sheet

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.

29.2 Nuclear power plants in associated companies and joint ventures

OKG, Forsmark and TVO are non-profit making companies, i.e. electricity production is invoiced to the owners at cost including depreciations, interest costs and production taxes. 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. During 2018, assumptions for nuclear provision were also changed for the respective balances of the co-owned nuclear companies in Finland and Sweden, i.e. Teollisuuden Voima, (TVO), Oskarshamn Kraftgrupp AB (OKG) and Forsmark Kraftgrupp AB. The total impact of the change to share of profit from these associated companies and joint ventures was EUR -37 million, net of tax, and including additional nuclear waste liability related to legacy waste obligations for Swedish nuclear. The net profit impact from all these nuclear-related adjustments is close to zero.

The tables below present the 100% figures relating to nuclear funds and provisions for the companies as well as Fortum's net share.

TVO's total nuclear related assets and liabilities (100%)

EUR million	2019	2018
Carrying values on TVO's balance sheet		
Nuclear provisions	1,041	1,016
Share of the State Nuclear Waste Management Fund	1,041	1,016

of which Fortum's net share consolidated with equity method

	0	0
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TVO's legal liability and actual share of the State Nuclear Waste Management Fund

Liability for nuclear waste management according to the Nuclear Energy Act	1,471	1,506
Share of the State Nuclear Waste Management Fund	1,506	1,471
Share of the fund not recognised on the balance sheet	465	455

TVO's legal liability, provision and share of the fund are based on the same principles as described above for Lovisa nuclear power plant. Both the technical plan and cost estimate update in 2019, had a small impact on Fortum's share in TVO's nuclear related assets and liabilities.

TVO's share of the Finnish State Nuclear Waste Management Fund is from an IFRS perspective EUR 465 million (of which Fortum's share EUR 124 million), since TVO's share of the Fund on 31 December 2018 was EUR 1,506 million and the carrying value on the balance sheet was EUR 1,041 million. 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 own more information in ► **Note 27** Interest-bearing liabilities.

OKG's and Forsmark's total nuclear related assets and liabilities (100%)

EUR million	2019	2018
OKG's and Forsmark's nuclear related assets and liabilities ¹⁾		
Nuclear provisions	3,9	3,9
Share in the State Nuclear Waste Management Fund	3,3	3,3
Net amount	-5	-5

of which Fortum's net share consolidated with equity method

¹⁾ Accounted for according to Fortum's accounting principles. Companies' statutory financial statements are not audited.

In Sweden Svensk Kärnbränslehantering AB (SKB), a company owned by the nuclear operators, takes nuclear waste management related activities on behalf of nuclear operators. SKB receives its funding from the Swedish State Nuclear Waste Management Fund, which in turn is financed by the nuclear operators.

Nuclear waste fees and guarantees are updated every third year by governmental decision after proposal from Swedish Radiation Safety Authority (SSM). From September 2018 onwards the proposal is prepared by the National Debt Office. The proposal is based on cost estimates done by SKB and the license holders' technical plan for nuclear waste management was decided by SKB in September 2019 and was handed in the end of September. In December 2017 the Swedish government decided the waste fees and guarantees for the years 2018–2020. Nuclear waste fees are currently based on future costs with the assumed lifetime (40 years in previous decision) for each unit of a nuclear power plant.

In addition to nuclear waste fees nuclear power companies provide guarantees for any nuclear waste management unexpected events.

For more information regarding Fortum's guarantees given on behalf of nuclear associated companies see ► **Note 36** Pledged assets and contingent liabilities.

Balance sheet

30 Other provisions

ACCOUNTING POLICIES

Provisions for environmental obligations, asset retirement obligations, legal claims and other obligations are recognised when the Group has a present legal or constructive obligation as a result of past events to a third party, 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 using a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the obligation. Increase in the provision due to the passage of time is recognised as interest expense.

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. Environmental expenditures resulting from the remediation of an existing condition caused by past operations, and which do contribute to current or future revenues, are expensed as incurred.

Environmental provisions include provisions for obligations to cover landfills and clean-up obligations for contaminated land areas. Provisions are determined based on the surface area of the landfill site, remaining land area to be landscaped or otherwise cleaned-up, and the unit cost of conducting the coverage and clean-up activities in the future.

Environmental provisions are also recognised for aftercare and monitoring obligations arising from landfill permit holder's requirement to take into account potential danger to health or the environment posed by a landfill site for a period of at least 30, up to 60, years after the coverage. The aftercare and monitoring provision is determined on the basis of estimated costs and estimated number of years of filling the landfill.

ASSET RETIREMENT OBLIGATIONS

Asset retirement obligation is recognised either when there is a contractual obligation towards a third party or a legal obligation, and the amount can be reliably estimated. Obligating event is, e.g. when a plant is built on a leased land with an obligation to dismantle and remove the asset in the future; or when a legal obligation towards Fortum changes. 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.

CRITICAL ACCOUNTING ESTIMATES AND JUDGEMENTS:

ASSUMPTIONS MADE WHEN ESTIMATING PROVISIONS

Provisions for present obligations require management to assess the best estimate of the expenditure needed to settle the present obligation at the end of the reporting period. The actual amount and timing of the expenditure might differ from these estimates made.

EUR million	2019			2018		
	Environ- mental	Other	Total	Environ- mental	Other	Total
1 January	41	65	106	43	0	43
Increase in provisions	3	14	17	0	0	0
Provisions used	-1	-22	-23	0	-	-
Unused provisions reversed	-1	-3	-4	0	0	0
Transfer to assets held for sale ¹⁾	-1	0	-1	0	0	0
Exchange rate differences and other changes	8	-2	6	-1	-	-
31 December	49	52	101	41	0	41
Of which current provisions ²⁾	0	13	13	0	0	0
B5 Of which non-current provisions	49	38	87	41	0	41

1) See ▶ **Note 3** Acquisitions, disposals and assets held for sale.

2) Included in trade and other payables on the consolidated balance sheet, see ▶ **Note 33** Trade and other payables

Environmental provisions include mainly provisions for obligations to cover and monitor landfills, as contaminated land areas. The majority of the provision is estimated to be used within 10 to 15 years.

Dismantling provisions for the Finnish coal fired power plants are included in Other provisions.

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 practises in the countries in which they operate. The schemes are generally funded through payments to insurance companies or the Group's pension funds as determined by periodic actuarial calculations. The Group has both defined benefit and defined contribution plans.

The Group's contributions to defined contribution plans are charged to the income statement in the period to which the contributions relate.

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. The net interest is presented in financial items and the rest of the income statement effect as pension cost.

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 that have terms to maturity approximating to the terms of the related pension liability. In countries where there is no deep market in such bonds, market yields on government bonds are used instead. The plan assets for pensions are valued at market value. The liability recognised on the balance sheet is the defined benefit obligation at the closing date less the fair value of plan assets. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

When the benefits of a plan are changed or when a plan is curtailed, the resulting change in benefit 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 benefits plans are recognised when the settlement occurs.

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

In Finland statutory pension benefits (as determined in Employee's Pension Act /TyEL) provide the pension coverage for old age, disability and death of a family provider. The benefits are insured with company and determined to be defined contribution plans.

In addition the Group has additional old-age and survivors pension benefits arranged with the Fortum Pension Fund. The Fortum Pension Fund is a closed fund managed by a Board, consisting of both employees' representatives. The Fund is operating under regulation from Financial Supervisory Authority. The liability has to be fully covered according to the regulations. The national benefit obligation related to defined benefit plans is calculated so that the promised benefit is fully funded until retirement. After the benefits payable are indexed yearly with TyEL-index. The promised benefit is defined by the rule that the benefits are mostly 66% at a maximum of the salary basis. The salary basis is an average of the ten last years' salaries indexed with a common salary index to the accounting year.

Sweden

In Sweden the Group operates several defined benefit and defined contribution plans like the general pension plan and the PA-KL and PA-KFS plans that are eligible for employees within companies formerly owned by municipalities. The defined benefit plans are fully funded and have partly been financed through Fortum pension fund and partly through insurance premiums. The pension arrangements comprise a normal pension, complementary retirement pensions, survivors' pension and disability pension. The most significant pension plan is the ITP-plan for white-collar employees in permanent employment (or temporary employment for a certain waiting period), who fulfil the age conditions. To qualify for a full pension the employee must have worked for at least 30 years. The projected period of pensionable service, from the date of entry until retirement age, of at least 30 years.

The Swedish pension fund is managed by a Board, consisting of both employers' and employees' representatives. The fund is operating under regulation from Swedish Financial Supervisory Authority and County Administrative Board and governed by Swedish law (no. 1967:531). The fund constitutes a separate legal entity. The fund's liability is secured by Swedish state bonds. The fund constitutes a separate legal entity. The employer must have a credit insurance from PRI Pensjonsgaranti Mutual Insurance Company. The liability does not have to be fully covered by the fund according to the regulations.

The part of the ITP multiemployer pension plan that is secured by paying pension premiums to AFA is accounted for as a defined contribution plan. The part of the ITP multiemployer pension plan that is secured by paying pension premiums to AFA is accounted for as a defined contribution plan.

Balance sheet

consistent and reliable basis to allocate assets or liabilities to the participating entities within the ITP insurance. The reason for this is that it is not possible to determine from the terms of the plan to which extent a surplus or a deficit will affect future contributions.

Norway

Group companies operate both defined contribution and defined benefit plans. Some defined benefit schemes offer benefits common for municipalities in Norway and some are private pension schemes. Benefits include old age pensions, disability pension and survivor's pension, including pension benefits from the National Insurance Scheme (Folketrygden). The schemes are fully funded within the rules set out in the Norwegian insurance legislation.

The majority of the defined benefit plans are closed, either private plans or public plans, that are operated by the Fortum Pension Fund. The Fortum Pension Fund was established in 2018 and the participants were transferred there from the Hafslund and Infratek's Pension Fund. The Group has also a closed public defined benefit plan operated by Oslo Pensjonsforsikring AS. In addition, the Group has defined benefit plans with various insurance companies.

Pension arrangements in other countries

Pension arrangements in Russia include payments made to the state pension fund. These arrangements are treated as defined contribution plans. The Russian (in addition to the defined contribution plans) and Polish companies participate in certain defined benefit plans, defined by collective agreements, which are unfunded and where the company meets the benefit payment obligation as it falls due. The benefits provided under these arrangements include, in addition to pension payments, one-time benefits paid in case of employee mortality or disability as well as lump sum payments for anniversary and financial support to honoured workers and pensioners.

In other countries the pension arrangements are done in accordance with the local legislation and practice, mostly being defined contribution plans.

Main risks relating to defined benefit plans – Finland and Sweden

Overall risks

Finland - If the return of the fund's assets is not enough to cover the raise in liability and benefit paid the financial year then the employer funds the deficit with contributions unless the fund has sufficient assets. Sweden - As the pension fund is separated from the funding companies Fortum is not obliged to make additional contributions to the pension fund in any case of deficit. However if the assets decrease then the liability according to Swedish GAAP, Fortum's credit insurance cost from PRI will increase.

Change in discount rate

Finland - The discount rate which is used to calculate the defined benefit obligation (according to IFRS) on the value of corporate bond yields as at reporting date. A decrease in yields increases the benefit that is offset by increase in the value of fixed income holdings.

Investment and volatility risk

Finland - The pension fund's board accepts yearly an Investment Plan, which is based on an external analysis. The assets are allocated to stocks and stock funds, fixed income instruments and real estate investments are diversified into different asset classes and to different asset managers taking into regulation of the Financial Supervisory Authority.

Sweden - The pension fund operation is regulated by law and supervised by central administrative (Finansinspektionen and the County Administrative Board). The pension fund board decides yearly on asset allocation and a risk management model that stipulates a maximum acceptable market value assets. The major assets are fixed income instruments, stock index funds and cash.

Risks relating to assumptions used

Actuarial calculations use assumptions for future inflation and salary levels and longevity. Should the outcome differ from these assumptions, this might lead to higher liability.

Balance sheet

Movement in the net defined benefit liability

EUR million	Defined benefit obligation		Fair value of plan assets		Net defined benefit asset(-)/liability(+)	
	2019	2018	2019	2018	2019	2018
1 January	483	501	-386	-401	97	101
Included in consolidated income statement						
Current service cost	6	8			6	9
Past service cost	-1	-1			-1	-1
Settlements	0	-4	0	2	0	-1
Net interest ¹⁾	10	9	-7	-7	2	2
	14	13	-6	-4	7	9
Included in OCI						
Remeasurement gains(-)/losses(+)	50	-8	-26	2	25	-6
Actuarial gains/losses arising from changes in financial assumptions	52	-12			52	-12
Actuarial gains/losses arising from experience adjustments	-2	4			-2	4
Return on plan assets (excluding amounts included in net interest expense)			-26	2	-26	2
Exchange rate differences	-2	-7	1	5	0	-2
	49	-15	-24	7	24	-8
Other						
Contributions paid by the employer			-2	-1	-2	-1
Benefits paid	-17	-17	13	13	-4	-4
	529	483	-406	-386	123	97
31 December					524	480
Present value of funded defined obligation					-406	-386
Fair value of plan assets					119	94
Funded status					5	3
Present value of unfunded obligation ²⁾						
Net liability arising from defined benefit obligation					123	97

Pension assets included in other non-current assets on the balance sheet
BS Pension obligations on the balance sheet

¹⁾ Net interest is presented among financial items in 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 11** Employee benefits and Board remuneration).

²⁾ The unfunded obligation relates to arrangements in Russia and Poland.

At the end of 2019 a total of 836 (2018: 833) Fortum employees are included in defined benefit plans providing pension benefits. During 2019 pensions or related benefits were paid to a total of 3,665 (2018: 3,375) persons. Contributions expected to be paid during year 2020 are EUR 3 million.

Fair value of plan assets

EUR million	2019
Equity instruments	1
Debt instruments	1
Cash and cash equivalents	1
Real estate ¹⁾	
Investment funds	
Company's own ordinary shares	
Other assets	
Total	4

¹⁾ Of which EUR 1 million (2018: 1) occupied by the Group.

When the pension plan has been financed through an insurance company, a specification of the plan not been available. In these cases the fair value of plan assets has been included in other assets.
The actual return on plan assets in Finland, Sweden and Norway totalled EUR 32 million (2018: 5 million).

Amounts recognised on the balance sheet by country 2019

EUR million	Finland	Sweden	Norway	Other countries
Present value of funded obligations	283	180	6	6
Fair value of plan assets	-244	-104	-5	-5
Deficit(+)/surplus(-)	39	76	-	-
Present value of unfunded obligations				
Net asset(-)/liability(+) on the balance sheet	39	76	-	-
Pension asset included in non-current assets	0	0	0	0
BS Pension obligations on the balance sheet	39	76		

Amounts recognised on the balance sheet by country 2018

EUR million	Finland	Sweden	Norway	Other countries
Present value of funded obligations	269	147	6	6
Fair value of plan assets	-233	-102	-5	-5
Deficit(+)/surplus(-)	37	45	-	-
Present value of unfunded obligations				
Net asset(-)/liability(+) on the balance sheet	37	45	-	-
Pension asset included in non-current assets	0	0	0	0
BS Pension obligations on the balance sheet	37	45		

Balance sheet

The principal actuarial assumptions used

	2019			2018		
	Finland	Sweden	Norway	Finland	Sweden	Norway
%						
Discount rate	0.80	1.20	2.20	1.60	2.30	2.60
Future salary increases	1.60	2.80	2.25	1.70	2.90	2.75
Future pension increases	1.60	1.80	1.24	1.80	1.90	1.33
Rate of inflation	1.30	1.80	1.50	1.50	1.90	1.50

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 Sweden is based on yields on Swedish covered bonds with maturity that best reflects the estimated term of the defined benefit pension plans. The covered bonds in Sweden are considered high quality bonds as they are secured with assets. The discount rate in Norway is based on high-quality corporate bonds (covered bonds - OMF).

The life expectancy is the expected number of years of life remaining at a given age

Longevity at age 65	Finland		Sweden		Norway	
45 – male	22	23	23	23	23	23
45 – female	27	25	27	27	27	27
65 – male	21	22	21	21	21	21
65 – female	25	24	24	24	24	24

The discount, inflation and salary growth rates used are the key assumptions used when calculating defined benefit obligations. Effects of 0.5 percentage point change in the rates to the defined benefit obligation on 31 December 2019, holding all other assumptions stable, are presented in the table below.

Sensitivity of defined benefit obligation to changes in assumptions

Change in the assumption	Impact to the pension obligation increase(+)/decrease(-)		
	Finland	Sweden	Norway
0.5% increase in discount rate	-7%	-11%	-8%
0.5% decrease in discount rate	8%	12%	10%
0.5% increase in benefit	7%	10%	7%
0.5% decrease in benefit	-6%	-9%	-6%
0.5% increase in salary growth rate	1%	2%	3%
0.5% decrease in salary growth rate	-1%	-2%	-3%

The methods used in preparing the sensitivity analysis did not change compared to the previous period. The sensitivity analysis is based on the mortality basis so that life expectancy increases by one year would increase the net liability in Finland and Norway with EUR 20 million (17%).

Maturity profile of the undiscounted defined benefit obligation for Finland, Sweden and Norway as of 31 December 2019

EUR million	Future benefit obligations
Maturity under 1 year	
Maturity between 1 and 5 years	
Maturity between 5 and 10 years	
Maturity between 10 and 20 years	
Maturity between 20 and 30 years	
Maturity over 30 years	

The weighted average duration of defined benefit obligation in Finland, Sweden and Norway at the end of 2019 is 17 years.

32 Other non-current liabilities

EUR million	2019	2018
Connection fees		
Other non-current liabilities		
BS Total	1	1

Connection fees include refundable fees paid by the customer when connected to district heating in Finland. Connection fees were refundable until 2013.

34 Leases

EUR million	2019	2018
Trade payables	316	334
Accrued expenses and deferred income		
Accrued personnel expenses	97	103
Accrued interest expenses	80	98
	31	40
Contract liabilities		
Other accrued expenses and deferred income	42	80
Other liabilities		
VAT liability	54	34
Current tax liability	64	30
Advances received	78	110
Current provisions ¹⁾	13	14
Other liabilities	168	214
BS Total	943	1,058

1) See ► **Note 30** Other provisions.

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.

ACCOUNTING POLICIES

The Group leases mainly office buildings and land areas. Until 31 December 2018, the Group's leases were classified as operating leases under the previous accounting standard, IAS 17 Leases; from 1 January 2019, the Group reclassifies its leases into short-term leases and low value leases, in line with IFRS 16 Leases. The Group has elected to apply the short-term lease exemption for all of its leases with a lease term of 12 months or less. The Group has also elected to apply the low value asset exemption for all of its leases with a value of less than €5,000. The Group's accounting policy for leases is set out in Note 16. See ► Note 1 Significant accounting policies for information on the change in lease accounting policy.

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.

Right-of-use assets and lease liabilities are initially recognised on the consolidated balance sheet at future payments over the lease term. Lease payments are discounted to present value using an effective interest rate. Right-of-use assets are depreciated on a straight-line basis over the lease term, and reviewed periodically for impairment.

When the future lease payments are revised due to changes in index-linked considerations or the lease term, the right-of-use asset and the corresponding lease liability is remeasured. Any differences arising in remeasures are recognised in the consolidated income statement.

Interest expense on lease liabilities is presented within Interest expense in the consolidated income statement. The principal portion of the lease payment is presented under Other payments on consolidated cash flow statement, and the interest portion as Interest paid under Funds from operations. Variable lease payments, as defined in the standard, are presented in Other expenses. Leases not capitalised due to exemptions in the standard, are presented in Other expenses.

Amounts recognised in consolidated financial statements

EUR million

In consolidated Income Statement

Depreciation -18

Interest expense on lease liabilities -3

On consolidated balance sheet

Additions to right-of-use assets 38

Of which land 8

Of which buildings, plants and structures 27

Of which machinery and equipment 4

Carrying amount of right-of-use assets 114

Of which land 33

Of which buildings, plants and structures 70

Of which machinery and equipment 11

Lease liabilities 108

In consolidated cash flow statement

Cash outflow for leases -18

Lease commitments

The Group has EUR 22 million off-balance sheet future commitments for leases that have not commenced on 31 December 2019.

See ► **Note 1** Significant accounting policies, ► **Note 4** Financial risk management, ► **Note 18** Property, plant and equipment and right-of-use assets, and ► **Note 27** Interest-bearing liabilities for more information.

35 Capital and other commitments

Capital commitments

EUR million

Property, plant and equipment

Capital commitments are off-balance sheet capital expenditures contracted for at the balance sheet date.

Other commitments

On 8 October 2019, Fortum entered into agreements to acquire all the shares in Uniper SE held managed by Elliott Management Corporation and its affiliates (Elliott) and Knight Vinke Energy A and its affiliates (Knight Vinke), a total shareholding in excess of 20.5%. The transaction will be financed with existing cash resources and committed credit facilities underwritten by Barclays Bank PLC. In accordance with the agreements, Fortum has committed to paying the acquisition price of EUR 2.3–2.6 billion, depending on the amount of shares acquired.

Fortum has committed to provide a maximum of EUR 85 million to Voimaosakeyhtiö S for its part in the Fennovoima nuclear power project in Finland. Furthermore, Fortum's remaining directed commitments include the construction of a waste-to-energy combined heat and power plant (CHP) in Kaunas, Lithuania, at a maximum. The investment is made through Kauno Kogeneracinė Jėgainė (KKJ), a joint venture owned by Lietuvos Energija.

Fortum has also committed to provide a maximum of EUR 7 million to a joint venture with Numail Limited (NRL) and Chempolis to build and operate a biorefinery in Assam, India.

Teollisuuden Voima Oyj (TVO) is building Olkiluoto 3, the nuclear power plant, which is intended to provide loans, share issues and shareholder loans according to shareholders' agreement between the owner and Fortum. At end of December 2019, Fortum had EUR 170 million (2018: 170) outstanding receivables regarding Olkiluoto 3 and is additionally committed to provide at maximum EUR 63 million. TVO shareholder's share is calculated as a percentage of participation in joint ventures.

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 develop common hydro-power fund to finance large parts of the environmental actions needed. The fund will have a financial cap of SEK 10 billion to be paid over a 20-year period, and the largest operators will contribute proportionately based on their respective market share of hydro-power production. Fortum's share of the funds' total financing.

Off balance sheet items

36 Pledged assets and contingent liabilities

ACCOUNTING POLICIES

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.

EUR million	2019	2018
Pledged assets on own behalf		
For debt		
Pledges	288	288
Real estate mortgages	137	137
For other commitments		
Pledges	309	346
Real estate mortgages	2	21
Pledged assets on behalf of others		
Pledges	33	31
Contingent liabilities on own behalf		
Other contingent liabilities	25	167
On behalf of associates and joint ventures		
Guarantees	875	622

36.1 Pledged assets for debt

Participants in the Finnish State Nuclear Waste Management Fund are allowed to borrow from the Fund. Fortum has pledged shares in Kemijoki Oy as a security. The value of the pledged shares amounts to EUR 269 million (2018: 269).

Fortum Tartu in Estonia (60% owned by Fortum) has given real estate mortgages for a value of EUR 96 million (2018: 96) as a security for an external loan. Real estate mortgages have also been given for loan from Fortum's pension fund for EUR 41 million (2018: 41).

See ▶ **Note 27** Interest-bearing liabilities for related interest-bearing liabilities.

36.2 Pledged assets for other commitments

Pledges include restricted cash of EUR 21 million (2018: 346) and securities of EUR 281 million (2018: 311) posted toward Nasdaq Clearing AB covering Fortum's required contribution to the Commodity Market Default Fund (default fund). The default fund is a mutualized fund whereby all participants on the Nasdaq Commodities (default fund) post collateral in relation to their exposure on the market in order to cover power receivables by members which may cause losses exceeding the members' own collateral. See ▶ **Note 21** Interest-bearing liabilities.

Fortum has given real estate mortgages in power plants in Finland, total value of EUR 2 million (2018: 2 million) as a security to the Finnish State Nuclear Waste Management Fund for the uncovered part of the loan for the decommissioning and disposal of spent fuel in Loviisa power plant. According to the Nuclear Energy Act, Fortum is obligated to contribute the funds in the Nuclear Waste Management Fund to cover the legal liability. Any uncovered legal liability relates to the payments to the fund. The size of the securities given is updated yearly in the second quarter of the year. See ▶ **Note 29** Nuclear related assets and liabilities.

36.3 Pledged assets on behalf of others

Pledged assets on behalf of others consist of restricted cash of EUR 33 million (2018: 31) posted toward Nasdaq Clearing AB covering Fortum's required contribution to the Commodity Market Default Fund (default fund). The default fund is a mutualized fund whereby all participants on the Nasdaq Commodities (default fund) post collateral in relation to their exposure on the market in order to cover power receivables by members which may cause losses exceeding the members' own collateral. See ▶ **Note 21** Interest-bearing liabilities.

36.4 Contingent liabilities on own behalf

On 1 January 2019, Fortum acquired all remaining C-shares of TVO entitling to the power production of Meri-Pori coal condensing power plant. Fortum is now entitled to 100% of the power production of the Meri-Pori power plant is mainly used in Fingrid's capacity reserve and as back-up capacity.

36.5 Guarantees on behalf of associates and joint ventures

Guarantees on behalf of associated companies and joint ventures mainly consist of guarantees related to associated nuclear companies (Teollisuuden Voima Oyj, Forsmarks Kraftgrupp AB and OKG AB). Guarantees have been given on behalf of Forsmarks Kraftgrupp AB and OKG AB amounting to SEK 8,239 million (EUR 2018: 526). There are two types of guarantees given. The Financing Amount is given to cover Fortum's uncovered part in the Nuclear Waste Fund, assuming no further production and that no further

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 updated every third year by governmental decision. The Financing Amount given by Fortum on behalf of Forsmarks Kraftgrupp AB and OKG AB is SEK 5,695 million (EUR 545 million) and the Supplementary Amount is SEK 2,544 million (EUR 244 million).

The guarantee given on behalf of Teollisuuden Voima Oyj to the Finnish State Nuclear Waste Management Fund amounts to EUR 21 million (2018: 36). The guarantee covers the unpaid legal liability due to periodisation as well as risks for unexpected future costs.

Fortum has minority shares in legal companies owning nuclear power plants in Finland and Sweden. Fortum consolidates these companies according to the equity method meaning that Fortum's share of the assets and liabilities are netted to the balance sheet. For information regarding nuclear related assets and liabilities of Loviisa nuclear power plant as well as Swedish and Finnish nuclear production companies where Fortum has a minority shareholding see ► **Note 29** Nuclear related assets and liabilities.

The guarantees given to the Russian Wind fund have been released during Q4 2019 (2018: EUR 48 million).

36.6 Other contingent liabilities

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.

37 Legal actions and official proceedings

37.1 Group companies

Tax cases in Finland

No tax cases with material impact in Finland.

Tax cases in Sweden

Cases relating to Swedish interest deductions

In March 2018, the Swedish Supreme Administrative Court decided not to grant Fortum leave to appeal with respect to the interest deduction cases relating to the years 2009–2012. The unfavourable decision of the Administrative Court of Appeal from June 2017 therefore remains in force. The additional tax and interest in total SEK 1,175 million (EUR 122 million), was paid in 2016 and booked as a cost in 2017. There are grounds to argue that the aforementioned decisions of the Administrative Court of Appeal and the Administrative Court violate EU law and fundamental rights under EU law. On these grounds, Fortum in December 2018 filed a summons application to the District Court of Stockholm in which it alleges a violation of the Swedish state in these cases. Moreover, Fortum has filed a request to initiate a mutual agreement procedure between Sweden and the Netherlands for the year 2012.

Cases relating to the Swedish hydro real estate tax

Fortum Sverige AB has through an appeal process in Swedish courts claimed that the property tax for hydropower plants shall be lowered to the normal 0.5 percent of the tax assessment value. The case concerns the years 2009–2014 and includes several legal arguments for the claim including state aid arguments. Fortum Sverige AB did not receive a permission to appeal from the Supreme Administrative Court in this matter. The Administrative Court, the Administrative Court of Appeal in Stockholm and the Supreme Administrative Court have handled only the arguments concerning state aid, the case has now been transferred back to the Administrative Court concerning the other legal arguments. The disputed amount, excluding interest for the time period, is approximately SEK 510 million (approximately EUR 49 million).

Moreover, Swedish Fortum companies have appeals for 2011–2016 pending before the Administrative Court relating to the property tax rate for their hydropower plants referring to the same legal grounds. Fortum has also appealed the real estate tax in accordance with the legislation. If the final court decision would be in favour of Fortum, this would not have any result impact for Fortum.

Fortum Sverige AB has in December 2018 filed a complaint to the EU commission regarding the property tax for hydropower plants regarding 2017 and prior years. Fortum has asked the commission to investigate whether the Swedish legislation regarding the property tax for hydropower plants and the court decisions are in line with EU state aid rules.

Off balance sheet items

Tax cases in Belgium

Fortum has received income tax assessments in Belgium for the years 2008, 2009, 2010, 2011 and 2012. The tax authorities disagree with the tax treatment of Fortum EIF NV which was later merged into Fortum Project Finance NV. Fortum finds the tax authorities' interpretation not to be based on the local regulation and has appealed the decisions. In June 2014, the court of First instance in Antwerp rejected Fortum's appeal for the years 2008 and 2009. Fortum found the decision unjustifiable and appealed to the Court of Appeal.

In January 2016, Fortum received a favourable decision from the Court of Appeal in Antwerp in which the Court disagreed with the tax authorities' interpretation and the tax assessment for 2008 was nullified. The tax authorities disagreed with the decision and filed an appeal to the Supreme Court (Hof van Cassatie) in March 2016. In April 2019, the Advocate General at the Supreme Court issued his opinion which was in favour of Fortum Project Finance. He dismissed the arguments made by the Belgian State and confirmed the judgment of the Court of Appeal of Antwerp.

In May 2019, the Supreme Court, however, annulled the decision of the Court of Appeal of Antwerp and referred the case back to the Court of Appeal of Ghent for full retrial. Fortum's appeals concerning 2009–2012 are still pending and Fortum expects the remaining years to follow the final decision for 2008. Fortum has made an assessment supported by legal opinions not to recognise a provision. The amount of additional tax claimed is approximately EUR 36 million for the year 2008, approximately EUR 27 million for the year 2009, approximately EUR 15 million for the year 2010, approximately EUR 21 million for the year 2011 and approximately EUR 15 million for the year 2012. The tax has already been paid.

For critical accounting estimates regarding uncertain tax positions, see **► Note 28** Income taxes on the balance sheet. See also **► Note 13** Income tax expense.

Other legal actions and official proceedings

In addition to the litigations described above, some Group companies are involved in other routine tax and other disputes incidental to their normal conduct of business. Based on the information currently available, management does not consider the liabilities arising out of such litigations likely to be material to the Group's financial position.

37.2 Associated companies

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.

OL3 was procured as a fixed-price turnkey project from a consortium (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 accordance with the Supplier's schedule updated in November 2018, regular electricity generation at the plant unit will commence in January 2020. According to the Supplier, nuclear fuel will be loaded into the reactor in June 2019 and the first connection to the grid takes place in October

2019. According to the Supplier's plant ramp-up program the unit will produce 2–4 TWh of electricity at power levels, during the period of time between the first connection to the grid and the start of regular production.

According to the comprehensive settlement agreement signed in March 2018, TVO and the Supplier withdrew the pending arbitration proceedings under the International Chamber of Commerce (ICC) respect to costs and losses incurred in relation to delays in the construction of the OL3 EPR project. The ICC tribunal confirmed the arbitration settlement by a consent award, and the arbitration proceedings terminated. The parties also withdrew the pending appeals in the General Court of the European Union.

The settlement agreement between TVO and the plant supplier consortium companies Areva NP and Siemens AG as well as with Areva Group parent company Areva SA, a company wholly owned by the French State, concerning the completion of the OL3 EPR project and related disputes entered into force later.

The settlement agreement stipulates that:

- In order to provide and maintain adequate and competent technical and human resources for the OL3 EPR project, Areva will source the necessary additional resources from Framatome S.A., a majority owner of Electricité de France (EDF). The supplier consortium companies undertake that dedicated to the completion of the OL3 EPR project will be adequate and will cover all applicable periods, including setting up a trust mechanism funded by Areva companies to secure the financial completion of the OL3 EPR project.
- The turnkey principle of the OL3 EPR plant contract and the joint and several liability of the supplier companies remain in full force. The agreement also noted the plant supplier's schedule for the time agreement was signed, according to which regular electricity production in the unit will commence. The ICC arbitration concerning the costs and losses caused by the delay of the OL3 EPR project financial compensation of EUR 450 million to be paid to TVO in two installments by the supplier companies.
- In the event that the supplier consortium companies fail to complete the OL3 EPR project by the time they will pay a penalty to TVO for such delay in an amount which will depend on the actual time of the OL3 EPR project and may not exceed EUR 400 million.

TVO received the first payment of EUR 328 million of the settlement amount in March 2018 at the time of the settlement agreement. In December 2019, the Supplier paid the second installment of compensation amounting to EUR 122 million. The amount corresponding to the total settlement entered as property, plant and equipment in the TVO Group balance sheet.

In December 2019, TVO received an updated schedule for the commissioning of the OL3 EPR plant. According to the received information, nuclear fuel will be loaded into the reactor in June 2020. The first connection to the grid will take place in November 2020, and the start of regular electricity production in March 2021.

38 Related party transactions

38.1 The Finnish State and companies owned by the Finnish State

At the end of 2019, the Finnish State owned 50.76% of the Company's shares (2018: 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 2019. The total compensation (including pension benefits and social costs) for the key management personnel for 2019 was EUR 12 million (2018: 9).

See ► **Note 11** 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.

For further information on transactions and balances with associated companies and joint ventures, see ► **Note 19** Participations in associated companies and joint ventures.

38.4 Pension funds

The Fortum pension funds in Finland, Sweden and Norway are stand-alone legal entities which manage pension assets related to part of the pension coverage in these countries. Fortum has not paid contributions to the pension funds in 2019. In 2018, Fortum paid a capital contribution of EUR 3 million to the newly established pension fund in Norway. The assets in the pension fund in Finland include Fortum shares representing 0.04% (2018: 0.04%) of the company's outstanding shares. Real estate mortgages have been given for a loan from Fortum's Finnish pension fund for EUR 41 million (2018: 41).

39 Events after the balance sheet date

Disposal of district heating business, Joensuu, Finland

On 10 January 2020, Fortum concluded the sale of its district heating business in Joensuu, Finland, Voima Oyj, as announced on 20 December 2019. The total consideration of the sale on a debt- and basis was approximately EUR 530 million and the cash was received at the completion of the divestiture in January 2020. Fortum will record a tax-exempt capital gain of approximately EUR 430 million in the segment's first-quarter 2020 results.

40 Subsidiaries by segment on 31 December 2019

C = City Solutions
CS = Consumer Solutions
G = Generation
R = Russia
O = Other Operations

1) New company
2) Shares held by the parent company

Company name	Domicile	Segment	Group holding, %
Böle Vindkraft Ab/Oy	Finland	G	100.0
Ekopartnerit Turku Oy	Finland	C	51.0
Fincmet Oy	Finland	C	100.0
Fortum Asiakaspalvelu Oy ²⁾	Finland	CS	100.0
Fortum Assets Oy	Finland	O	100.0
Fortum Growth Oy	Finland	C	100.0
Fortum Heat and Gas Oy ²⁾	Finland	C,O	100.0
Fortum Heat Estonia Oy ¹⁾	Finland	C	100.0
Fortum Joensuu Oy ^{1),2)}	Finland	C	100.0
Fortum Markets Oy ²⁾	Finland	CS	100.0
Fortum Norm Oy ²⁾	Finland	O	100.0
Fortum Power and Heat Holding Oy	Finland	G	100.0
Fortum Power and Heat Oy ²⁾	Finland	CS,C,G,O,R	100.0
Fortum Real Estate Oy ²⁾	Finland	O	100.0
Fortum Recharge Oy ¹⁾	Finland	O	100.0
Fortum Waste Solutions Oy ²⁾	Finland	C	100.0
Kalax Vindkraft Ab/Oy	Finland	G	100.0
Koillis-Polijan Energiantuotanto Oy	Finland	G	100.0
Kotimaan Energia Oy	Finland	G	100.0
Kristinestad-Tjock Vindpark Ab ¹⁾	Finland	CS	100.0
Molpe Vindkraft Ab/Oy	Finland	G	100.0
Närpes Vindkraft Ab/Oy	Finland	G	100.0
Niemen Romukauppa Oy	Finland	C	100.0
Nordic Wind Oy ¹⁾	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
Pjelax Vindkraft Ab/Oy	Finland	O	100.0
Poikel Vindkraft Ab/Oy	Finland	G	100.0
Barry Danmark ApS	Denmark	G	100.0
Fortum Energi A/S	Denmark	CS	100.0

Company name	Domicile	Segment
Fortum Waste Solutions A/S	Denmark	C
Fortum Waste Solutions OW A/S	Denmark	C
AS Anne Soojus	Estonia	C
AS Fortum Tartu	Estonia	C
AS Tartu Joujaam	Estonia	C
AS Tartu Keskkattlamaja	Estonia	C
Fortum CFS Eesti OU	Estonia	O
Fortum Eesti AS	Estonia	C
Fortum France S.A.S	France	G
Fortum Deutschland SE	Germany	O
Fortum Service Deutschland GmbH	Germany	C
Plugsurfing GmbH	Germany	O
Fortum Carlisle Limited	Great Britain	C
Fortum Energy Ltd	Great Britain	O
Fortum Glasgow Limited	Great Britain	O
Fortum O&M(UK) Limited	Great Britain	C
IVO Energy Limited	Great Britain	G
Fortum Insurance Ltd	Guernsey	O
Fortum Charge & Drive India Private Limited ¹⁾	India	O
Fortum India Private Limited ²⁾	India	C
Fortum Solar India Private Limited	India	C
Fortum Solar Plus Private Limited	India	C
PT Fortum Energy Solution ¹⁾	Indonesia	C
Fortum Finance Ireland Designated Activity Company ²⁾	Ireland	C
Fortum Global Finance Designated Activity Company ¹⁾	Ireland	O
Fortum P&H Ireland Limited	Ireland	O
Fortum Participation Ltd	Ireland	O
Fortum Jelgava, SIA	Latvia	C
Fortum Latvia SIA	Latvia	C
SIA Fortum Daugavpils	Latvia	C
SIA Lake Development	Latvia	C
UAB Fortum Heat Lietuva	Lithuania	C
UAB Fortum Klaipeda	Lithuania	C
UAB Joniskio energija	Lithuania	C
UAB Svencioniu energija	Lithuania	C
Anstadblaheia Vindpark AS	Norway	G
Fortum Consumer Solutions AS	Norway	CS

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Group structure and

Company name	Domicile	Segment	Group holding, %	Company name	Domicile	Segment
Fortum Fiber AS ¹⁾	Norway	C	60.0	Energibolaget i Sverige Holding AB	Sweden	CS
Fortum Forvaltnig AS	Norway	O	100.0	Energikundservice Sverige AB	Sweden	CS
Fortum Hedging AS	Norway	G	100.0	Fortum 1 AB	Sweden	R
Fortum Kundesenter AS	Norway	CS	100.0	Fortum Energy AB	Sweden	CS
Fortum Markets AS	Norway	CS	100.0	Fortum Fastigheter AB	Sweden	O
Fortum Oslo Varme AS	Norway	C	50.0	Fortum Markets AB	Sweden	CS
Fortum Recharge AS ¹⁾	Norway	O	100.0	Fortum Produktionsnät AB	Sweden	G
Fortum Tellier AS	Norway	CS	100.0	Fortum Recharge AB ¹⁾	Sweden	O
Fortum Waste Solutions Norway AS	Norway	C	100.0	Fortum Sverige AB	Sweden	C
Fredrikstad EnergiSalg AS	Norway	CS	100.0	Fortum Sweden AB ²⁾	Sweden	CS
Hafslund Strøm AS	Norway	CS	100.0	Fortum Vind Norr AB	Sweden	O
Hallingkraft AS	Norway	CS	100.0	Fortum Waste Solutions AB	Sweden	G
Nordic Wind Norway AS ¹⁾	Norway	G	100.0	Fortum Waste Solutions Holding AB	Sweden	C
NorgesEnergi AS	Norway	CS	100.0	Göta Energi AB	Sweden	CS
Nygårdsfjellet Vindpark AS	Norway	G	100.0	Mellansvensk Kraftgrupp Aktiebolag	Sweden	G
Oslo Energi AS	Norway	CS	100.0	Nord Wind Sweden AB ¹⁾	Sweden	G
Solencia AS	Norway	CS	100.0	Nordgroup Waste Management AB	Sweden	C
Sørfjord Vindpark AS	Norway	G	100.0	Oreälvens Kraftaktiebolag	Sweden	G
AMB Energia Sprzedaż Sp. z o.o.	Poland	CS	100.0	Sävar Vindkraft AB	Sweden	G
Fortum Customer Services Polska Sp. z o.o.	Poland	CS	100.0	Solberg Vindkraft AB	Sweden	G
Fortum Marketing and Sales Polska S.A.	Poland	CS	100.0	Uddeholm Kraft Aktiebolag	Sweden	G
Fortum Markets Polska S.A.	Poland	CS	100.0	Värmlandskraft-OKG-delägarna Aktiebolag	Sweden	G
Fortum Network Czystochowa Sp. z o.o.	Poland	C	100.0	VG Power Tools AB	Sweden	C
Fortum Network Plock Sp. z o.o.	Poland	C	100.0	VG Power Turbo AB	Sweden	C
Fortum Power and Heat Polska Sp. z o.o.	Poland	C,CS	100.0	FB Generation Services B.V.	The Netherlands	O
Fortum Silesia SA	Poland	C	100.0	Fortum 2 B.V.	The Netherlands	O
Fortum Sprzedaż Sp. z o.o.	Poland	CS	100.0	Fortum 3 B.V.	The Netherlands	O
Regionowa Spółka Ciepłownicza Sp. z o.o.	Poland	C	100.0	Fortum Charge & Drive B.V.	The Netherlands	O
Joint Stock Company Chelyabenergoremont	Russia	R	100.0	Fortum Finance B.V.	The Netherlands	O
Fortum-New Generation 2 Limited Liability Company ¹⁾	Russia	R	100.0	Fortum H&C B.V. ¹⁾	The Netherlands	O
Fortum-New Generation 4 Limited Liability Company ¹⁾	Russia	R	100.0	Fortum Holding B.V. ²⁾	The Netherlands	C,CS
Fortum-New Generation 5 Limited Liability Company ¹⁾	Russia	R	100.0	Fortum Hydro B.V.	The Netherlands	O
LLC Bugulchanskaya Solar power station	Russia	R	100.0	Fortum India B.V.	The Netherlands	O
PAO Fortum	Russia	R	100.0	Fortum Power Holding B.V.	The Netherlands	O
Ural Heat Networks Company Joint Stock Company	Russia	R	98.2	Fortum Russia B.V.	The Netherlands	R
HQ Services Limited	Rwanda	R	100.0	Fortum Russia Holding B.V.	The Netherlands	O
Escandnava de Electricidad S.L.U	Spain	CS	49.0	Fortum SAR B.V.	The Netherlands	O
Blybergs Kraftaktiebolag	Sweden	G	100.0	Fortum Står B.V.	The Netherlands	O
Brännälven Kraft AB	Sweden	G	66.7	Nordic Wind B.V. ¹⁾	The Netherlands	G
Bullerforsens Kraft Aktiebolag	Sweden	G	67.0	PolarSolar B.V.	The Netherlands	C
	Sweden	G	88.0	Valo Ventures I LLP Fund	USA	O

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Financial key figures

Financial key figures

Fortum has adopted the IFRS 16 standard from 1 January 2019 onwards. Fortum has applied the transition relief for not restating the comparative figures from 2018. See additional information in ► **Note 1** Significant accounting policies.

For information of Alternative Performance Measures used by Fortum, see ► **Definitions of key figures** and ► **Note 1** Significant accounting policies.

EUR million or as indicated	2019	2018	Change 19/18%		EUR million or as indicated	2019	2018
Income statement					Key ratios		
Sales	5,447	5,242	4		Return on capital employed, %	10.0	6.7
EBITDA ¹⁾	1,685	1,674	1		Return on shareholders' equity, %	11.9	6.8
Comparable EBITDA	1,766	1,523	16		Interest coverage	8.0	10.0
Operating profit	1,110	1,138	-2		Interest coverage including capitalised borrowing costs	7.5	9.2
- of sales %	20.4	21.7			Funds from operations/interest-bearing net debt, %	32.2	26.8
Comparable operating profit	1,191	987	21		Gearing, %	40	46
Share of profit of associates and joint ventures	744	38	1,858		Comparable net debt/EBITDA	3.0	3.6
Profit before income tax	1,728	1,040	66		Equity-to-assets ratio, %	57	54
- of sales %	31.7	19.8			Other data		
Profit for the period	1,507	858	76		Dividends	977 ²⁾	977
- of which attributable to owners of the parent	1,482	843	76		Research and development expenditure	67	56
Financial position and cash flow					- of sales %	1.2	1.1
Capital employed	19,929	18,170	10		Average number of employees	8,248	8,767
Interest-bearing net debt	5,260	5,509	-5				
Capital expenditure and gross investments in shares	819	4,672	-82				
- of sales %	15.0	89.1					
Capital expenditure	713	584	22				
Net cash from operating activities	2,015	804	151				

See ► **Definitions of key figures**.

1) EBITDA is defined as Operating profit + Depreciation and amortisation.
2) Board of Directors' proposal for the planned Annual General Meeting on 17 March 2020.

Share key figures

Share key figures

EUR million or as indicated	2019	2018	Change 19/18%
Data per share			
Earnings per share	1.67	0.95	76
Cash flow per share	2.27	0.91	149
Equity per share	14.61	13.33	10
Dividend per share	1.10 ¹⁾	1.10	0
Payout ratio, %	65.9 ¹⁾	115.8	
Dividend yield, %	5.0 ²⁾	5.8	
Price/earnings ratio (P/E)	13.2	20.1	
Share prices			
At the end of the period	22.00	19.10	
Average	20.06	19.10	
Lowest	18.09	16.43	
Highest	22.50	22.91	
Other data			
Market capitalisation at the end of the period, EUR million	19,542	16,966	
Trading volumes ²⁾			
Number of shares, 1,000 shares	372,272	474,705	
In relation to weighted average number of shares, %	41.9	53.4	
Number of shares, 1,000 shares	888,294	888,294	
Number of shares excluding own shares, 1,000 shares	N/A	N/A	
Average number of shares, 1,000 shares	888,294	888,312	
Diluted adjusted average number of shares, 1,000 shares	888,294	888,312	

1) Board of Directors' proposal for the Annual General Meeting on 17 March 2020.

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 Bors, Cboe and Turquoise, and on the OTC market as well. During 2019, approximately 73% (2018: 68%) of Fortum's shares were traded on markets other than the Nasdaq Helsinki Ltd.

See ► Definitions of key figures.

Segment key figures

Segment key figures

Sales by segment, EUR million	2019	2018
Generation	2,141	1,842
- of which internal	259	-2
City Solutions	1,200	1,110
- of which internal	45	37
Consumer Solutions	1,835	1,759
- of which internal	-3	11
Russia	1,071	1,069
- of which internal	0	0
Other Operations	115	103
- of which internal	86	79
Eliminations and Netting of Nord Pool transactions	-916	-641
Total	5,447	5,242

Comparable operating profit by segment, EUR million	2019	2018
Generation	794	628
City Solutions	121	135
Consumer Solutions	79	53
Russia	316	271
Other Operations	-119	-99
Comparable operating profit	1,191	987
Impairment charges	-8	-4
Capital gains and other	7	102
Changes in fair values of derivatives hedging future cash flow	-72	98
Nuclear fund adjustment	-9	-45
Operating profit	1,110	1,138

Comparable EBITDA by segment, EUR million	2019	2018
Generation	939	763
City Solutions	309	310
Consumer Solutions	141	110
Russia	469	417
Other Operations	-91	-78
Total	1,766	1,523

Depreciation and amortisation by segment, EUR million

Generation	2019
City Solutions	145
Consumer Solutions	188
Russia	62
Other Operations	153
Total	575

Share of profit of associates and joint ventures by segment, EUR million

Generation	2019
City Solutions	10
Russia	37
Other Operations	59
Total	638

Capital expenditure by segment, EUR million

Generation	2019
City Solutions	247
Consumer Solutions	313
Russia	55
Other Operations	67
Total	713

Gross investments in shares by segment, EUR million

Generation	2019
City Solutions	13
Consumer Solutions	9
Russia	0
Other Operations	66
Total	106

Gross divestments of shares by segment, EUR million		2019	2018
Generation		12	160
City Solutions		2	147
Consumer Solutions		0	0
Russia		0	0
Other Operations		16	0
Total		30	306
Comparable net assets by segment, EUR million		2019	2018
Generation		6,147	6,485
City Solutions		3,892	3,794
Consumer Solutions		640	648
Russia		3,205	2,789
Other Operations		4,356	4,023
Total		18,239	17,739
Comparable return on net assets by segment, %		2019	2018
Generation		12.8	10.8
City Solutions		4.7	5.5
Consumer Solutions		13.2	7.8
Russia		12.3	10.3
Other Operations		1.4	-5.8
Average number of employees by segment		2019	2018
Generation		1,122	1,107
City Solutions		1,979	1,994
Consumer Solutions		1,379	1,473
Russia		2,942	3,378
Other Operations		825	814
Total		8,248	8,767

Definitions of key figures

Alternative performance measures

Business performance	Definition	Reason to use the measure	Reference to reconciliation	Business performance	Definition	Reason to use the measure
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 Comparable net debt /EBITDA.	► Note 5 Capital risk management	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, which are adjusted from other income or to sales and materials and services respectively when calculating Fortum's alternative performance measures.	Component used in calculating comparable operating profit and comparable EBITDA.
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	Nuclear fund adjustment	Effects from the accounting of Fortum's part of the Finnish Nuclear Waste Fund where the asset on the balance sheet cannot exceed the related liabilities according to IFRIC interpretation 5, which are adjusted from materials and services. In addition adjustments are made for accounting effects from valuation according to IFRS.	Component used in calculating comparable operating profit and comparable EBITDA.
Items affecting comparability	Impairment charges + capital gains and other + changes in fair values of derivatives hedging future cash flow + nuclear fund adjustment	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement	Comparable return on net assets, %	Comparable operating profit + share of profit (loss) in associated companies and joint ventures + adjustment for share of profit of associated companies and joint ventures $\frac{\text{Comparable net assets average}}{\text{Comparable net assets average}} \times 100$	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.
Impairment charges	Impairment charges and related provisions (mainly dismantling), which are adjusted from depreciation and amortisation.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement	Adjustment for	Adjustment for material items affecting comparability.	Share of profit of associates and joint ventures is included in profit component in the comparable RONA calculation and the adjustments are done based on similar components as in items affecting comparability.
Capital gains and other	Capital gains and transaction costs from acquisitions, which are adjusted from other income and other expenses, respectively. Profits from the capital recycling business model are presented in comparable operating profit because the business results are realised through divesting the shareholding, either partially or totally.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement	Share of profit of associated companies and joint ventures		Comparable net assets is a component in Comparable return on net assets calculation where return on capital is allocated directly to the businesses is measured

Capital structure	Definition	Reason to use the measure	Reconciliation
Comparable net debt / EBITDA	Interest-bearing net debt Comparable EBITDA	Financial targets give guidance on Fortum's view of the company's long-term value creation potential, its growth strategy and business activities. Comparable net debt to EBITDA is one of the Fortum's long-term over-the-cycle financial targets measuring the capital structure of the Group.	► Note 5 Capital risk management
Interest-bearing net debt	Interest-bearing liabilities - liquid funds	Interest-bearing net debt is 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.	► Note 27 Interest-bearing liabilities
Return on capital employed (ROCE), %	Profit before taxes + interest and other financial expenses Capital employed average	Return on capital employed (ROCE) is a long-term over the cycle financial ratio measuring the profitability and how efficiently invested capital is used. It gives guidance on company's long-term value creation potential, its growth strategy and business activities.	► Note 5 Capital risk management
Capital employed	Total assets - total non-interest bearing liabilities	Capital employed is the book value of the invested capital and it is used as a component when calculating the Return of capital employed in the group.	► Note 5 Capital risk management

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	
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

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 a 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 cash and grossed with interest-bearing liabilities in the acquired company.

Return on shareholders' equity (ROE), %

Profit for the year
Total equity average $\times 100$

Gearing, %

Interest-bearing net debt
Total equity including non-controlling interests $\times 100$

Equity-to-assets ratio, %

Total equity including non-controlling interests
Total assets $\times 100$

Interest coverage

Operating profit
Net interest expenses

Interest coverage including capitalised borrowing costs

Operating profit
Net interest expenses - capitalised borrowing costs

Average number of employees

Based on monthly average for the whole period

Definitions for tax figures

Effective income tax rate, % = Income tax expense

Profit before income tax

Comparable effective income tax rate, %

= Income tax expense - effects from tax rate changes and major one time income tax effects

Profit before income tax decreased by profits from associated companies and joint ventures as well as tax exempt capital gains or losses

Weighted average applicable income tax rate

= Sum of the proportionately weighted share of profits before taxes of each group operating country multiplied with an applicable nominal tax rate of the respective countries.

Parent company financial statements, Finnish GAAP (FAS)

Income statement

EUR million	Note	2019	2018
Sales	2	82	82
Other income	3	7	8
Employee benefits	4	-37	-36
Depreciation, amortisation and write-downs	8	-8	-8
Other expenses		-84	-78
Operating loss		-40	-33
Financial income and expenses	6	4	751
Loss/profit before appropriations		-35	719
Group contributions received ¹⁾		286	85
Profit before income tax		251	803
Income tax expense	7	-37	-5
Profit for the year		213	798

¹⁾ Taxable profits transferred from Finnish subsidiaries.

Balance sheet

EUR million	Note	31 Dec 2019	31 Dec 2018
ASSETS			
Non-current assets			
Intangible assets	8	24	23
Property, plant and equipment	8	12	10
Shares in Group companies	8	16,702	16,725
Interest-bearing receivables from Group companies	8	2,952	2,954
Interest-bearing receivables from associated companies	8	1	1
Other non-current assets	8	0	0
Derivative financial instruments	13, 14	160	157
Deferred tax assets		5	1
Total non-current assets		19,857	19,870
Current assets			
Other current receivables from Group companies	9	314	99
Other current receivables from associated companies	9	0	0
Derivative financial instruments	13, 14	126	167

EUR million	Note	31 Dec 2019
Other current receivables	9	10
Deposits and securities (maturity over three months)		70
Cash and cash equivalents		1,095
Liquid funds		1,165
Total current assets		1,614
Total assets		21,471
EQUITY		
Shareholders' equity		
Share capital	10	3,046
Share premium		2,822
Hedging reserve		-20
Retained earnings		4,025
Profit for the year		213
Total equity		10,087

Provisions for liabilities and charges

LIABILITIES		
Non-current liabilities		
External interest-bearing liabilities	11, 13, 14	5,414
Interest-bearing liabilities to Group companies		5,240
Interest-bearing liabilities to associated companies		293
Derivative financial instruments	13, 14	78
Other non-current liabilities		23
Total non-current liabilities		11,048
Current liabilities		
External interest-bearing liabilities	11	136
Trade and other payables to Group companies	12	10
Trade and other payables to associated companies	12	9
Derivative financial instruments	13, 14	63
Trade and other payables	12	118
Total current liabilities		336
Total liabilities		11,384
Total equity and liabilities		21,471

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Cash flow statement								
EUR million	2019	2018	2019					
Cash flow from operating activities			Cash flow from financing activities					
Profit for the year	213	798	Proceeds from long-term liabilities					
Adjustments:			Payment of long-term liabilities					
Income tax expense	37	5	Change in cashpool liabilities					
Group contributions	-286	-85	Change in short-term liabilities					
Finance costs - net	-4	-751	Dividends paid					
Depreciation, amortisation and write-downs	8	8	Net cash from/used in financing activities					
Operating profit before depreciation (EBITDA)	-32	-24	Net increase(+)/decrease(-) in liquid funds					
Non-cash flow items	0	0	Liquid funds at the beginning of the year					
Interest and other financial income received	26	18	Liquid funds at the end of the year					
Interest and other financial expenses paid	-97	-104						
Dividends received	87	796						
Group contributions received	85	157						
Realised foreign exchange gains and losses	37	16						
Income taxes paid	-3	-6						
Funds from operations	102	853						
Other short-term receivables increase(-)/decrease(+)	-12	9						
Other short-term payables increase(+)/decrease(-)	-1	-4						
Change in working capital	-13	4						
Net cash from operating activities	90	857						
Cash flow from investing activities								
Capital expenditures	-8	-16						
Acquisition of shares and capital contributions in subsidiaries	0	0						
Capital returns	0	0						
Proceeds from sales of fixed assets	0	0						
Change in interest-bearing receivables and other non-current assets	-2	-2,744						
Net cash used in investing activities	-11	-2,760						
Cash flow before financing activities	79	-1,903						
2,808								
-2,540								
1,838								
-201								
-977								
927								
1,006								
159								
1,165								

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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 2019 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.

Finnish Accounting Board issued new requirements for accounting of financial derivatives on 13 December 2016 (KILA 1963/2016), whereby Fortum Oyj chose to apply IAS 39 standard in statutory financial statements. Fortum Oyj applied IFRS 9 Financial Instruments standard from 1 Jan 2018 for derivative instruments and hedge accounting.

Accounting principles of financial derivatives, see ► **Note 4** Financial risk management, ► **Note 15** Financial assets and liabilities by categories and ► **Note 16** 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 estimated future cash flows generated by a non-current asset are expected to be permanently lower than the balance of the carrying amount, an adjustment to the value must be made to write-down the difference. If the basis for the write-down can no longer be justified at the balance sheet date, it must be reversed.

1.6 Intangible assets and Property, plant and equipment

The balance sheet value of intangible assets and property, plant and equipment consists of historic depreciation and possible impairments. Intangible assets and Property, plant and equipment are depreciated on a straight-line basis over the expected useful life of the asset.

The depreciation is based on the following expected useful lives:

Buildings and structures	15–40 years
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 for Group employees. Costs for pension fund are recorded in the income statement based on contribution paid pursuant to 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 costs are 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 provisions in the income statement and included as provisions on the balance sheet.

2 Sales by market area

EUR million	2019	2018
Finland	53	52
Other countries	29	30
Total	82	82

3 Other income

EUR million	2019	2018
Rental and other income	7	8
Total	7	8

4 Employee benefits

EUR million	2019	2018
Personnel expenses		
Wages, salaries and remunerations	29	26
Indirect employee costs		
Pension costs	5	6
Other indirect employee costs	1	1
Other personnel expenses	3	3
Total	37	36

EUR thousand

Compensation for the President and CEO

	2019	2018
Salaries and fringe benefits	1,057	1,048
Performance bonuses ¹⁾	200	228
Share-based incentives ^{1,2)}	898	297
Pensions (statutory)	207	250
Pensions (voluntary)	265	252
Social security expenses	39	36
Total	2,666	2,112

1) Based on estimated amounts

2) Share-based incentives increased in 2019 mainly due to the higher earnings outcome from settled plans.

EUR thousand

Compensation for the Board of Directors

2019	2018
529	

The compensation above is presented on accrual basis. Paid salaries and remunerations for the President and CEO were EUR 2,213 thousand (2018: 1,594).

For the President and CEO Pekka Lundmark the retirement age of old-age pension is 63. The pension obligations are covered through insurance company.

Board members are not in an employment relationship or service contract with Fortum, and they have the opportunity to participate in Fortum's STI or LTI programme, nor does Fortum have a pension plan that can opt to take part in. The compensation of the board members is not tied to the sustainability performance of the Group.

See ► **Note 11** Employee benefits and Board remuneration and ► **Note 31** Pension obligations in the consolidated financial statements.

Average number of employees

2019	2018
268	

5 Auditor's fees

EUR thousand

2019	2018
Audit fees	614
Audit-related assignments	73
Tax assignments	3
Total	690

Deloitte Oy is the appointed auditor until the next Annual General Meeting, to be held in 2020. Audit fees for the audit of the consolidated financial statements, review of the interim reports as well as the audit of Fortum Oyj. Audit related assignments include fees for assurance of sustainability reports, assurance and associated services related to the audit. Tax assignments include fees for tax advice.

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6 Financial income and expenses

EUR million	2019	2018
Dividend income from group companies	87	796
Dividend income from associated companies and other companies	0	0
Interest and other financial income from group companies	32	16
Write-downs of participations in group companies	-22	0
Write-downs of participations in associated companies	0	-2
Write-downs of loan receivables	0	-17
Interest and other financial income	0	0
Exchange rate differences	1	37
Changes in fair values of derivatives	-7	1
Interest and other financial expenses to group companies	-6	-2
Interest and other financial expenses	-80	-78
Total	4	751
Interest income	27	17
Interest expenses	-75	-75
Interest costs - net	-48	-58

7 Income tax expense

EUR million	2019	2018
Taxes on regular business operations	-20	-12
Taxes on group contributions	57	17
Total	37	5
Current taxes for the year	36	5
Current taxes for prior periods	0	0
Changes in deferred tax	1	0
Total	37	5

8 Non-current assets

Intangible assets

EUR million	
Cost 1 January 2019	
Additions	16
Disposals	0
Cost 31 December 2019	
Disposals	-17
Accumulated depreciation 1 January 2019	
Disposals	0
Depreciation for the year	37
Accumulated depreciation 31 December 2019	
Depreciation for the year	1
Carrying amount 31 December 2019	
Carrying amount 31 December 2018	751

Property, plant and equipment

EUR million	Buildings and structures	Machinery and equipment	Advances paid and construction in progress
Cost 1 January 2019	0	10	4
Additions and transfers between categories	0	1	3
Disposals	0	-1	0
Cost 31 December 2019	0	10	7
Accumulated depreciation 1 January 2019	0	4	0
Disposals	0	-1	-
Depreciation for the year	0	2	-
Accumulated depreciation 31 December 2019	0	5	0
Carrying amount 31 December 2019	0	5	7
Carrying amount 31 December 2018	0	5	4

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Investments

EUR million	Shares in Group companies	Participation in associated companies	Receivables from Group companies	Receivables from associated companies	Other non-current assets	Total
Cost 1 January 2019	17,847	6	2,954	17	8	20,831
Additions ¹⁾	0	0	58	0	0	59
Disposals	0	-	-60	-	-	-60
Cost 31 December 2019	17,847	6	2,952	17	8	20,830
Accumulated write-downs						
1 January 2019	1,123	6	0	15	8	1,152
Impairment charges	22	0	-	0	0	22
Accumulated write-downs						
31 December 2019	1,145	6	0	15	8	1,174
Carrying amount						
31 December 2019	16,702	0	2,952	1	0	19,656
Carrying amount	16,725	0	2,954	1	0	19,680
31 December 2018						

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 million	2019	2018
Other current receivables from group companies		
Trade receivables	9	10
Group contribution and other receivables	286	85
Accrued income and prepaid expenses	18	5
Total	314	99
Other current receivables		
Trade receivables	0	0
Other receivables	4	0
Accrued income and prepaid expenses	6	10
Total	10	10

See ► **Note 4.5** Liquidity and refinancing risk in the Consolidated financial statements.

10 Changes in shareholders' equity

EUR million	Share capital	Share premium	Hedging reserve	Retained earnings
1 January 2019	3,046	2,822	-11	5,000
Cash dividend	-	-	-	-97
Change in hedging reserve	-	-	-9	-
Profit for the year	-	-	-	21
31 December 2019	3,046	2,822	-20	4,239
1 January 2018	3,046	2,822	-11	5,180
Cash dividend	-	-	-	-97
Change in hedging reserve	-	-	1	-
Profit for the year	-	-	-	79
31 December 2018	3,046	2,822	-11	5,000
EUR million			2019	
Distributable funds				
Retained earnings 31 December			4,239	
Hedging reserve			-20	
Total			4,219	

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11 Interest-bearing liabilities

EUR million	2019	2018
External interest-bearing liabilities		
Bonds	4,251	1,746
Loans from financial institutions	311	1,775
Other long-term interest-bearing debt	852	865
Total long-term interest-bearing debt	5,414	4,386
Current portion of long-term bonds	0	750
Current portion of loans from financial institutions	26	42
Current portion of other long-term interest-bearing debt	34	0
Other short-term interest-bearing debt	76	283
Total short-term interest-bearing debt	136	1,074
Total ¹⁾	5,550	5,460

Maturity of external interest-bearing liabilities

EUR million	2019
2020	136
2021	520
2022	1,033
2023	1,093
2024	300
2025 and later	2,468
Total ¹⁾	5,550

See ► **Note 4.5** Liquidity and refinancing risk and ► **Note 27** Interest-bearing liabilities in the Consolidated financial statements.

EUR million	2019	2018
External interest-bearing liabilities due after five years		
Bonds	1,616	97
Other long-term liabilities	852	865
Total ¹⁾	2,468	962
EUR million		
Other interest-bearing liabilities due after five years		
Interest-bearing liabilities to associated companies	293	293
Total	293	293

¹⁾ Excludes liabilities to Group and associated companies.

Non-discounted cash flows of interest-bearing liabilities and their maturities, see ► **Note 13** Financial derivatives.

12 Trade and other payables

EUR million	2019
Trade and other payables to group companies	
Trade payables	1
Deposits from group companies and other liabilities	9
Accruals and deferred income	0
Total	10
Trade and other payables to associated companies	
Accruals and deferred income	9
Total	9
Trade and other payables	
Trade payables	14
Other liabilities	35
Accruals and deferred income	69
Total	118

13 Financial derivatives

Interest rate and currency derivatives by instrument 2019

EUR million	Notional amount Remaining lifetimes			Fair value
	Under 1 year	1–5 years	Over 5 years	
Forward foreign exchange contracts	10,489	716	0	11,205
Interest rate swaps	0	2,715	1,525	4,240
Interest rate and currency swaps	104	263		367
Total	10,592	3,694	1,525	15,811
Of which long-term Short-term				280 166 126

Interest rate and currency derivatives by instrument 2018

EUR million	Notional amount Remaining lifetimes					Fair value	
	Under		Over		Total	Positive	Negative
	1 year	1–5 years	5 years	Over 5 years			
Forward foreign exchange contracts	8,523	786			9,309	99	83
Interest rate swaps	1,515	2,242	225		3,982	159	70
Interest rate and currency swaps	383	265			648	66	0
Total	10,420	3,293	225	13,938		324	154
Of which long-term						157	51
Short-term						167	103

Maturity analysis of interest-bearing liabilities and derivatives

Amounts disclosed below are non-discounted expected cash flows (future interest payments and amortisations) of interest-bearing liabilities and interest rate and currency derivatives.

EUR million	2019					2018	
	Under		Over		Total	Under	Over
	1 year	1–5 years	5 years	Over 5 years		1 year	5 years
Interest-bearing liabilities	269	3,151	2,995	6,415	1,192	3,582	1,437
Interest rate and currency derivatives liabilities	10,734	1,169	90	11,994	8,946	1,159	16
Interest rate and currency derivatives receivables	-10,818	-1,186	-100	-12,103	-9,037	-1,203	-21
Total	185	3,135	2,986	6,306	1,101	3,538	1,433
							6,072

Interest-bearing liabilities include loans from the State Nuclear Waste Management Fund and Teollisuuden Voima Oyj with balance value of EUR 1,185 million (2018: 1,158). 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 to indicate the significance of the inputs used in making the measurements. For further information look accounting Fortum consolidated accounts ▶ **Note 16** Financial assets and liabilities by fair value hierarchy.

Derivatives in financial assets

EUR million	Level 1		Level 2		Level 3	
	2019	2018	2019	2018	2019	2018
In non-current assets						
Derivative financial instruments						
Interest rate and currency derivatives						
Hedge accounting			155	149		
Non-hedge accounting			5	8		
In current assets						
Derivative financial instruments						
Interest rate and currency derivatives						
Hedge accounting			13	21		
Non-hedge accounting			113	146		
Total			286	324		

Derivatives and liabilities at fair value in financial liabilities

EUR million	Level 1		Level 2		Level 3	
	2019	2018	2019	2018	2019	2018
In non-current liabilities						
Interest-bearing liabilities ¹⁾			2,293	930		
Derivative financial instruments						
Interest rate and currency derivatives						
Hedge accounting			73	43		
Non-hedge accounting			5	8		
In current liabilities						
Derivative financial instruments						
Interest rate and currency derivatives						
Hedge accounting			5	5		
Non-hedge accounting			58	98		
Total			2,434	1,083		

1) Fair valued part of bond in the fair value hedge relationship.

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Net fair value amount of interest rate and currency derivatives is EUR 146 million (2018: 170), including assets EUR 286 million (2018: 324) and liabilities EUR 140 million (2018: 154). Fortum Corporation has cash collaterals based on Credit Support Annex agreements with some counterparties. At the end of December 2019 Fortum Corporation had received EUR 65 million (2018: 75) 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 million	2019	2018
On own behalf		
Other contingent liabilities	1	2
On behalf of group companies		
Guarantees ¹⁾	566	113
On behalf of associated companies		
Guarantees on behalf of Swedish associated companies	819	532
Total	1,385	647

¹⁾ Excludes parent company guarantee to acquire Uniper shares. See Guarantees on behalf of group companies below.

Guarantees on behalf of group companies

On 8 October 2019, Fortum entered into agreements to acquire all the shares in Uniper SE held by funds managed by Elliott Management Corporation and its affiliates (Elliott) and Knight Vinke Energy Advisors Limited and its affiliates (Knight Vinke), a total shareholding in excess of 20.5%. The transaction will be financed with existing cash resources and committed credit facilities underwritten by Barclays Bank PLC. In the said agreements Fortum has committed to paying the acquisition price of EUR 2.3–2.6 billion (depending on the number of shares acquired), for which Fortum Oyj has provided a parent company guarantee. See **Note 3** Acquisitions, disposals and assets held for sale in the Consolidated financial statements.

Operating lease commitments

EUR million	2019	2018
Operating lease commitments		
Due within a year	7	8
Due after one year and within five years	17	28
Due after 5 years	9	14
Total	33	49

16 Related party transactions

See **Note 38** Related party transactions in the Consolidated financial statements.

Investments in group companies, associated companies and other holdings

Investments in group companies	No. of shares units
Fortum Waste Solutions Oy	Finland 3,520,800
Fortum Asiakaspalvelu Oy	Finland 10,010
Fortum Heat and Gas Oy	Finland 2,000,000
Fortum Heat Estonia Oy	Finland 91,197,543
Fortum Joensuu Oy	Finland 91,197,543
Fortum Markets Oy	Finland 24,039
Fortum Norm Oy	Finland 250
Fortum Power and Heat Oy	Finland 91,197,543
Fortum Real Estate Oy	Finland 2,000,000
Fortum India Private Ltd	India 1
Fortum Finance Ireland Designated Activity Company	Ireland 1,000
Fortum Sweden AB	Sweden 1,062
Fortum Holding B.V.	The Netherlands 1,110,000
Investments in associated companies	
Wello Oy	Finland 2,894,688
Other holdings	
AW-Energy Oy	Finland 100
Clic Innovation Oy	Finland 1
East Office of Finnish Industries Oy	N/A
Prototype Carbon Fund	

17 Events after the balance sheet date

On 10 January 2020, Fortum concluded the sale of its district heating business in Joensuu, Finland, Voima Oyj, as announced on 20 December 2019. The total consideration of the sale on a debt- and was approximately EUR 530 million and the cash was received at the completion of the sale on 20 December 2020.

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Proposal for the use of the profit shown on the balance sheet

The distributable funds of Fortum Corporation as at 31 December 2019 amounted to EUR 4,219,128,198.51 including the profit of the financial period 2019 of EUR 213,409,797.80. The company's liquidity is good and the dividend proposed by the Board of Directors will not compromise the company's liquidity.

Based on the number of registered shares as at 5 February 2020 the total amount of dividend would be EUR 977,123,911.50. The Board of Directors proposes, that the remaining part of the distributable funds be used for the shareholders' equity.

The Board of Directors proposes to the Annual General Meeting that a dividend of EUR 1.10 per share be paid for 2019.

Signatures for the operating and financial review and financial statements

Espoo, 5 February 2020

Matti Lievonen

Klaus-Dieter Maubach

Eva Hamilton

Kim Ignatius

Essimari Kairisto

Anja McAlister

Veli-Matti Reinikkala

Philipp Rösler

Pekka Lundmark
President and CEO

Auditor's report

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, 2019. 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 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 requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our 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 the non-audit services that we have not provided any prohibited non-audit services referred to in Article 5(1) of regulation (EU) 2015/848. The non-audit services that we have provided have been disclosed in note 9 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 the 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 considering whether there was evidence of management bias that represented a risk of material misstatement in the financial statements.

Operating and financial review		Consolidated financial statements	Notes	Key figures	Parent company financial statements	Proposal for the use of the profit shown on the balance sheet	Auditor's report	Key figures 2010–2019	Quarterly financial information
Key audit matter Uniper investment Refer to notes 2, 3 and 19. - On 26 June 2018, Fortum closed the Uniper SE (Uniper) offer and became the company's largest shareholder. Fortum holds 49.99% of the shares as of 31 December 2019. - Fortum consolidates Uniper as an associated company from 30 June 2018. The total Uniper investment, approximately EUR 4.0 billion, is reported in the 'Participations in associated companies and joint ventures'. - Purchase price allocation was finalised during Q2/2019. - In Uniper transaction the purchase price allocation has been based on publicly available information since Uniper is a listed company and a competitor of Fortum. Due to the unique circumstances, preparing the purchase price allocation has required management judgement. - Due to the size, Fortum's investment in Uniper may have significant effect on Fortum's financial reporting. How our audit addressed the key audit matter - We have assessed management's approach according to which the purchase price allocation has been accounted in the financial statements as well as the management judgement applied in preparing the purchase price allocation in line with IFRS. - We have reviewed the management procedures and methodology in determining the fair value of the net assets acquired and preparing the purchase price allocation. We have challenged the management judgement relating to the key assumptions used in the valuation applied together with our valuation specialist. - We have tested the application of the valuation model used as well as the mathematical accuracy of the cash flow projections on a sample basis. - We have assessed the accounting treatment of the purchase price allocation in line with IFRS supported by our IFRS specialists and we have evaluated the accounting principles of the purchase price allocation. We assessed the adequacy of related disclosures in the financial statements.									
Key audit matter Valuation of fixed assets and goodwill Refer to Notes 2, 17 and 18. - The consolidated balance sheet includes property, plant and equipment amounting to EUR 10 123 million and goodwill amounting to EUR 612 million. - The main assumptions used in the valuation of energy 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. - Estimates are also made in an acquisition when determining the fair values and remaining useful lives of acquired intangible and tangible assets. - The potential indicators for impairment are among other things changes in electricity and fuel prices, regulatory/political changes relating to energy taxes and price regulations. - The assumptions used in the valuation of the balances in question require management judgment. - This matter is a significant risk of material misstatement referred to in EU Regulation No 537/2014, point (c) of Article 10(2). How our audit addressed the key audit matter - We have evaluated the process how management assessed the indicators for potential impairment performed audit procedures on impairment to material cash generating units. - We have obtained entity's impairment test documentation for goodwill and energy production property, plant and equipment and tested and evaluated the rationale of KPI and applied by management on a sample basis commodity price forecasts, profit and cash terminal values, foreign exchange rates and of discount rates. - We have compared, that the forecasts used in impairment testing calculations are based on forecast approved by management. - We challenged management's assumption with reference to historical data and, where external benchmarks. - We assessed the models used in the impairment and carried out our testing for sensitivity and assessed the adequacy of related disclosures in financial statements.									

Key audit matter

Fair value measurement of derivatives and hedge accounting

Refer to Notes 4, 7, 8, 15 and 16.

- In Fortum's consolidated financial statements total derivative assets amounts to EUR 311 million and total derivative liabilities amounts to EUR 389 million. The net effect of changes in fair values of derivatives hedging future cash flow amounts to EUR -72 million in items affecting comparability in the consolidated income statement and the cash flow hedges in other equity components amount to EUR -70 million.
- The fair value and changes in fair values of derivative financial instruments may have significant impacts on Fortum's financial statements. Fortum's business is exposed to fluctuations in prices and volume of commodities used in the production and sales of energy products. The main exposure is toward energy prices. Electricity price risk is hedged by entering into electricity derivative contracts. Fortum uses derivative instruments to reduce the effect of electricity price volatility.

How our audit addressed the key audit matter

- Our audit procedures included an assessment of internal controls over the hedge accounting documentation and effectiveness testing, measurement of fair value measures, and evaluating the methodologies, inputs, judgments made and assumptions used by management in determining fair values.
- For Fortum's fair valuation models, we evaluated rationale of the models and accounting treatment applied. We have compared the assumptions used by management in valuation against externally available market data.
- We have assessed the existence and completeness of outstanding derivative contracts as of 31 December 2019 by requesting confirmations from the counterparties.
- We have assessed that financial instruments included in hedge relationships are accounted for in accordance with IFRS 9.
- We have assessed the adequacy of the presentation for derivative financial instruments and hedge accounting applied in the financial statements.

Key audit matter

Nuclear related assets and liabilities

Refer to Notes 2 and 29.

- Nuclear related provisions and Fortum's share of the Finnish Nuclear Waste Management Fund in Fortum's balance sheet amount to EUR 813 million.
- Fortum's nuclear related provisions and the related part of the Finnish State Nuclear Waste Management Fund are both presented separately in the balance sheet as disclosed in note 29.
- Fortum's share in the Finnish State Nuclear Waste Management Fund 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.

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 statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU, and of financial statements that give a true and fair view in accordance with regulations governing the preparation of financial statements in Finland and comply with statutory The Board of Directors and the President and CEO are also responsible for such internal control as is necessary to enable the preparation of financial statements that are free from material misstatement 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, if matters relating to going concern and using the going concern basis of accounting. The financial statements 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 an 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. Material misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could 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 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, and design and perform audit procedures responsive to those risks, and obtain audit evidence that is appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement due to fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional 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's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to the company's ability to continue as a going concern.

[illegible]

Financial key figures

Financial key figures

Comparability of information presented in tables

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 discontinued operations in 2015, with restatement of year 2014, according to IFRS 5 Non-current Assets Held for Sale and Discontinued Operations.

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 (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 company was consolidated as a subsidiary with 50% minority interest.

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.

For information of Alternative Performance Measures used by Fortum, see ► **Definitions of key figures** and ► **Note 1** Significant accounting policies.

EUR million or as indicated

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Income statement										
Sales total Fortum	6,296	6,161	6,159	5,309	4,751	3,702	3,632	4,520	5,242	5,447
Sales continuing operations					4,088	3,459	3,632	4,520	5,242	5,447
EBITDA total Fortum ¹⁾	2,271	3,008	2,538	2,129	3,954	4,640	1,006	1,623	1,674	1,685
EBITDA continuing operations					1,673	196	1,006	1,623	1,674	1,685
Comparable EBITDA total Fortum	2,396	2,374	2,416	1,975	1,873	1,265	1,015	1,275	1,523	1,766
Comparable EBITDA continuing operations					1,457	1,102	1,015	1,275	1,523	1,766
Operating profit total Fortum	1,708	2,402	1,874	1,508	3,428	4,245	633	1,158	1,138	1,110
- of sales %	27.1	39.0	30.4	28.4	72.2	114.7	17.4	25.6	21.7	20.4
Operating profit continuing operations					1,296	-150	633	1,158	1,138	1,110
- of sales %					31.7	-4.3	17.4	25.6	21.7	20.4
Comparable operating profit total Fortum	1,833	1,802	1,752	1,403	1,351	922	644	811	987	1,191
Comparable operating profit continuing operations					1,085	808	644	811	987	1,191
Share of profit/loss of associates and joint ventures total Fortum	62	91	23	178	149	20	131	148	38	744
Profit before income tax total Fortum	1,615	2,228	1,586	1,398	3,360	4,088	595	1,111	1,040	1,728
- of sales %	25.7	36.2	25.8	26.3	70.7	110.4	16.4	24.6	19.8	31.7
Profit before income tax continuing operations					1,232	-305	595	1,111	1,040	1,728
- of sales %					30.1	-8.8	16.4	24.6	19.8	31.7
Profit for the period total Fortum	1,354	1,862	1,512	1,212	3,161	4,142	504	882	858	1,507
- of which attributable to owners of the parent	1,300	1,769	1,416	1,204	3,154	4,138	496	866	843	1,482
Profit for the period continuing operations					1,089	-228	504	882	858	1,507
- of which attributable to owners of the parent					1,081	-231	496	866	843	1,482

Arsregnskap regnskapsåret 2019 for 885361102

Fortum

Join the change

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Financial key figures								
EUR million or as indicated								
Financial position and cash flow								
Capital employed total Fortum		16,124	17,931	19,420	19,183	17,918	19,870	18,170
Interest-bearing net debt		6,826	7,023	7,814	7,793	4,217	-2,195	5,509
Interest-bearing net debt without Exergi financing					6,658	3,664	N/A	N/A
Capital expenditure and gross investments in shares total Fortum		1,249	1,482	1,574	1,020	843	669	4,672
- of sales %		19.8	24.1	25.6	19.2	17.7	18.1	89.1
Capital expenditure and gross investments in shares continuing operations						695	625	4,672
Capital expenditure total Fortum		1,222	1,408	1,558	1,005	774	626	713
Capital expenditure continuing operations						626	582	584
Net cash from operating activities total Fortum		1,437	1,613	1,382	1,548	1,762	1,381	804
Net cash from operating activities continuing operations						1,406	1,228	804
Key ratios								
Return on capital employed total Fortum, %		11.6	14.8	10.2	9.0	19.5	22.7	6.7
Return on shareholders' equity total Fortum, %		15.7	19.7	14.6	12.0	30.0	33.4	6.8
Interest coverage total Fortum		13.7	10.5	7.6	6.7	19.9	27.6	10.0
Interest coverage including capitalised borrowing costs total Fortum		10.0	8.5	5.7	5.3	15.7	21.5	9.2
Funds from operations/interest-bearing net debt total Fortum, %		20.5	21.5	19.9	18.8	42.9	-59.7	26.8
Funds from operations/interest-bearing net debt without Exergi financing total Fortum, %					22.1	49.3	N/A	N/A
Gearing, %		78	69	73	77	39	-16	40
Comparable net debt/EBITDA total Fortum		2.8	3.0	3.2	3.9	2.3	-1.7	3.6
Comparable net debt/EBITDA without Exergi financing					3.4	2.0	N/A	N/A
Equity-to-assets ratio, %		40	44	43	43	51	61	54
Other data								
Dividends		888	888	888	977	1,155	977	977 ²⁾
Research and development expenditure		30	38	41	49	41	47	56
- of sales %		0.5	0.6	0.7	0.9	1.0	1.4	1.1
Average number of employees total Fortum		11,156	11,010	10,600	9,532	8,821	8,193	8,248
Average number of employees continuing operations						8,329	8,009	8,767
1) EBITDA is defined as Operating profit + Depreciation and amortisation. 2) Board of Directors' proposal for the planned Annual General Meeting on 17 March 2020.								
See ▶ Definitions of key figures.								

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See ► Definitions of key figures.

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EUR or as indicated

Data per share

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Earnings per share total Fortum	1.46	1.99	1.59	1.36	3.55	4.66	0.56	0.98	0.95	1.67
Earnings per share continuing operations					1.22	-0.26	0.56	0.98	0.95	1.67
Earnings per share discontinued operations					2.33	4.92	-	-	-	-
Diluted earnings per share total Fortum	1.46	1.99	1.59	1.36	3.55	4.66	0.56	0.98	0.95	1.67
Diluted earnings per share continuing operations					1.22	-0.26	0.56	0.98	0.95	1.67
Diluted earnings per share discontinued operations					2.33	4.92	-	-	-	-
Cash flow per share total Fortum	1.62	1.82	1.56	1.74	1.98	1.55	0.70	1.12	0.91	2.27
Cash flow per share continuing operations					1.38	1.38	0.70	1.12	0.91	2.27
Equity per share	9.24	10.84	11.30	11.28	12.23	15.53	15.15	14.69	13.33	14.61
Dividend per share	1.00	1.00	1.00	1.10	1.10	1.10	1.10	1.10	1.10	1.10 ¹⁾
Extra dividend					0.20	-	-	-	-	-
Payout ratio, %	68.5	50.3	62.9	80.9	36.6	23.6	196.4	112.2	115.8	65.9 ¹⁾
Dividend yield, %	4.4	6.1	7.1	6.6	7.2	7.9	7.5	6.7	5.8	5.0 ¹⁾
Price/earnings ratio (P/E)	15.4	8.3	8.9	12.2	5.1	3.0	26.1	16.8	20.1	13.2

Share prices

At the end of the period

Average

Lowest

Highest

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Average	22.53	16.49	14.15	16.63	17.97	13.92	14.57	16.50	19.10	22.00
Lowest	19.05	19.77	15.66	15.11	17.89	16.29	13.56	15.28	19.10	20.06
Highest	17.18	15.53	12.81	13.10	15.13	12.92	10.99	12.69	16.43	18.09
	22.69	24.09	19.36	18.18	20.32	21.59	15.74	18.94	22.91	22.50

Other data

Market capitalisation at the end of the period, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Market capitalisation at the end of the period, EUR million	20,015	14,649	12,570	14,774	15,964	12,366	12,944	14,658	16,966	19,542

Trading volumes²⁾

Number of shares, 1,000 shares

In relation to weighted average number of shares, %

Number of shares, 1,000 shares

Number of shares excluding own shares, 1,000 shares

Average number of shares, 1,000 shares

Diluted adjusted average number of shares, 1,000 shares

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number of shares, 1,000 shares	493,375	524,858	494,765	465,004	454,796	541,858	611,572	582,873	474,705	572,272
In relation to weighted average number of shares, %	55.5	59.1	55.7	52.3	51.2	61.0	68.8	65.6	53.4	41.9
Number of shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,294	888,294
Number of shares excluding own shares, 1,000 shares	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Average number of shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,312	888,294
Diluted adjusted average number of shares, 1,000 shares	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,367	888,312	888,294

¹⁾ Board of Directors' proposal for the planned Annual General Meeting on 17 March 2020.

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 Boati, Cboe and Turquoise, and on the OTC market as well. In 2019, approximately 3% (2018: 4%) of Fortum shares were traded on markets other than the Nasdaq Helsinki Ltd.

See ▶ Definitions of key figures.

Segment key figures

Segment key figures

Fortum renewed its business structure as of 1 March 2014. The reorganisation lead to a change in Fortum's external financial reporting structure as previously separately reported segments Heat and Electricity Sales were 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 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 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 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 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 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. 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 organisation structure.

See more information in ► **Note 6** Segment reporting.

Sales by segment. EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation	2,702	2,481	2,415	2,252	2,156	1,722	1,657	1,677	1,842
- of which internal	-281	-24	296	69	85	83	15	15	-2
City Solutions				1,516	1,332	1,187	782	1,015	1,110
- of which internal				87	34	-13	1	19	37
Heat	1,770	1,737	1,628						
- of which internal	-8	8	18						
Consumer Solutions							668	1,097	1,759
- of which internal							2	3	11
Electricity Sales	1,798	900	722						
- of which internal	158	95	55						
Russia	804	920	1,030	1,119	1,055	893	896	1,101	1,069
- of which internal	-	-	-	-	0	0	0	0	0
Other Operations	51	108	137	63	58	114	92	102	103
- of which internal	169	115	-66	54	44	75	61	67	79
Distribution	963	973	1,070	1,064					
- of which internal	18	15	37	19					
Eliminations and Netting of Nord Pool transactions	-1,792	-958	-843	-706	-513	-458	-463	-470	-641
Total for continuing operations	6,296	6,161	6,159	5,309	4,088	3,459	3,632	4,520	5,242
Discontinued operations					751	274			
Eliminations ¹⁾					-89	-31			
Total					4,751	3,702	3,632	4,520	5,242

1) Sales to and from discontinued operations.

Segment key figures

Comparable operating profit by segment, EUR million									
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation	1,298	1,201	1,146	859	877	561	417	478	628
City Solutions				109	104	108	64	98	135
Heat	275	278	271						
Consumer Solutions							48	41	53
Electricity Sales	11	27	39						
Russia	8	74	68	156	161	201	191	296	271
Other Operations	-66	-73	-92	-54	-57	-63	-77	-102	-99
Distribution	307	295	320	332					
Comparable operating profit	1,833	1,802	1,752	1,403	1,085	808	644	811	987
Impairment charges						-918	27	6	-4
Capital gains and other	93	284	155	61	305	22	38	326	102
Changes in fair values of derivatives hedging future cash flow							-65	14	98
Nuclear fund adjustment							-11	1	-45
Other items affecting comparability ¹⁾	-218	316	-33	45	-94	-62			
Operating profit, continuing operations	1,708	2,402	1,874	1,508	1,296	-150	633	1,158	1,138
Discontinued operations					2,132	4,395			
Operating profit					3,428	4,245	633	1,158	1,138

1) 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									
	2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation	1,398	1,310	1,260	1,007	998	680	527	603	763
City Solutions				211	204	209	186	262	310
Heat	462	471	481						
Consumer Solutions							55	57	110
Electricity Sales	13	29	40						
Russia	94	148	189	258	304	267	312	438	417
Other Operations	-56	-66	-83	-49	-49	-53	-64	-83	-78
Distribution	485	482	529	548					
Total for continuing operations	2,396	2,374	2,416	1,975	1,457	1,102	1,015	1,275	1,523
Discontinued operations					416	163			
Total					1,873	1,265	1,015	1,275	1,523

Arsregnskap regnskapsåret 2019 for 885361102

Segment key figures

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Depreciation and amortisation, EUR million									
Generation	100	109	114	148	121	118	110	125	135
City Solutions				102	100	101	121	163	175
Heat	187	193	210						
Consumer Solutions							7	16	57
Electricity Sales	2	2	1						
Russia	86	108	121	150	147	117	123	142	147
Other Operations	10	7	9	5	8	10	13	18	22
Distribution	178	187	209	216					
Total for continuing operations	563	606	664	621	377	346	373	464	536
Discontinued operations					150	50			
Total					526	395	373	464	536
Share of profit of associates and joint ventures by segment, EUR million									
Generation	-25	3	-12	4	-14	-111	-34	-1	-72
City Solutions				91	88	59	76	80	74
Heat	31	19	20						
Electricity Sales	1	2	0						
Russia	8	30	27	46	35	32	38	31	36
Other Operations	28	23	-20	32	37	40	51	38	0
Distribution	19	14	8	4					
Total for continuing operations	62	91	23	178	146	20	131	148	38
Discontinued operations					3	0			
Total					149	20	131	148	38
Capital expenditure by segment, EUR million									
Generation	97	131	190	179	197	187	196	174	248
City Solutions				123	86	105	109	170	209
Heat	304	297	464						
Consumer Solutions							3	7	47
Electricity Sales	0	5	1						
Russia	599	670	568	435	340	285	201	152	54
Other Operations	9	16	11	12	3	6	83	187	26
Distribution	213	289	324	255					
Total for continuing operations	1,222	1,408	1,558	1,005	626	582	591	690	584
Discontinued operations					147	44			
Total					774	626	591	690	584

Årsregnskap regnskapsåret 2019 for 885361102

Segment key figures

Gross investments in shares by segment, EUR million																			
	2010	2011	2012	2013	2014	2015	2016	2017	2018										
Generation	25	17	-	2	2	16	7	90	14										
City Solutions				11	37	23	698	386	33										
Heat	1	32	10																
Consumer Solutions																			
Russia	-	24	-	0	27	0	117	486	0										
Other Operations	1	1	6	2	4	4	22	125	63										
Distribution	0	-	-	0				39	3,977										
Total for continuing operations	27	74	16	15	69	43	844	1,125	4,088										
Discontinued operations					0	0													
Total					69	43	844	1,125	4,088										
Gross divestments of shares by segment, EUR million																			
	2010	2011	2012	2013	2014	2015	2016	2017	2018										
Generation	0	3	102	79	67	0	0	0	160										
City Solutions				11	446	27	33	0	147										
Heat	52	203	269																
Consumer Solutions																			
Electricity Sales	-	16	2				1	55	0										
Russia	43	23	-	-	0	0	127	0	0										
Other Operations	6	0	0	-	2	-	0	687	0										
Distribution	46	323	37	52															
Total for continuing operations	147	568	410	142	515	27	161	742	306										
Discontinued operations					2,681	6,369													
Total					3,196	6,395	161	742	306										
Comparable net assets by segment, EUR million																			
	2010	2011	2012	2013	2014	2015	2016	2017	2018										
Generation						5,931	5,815	5,672	6,485										
City Solutions						2,182	2,873	3,728	3,794										
Consumer Solutions							154	638	648										
Russia						2,561	3,284	3,161	2,789										
Other Operations						258	514	276	4,023										
Total for continuing operations						10,932	12,641	13,474	17,739										

Årsregnskap regnskapsåret 2019 for 885361102

Segment key figures

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	2010	2011	2012	2013	2014	2015 ¹⁾
Generation	5,806	6,247	6,389	6,355	6,001	5,913
City Solutions				2,295	2,112	2,170
Heat	4,182	4,191	4,286			
Electricity Sales	210	11	51			
Russia	2,817	3,273	3,848	3,846	2,597	2,561
Other Operations	29	208	158	295	496	291
Distribution	3,683	3,589	3,889	3,745		
Total for continuing operations	16,727	17,519	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, %	2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation	22.3	19.9	18.5	13.8	14.2	9.5	6.9	8.4	10.8
City Solutions				8.7	8.7	7.9	5.9	5.5	5.5
Heat	7.7	7.4	7.0						
Consumer Solutions									
Electricity Sales	9.3	33.5	203.1						
Russia	0.7	3.5	2.7	5.2	5.6	8.2	8.0	10.1	10.3
Distribution ¹⁾	9.3	8.6	8.8	8.8	9.3				

¹⁾ Classified as discontinued operations from 2014 onwards.

Return on net assets by segment, %	2010	2011	2012	2013	2014	2015 ¹⁾
Generation	19.5	24.6	18.7	14.5	13.6	-8.5
City Solutions				9.7	19.1	7.7
Heat	8.4	9.9	8.8			
Electricity Sales	38.4	4.2	152.3			
Russia	2.4	3.5	3.0	5.2	5.6	8.3
Distribution ²⁾	9.7	13.7	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.

Segment key figures

Average number of employees	2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation	1,891	1,873	1,896	1,900	1,685	1,389	1,064	1,036	1,107
City Solutions				2,051	1,913	1,458	1,529	1,807	1,994
Heat	2,482	2,682	2,354						
Consumer Solutions							877	1,180	1,473
Electricity Sales	538	510	515						
Russia	4,555	4,436	4,301	4,245	4,196	4,180	3,814	3,710	3,378
Other Operations	592	607	661	550	536	983	711	774	814
Distribution	1,098	902	873	786					
Total for continuing operations	11,156	11,010	10,600	9,532	8,329	8,009	7,994	8,507	8,767
Discontinued operations					492				
Total					8,821				

Capital expenditure

Capital expenditure ¹⁾

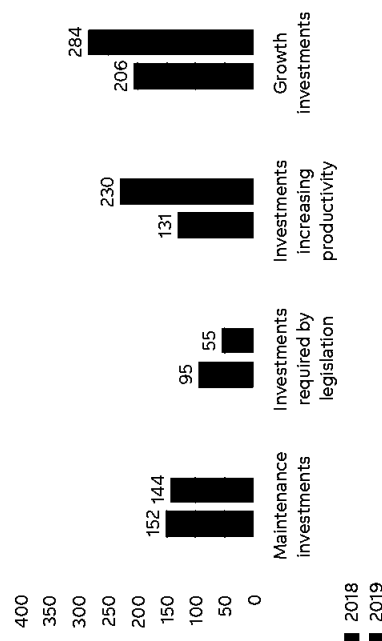
EUR million	Finland		Sweden		Russia		Poland		Norway		Other countries	
	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019	2018
Generation												
Hydropower	12	20	56	59					0	0		6
Nuclear power	57	99		0					0	0		5
Windpower	22	2	32	9					56	51		11
Fossil-based electricity	7			0					0	0		
Other	4	8	1	1					0	0		
Total Generation	102	128	89	68					56	51		24
City Solutions												
Fossil-based heat	2	5		0			5	7	0	0		0
Renewable, of which	39	34	7	6			14	52	9	9		23
waste	19	20	7	6			14	52	9	9		6
biofuels	20	15	0	0			0	0	0	0		2
solar												14
other	1	0	0	0			0	0	0	0		
District heat network	17	14	0	0			16	18	27	16		11
Other	3	7	2	1			2	1	1	0		3
Total City Solutions	62	60	9	6			38	78	36	26		38
Consumer Solutions												
Other	15	9	14	14			9	8	17	16		5
Total Consumer Solutions	15	9	14	14			9	8	17	16		0
Russia												
Fossil-based electricity					49	28						
Fossil-based heat					18	22						
Renewable-based electricity, wind					0	5						
Total Russia					67	54						6
Other												
Other	20	17	2	1			0	0	5	4		4
Total Other	20	17	2	1			0	0	5	4		4
Total	199	215	114	89	67	54	47	86	115	97		71
Of which investments in CO₂ free production	112	135	88	67	0	5	0	0	0	51		99

¹⁾ Includes capital expenditure to both intangible assets and property, plant and equipment.

Capital expenditure

Fortum classifies investments in four main categories,

EUR million



Generation

Fortum invested EUR 111 million (2018: EUR 62 million) into wind power production in the Nordics. The largest wind power investment was EUR 52 million to the Sørjord wind park in Norway. The wind investments also include the EUR 30 million Solberg fixed asset acquisition that is part of the Blaiken-Solberg wind park ownership swap. In Finland,

Fortum invested EUR 57 million (2018: 99) into the Loviisa nuclear power plant. Fortum additionally invested EUR 68 million (2018: 79) into hydro production, mainly maintenance, legislation and productivity investments. Investments in CO₂ free production were EUR 236 million (2018: 240).

City Solutions

The largest investment project in 2019 was EUR 140 million to the Pavagada solar plant in India. Maintenance, legislation and productivity investments totalled EUR 157 million (2018: 89). 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 CO₂ free production were EUR 165 million (2018: 34).

Consumer Solutions

Investments in Consumer solutions totalled EUR 55 million (2018: 47). The amount consists mainly of sales commissions for customer acquisition that are capitalised starting from the implementation of IFRS 15 in 2018 and new product development costs.

Russia

Investments to the Russia division were EUR 67 million (2018: 100). Investments consisted mainly of maintenance, legislation and productivity investments in CO₂ free production were EUR 0 million (2018: 0).

Other

Investments in Other segment were EUR 31 million (2018: 100). Investments consisted mainly of IT investments and investments into infrastructure ventures. Other operations invested in Charge and Drive (2018: 9), mainly charging stations in Norway.

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 the consolidated financial statements. From 1 January 2014 onwards Exergi is treated as a joint venture and thus consolidated with equity method. Before company was consolidated as a subsidiary with 50% minority interest.

Production

Fortum's total power and heat production in EU and Norway, TWh	2010	2011	2012	2013	2014	2015	2016	2017	2018
Power generation	53.7	55.3	53.9	47.4	50.1	50.2	47.5	46.6	44.7
Heat production	26.1	22.0	18.5	10.4	8.2	6.4	7.1	8.6	9.4
Fortum's total power and heat production in Russia, TWh	2010	2011	2012	2013	2014	2015	2016	2017	2018
Power generation	16.1	17.4	19.2	20.0	23.3	25.7	25.5	26.3	29.6
Heat production	26.0	25.4	24.8	24.2	26.4	25.8	20.7	20.0	20.4
Fortum's power generation by source, total in the Nordic area, TWh	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hydro and wind power	22.0	21.0	25.2	18.1	22.4	25.1	20.8	20.9	19.4
Nuclear power	22.0	24.9	23.4	23.7	23.8	22.7	24.1	23.0	22.8
Thermal power	8.3	7.2	3.0	3.4	1.8	1.0	1.4	1.6	1.3
Total	52.3	53.1	51.6	45.2	48.0	48.8	46.2	45.4	43.5
Fortum's power generation by source, total in the Nordic area, %	2010	2011	2012	2013	2014	2015	2016	2017	2018
Hydro and wind power	42	40	49	40	46	51	45	46	45
Nuclear power	42	47	45	52	50	47	52	51	52
Thermal power	16	13	6	8	4	2	3	3	3
Total	100	100	100	100	100	100	100	100	100

Power generation capacity by segment, MW		2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation		9,728	9,752	9,702	9,475	9,063	8,046	8,039	7,862	7,867
Heat		1,600	1,670	1,569						
City Solutions					793	803	743	760	775	788
Russia		2,785	3,404	3,404	4,250	4,758	4,903	4,482	4,794	4,912
Other Operations								53	292	157
Total		14,113	14,826	14,675	14,518	14,624	13,692	13,334	13,722	13,724
Heat production capacity by segment, MW		2010	2011	2012	2013	2014	2015	2016	2017	2018
Generation		250	250	250	250	0				
Heat		10,448	10,375	8,785						
City Solutions					4,317	3,936	3,915	3,818	4,671	4,780
Russia		13,796	14,107	13,396	13,466	13,466	12,696	9,920	10,094	10,229
Total		24,494	24,732	22,431	18,033	17,402	16,611	13,738	14,765	15,009

Fortum's power generation capacity by type and area, MW		Finland		Sweden		Russia		Poland		Other		Tot
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Hydropower		1,553	1,548	3,124	3,124	0	0	0	0	0	0	4,677
Nuclear power		1,487	1,485	1,334	1,334	0	0	0	0	0	0	2,821
Combined heat and power		452	452	9	9	4,858	4,843	233	186	137	139	5,689
Condensing power		565	376	0	0	0	0	0	0	0	0	565
Wind power		0	0	75	75	35	35	0	0	84	84	194
Solar power		0	0	0	0	35	35	0	0	250	0	285
Total		4,057	3,860	4,542	4,542	4,928	4,912	233	186	471	223	14,230

Fortum's heat production capacity by area, MW		Finland		Sweden		Russia		Poland		Other		Tot
		2019	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
Heat		2,002	1,993	35	35	8,437	10,229	941	782	1,834	1,971	13,249

Sales

Fortum's total power and heat sales in EU and Norway, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Power sales	3,110	2,868	2,700	2,462	2,344	1,921	1,893	2,244	2,922
Heat sales	1,309	1,278	1,201	538	468	423	449	524	615

Fortum's total power and heat sales in Russia, EUR million

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Power sales	505	590	713	822	758	661	691	837	872
Heat sales	287	324	300	290	285	228	199	258	193

Fortum's total power sales by area, TWh

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Finland	30.7	24.6	21.6	23.4	21.6	22.3	22.8	22.5	23.1
Sweden	28.3	29.4	30.1	23.3	28.2	29.8	28.8	30.8	29.7
Norway							1.5	7.2	15.3
Russia	18.7	20.2	23.3	25.6	26.5	29.4	29.5	30.5	34.1
Other countries	3.2	3.6	3.8	4.3	3.8	2.8	2.1	2.9	1.8
Total	80.9	77.8	78.8	76.6	80.1	84.3	84.7	93.9	104

Fortum's total heat sales by area, TWh

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Finland	9.6	8.5	5.8	5.5	3.2	3.1	3.6	3.9	3.8
Russia	26.8	26.7	26.4	24.1	26	25.4	20.7	19.8	20.7
Sweden	10.9	8.5	8.5	-	-	-	0.1	0.3	0.3
Poland	4	4.3	4.3	4.1	3.4	3.4	3.6	3.7	3.5
Other countries	3.6	3.4	2.9	3.1	2.8	1.2	1.4	2.2	3.2
Total	54.9	51.4	47.9	36.8	35.4	33.2	29.4	29.9	31.5

Volume of distributed electricity in distribution networks, TWh

	2010	2011	2012	2013	2014	2015	2016	2017	2018
Finland	10	9.5	9.8	9.5	2.8	-	-	-	-
Sweden	15.2	14.2	14.4	14.1	13.7	6.4	-	-	-
Norway	2.5	2.3	2.4	2.5	1.1	-	-	-	-
Estonia	0.2	0.1	0	-	-	-	-	-	-
Total	27.9	26.1	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	Q1/2018	Q2/2018	Q3/2018	Q4/2018	2018	Q1/2019	Q2/2019	Q3/2019	Q4/2019
IS Sales	1,585	1,087	971	1,599	5,242	1,690	1,144	1,060	1,553
Comparable EBITDA	538	282	230	473	1,523	545	372	295	552
IS Comparable operating profit	405	153	96	333	987	408	232	153	399
IS Operating profit	482	256	91	309	1,138	358	184	124	444
IS Share of profit/loss of associates and joint ventures	47	24	12	-44	38	111	461	106	65
IS Finance costs - net	-36	-39	-58	-4	-136	-46	7	-32	-55
IS Profit before income tax	493	241	45	261	1,040	424	652	198	455
IS Income tax expense	-94	-25	1	-64	-181	-65	-45	-25	-88
IS Profit for the period	400	215	46	197	858	359	607	173	367
IS Non-controlling interests	-16	1	5	-5	-15	-19	0	5	-10
IS Profit for the period, owners of the parent	384	216	51	192	843	341	607	178	356
Earnings per share for profit attributable to the equity owners of the company (EUR per share)									
Basic	0.43	0.24	0.05	0.22	0.95	0.38	0.69	0.20	0.40

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Quarterly sales by segment

EUR million	Q1/2018	Q2/2018	Q3/2018	Q4/2018	2018	Q1/2019	Q2/2019	Q3/2019	Q4/2019
Generation ¹⁾	498	427	360	557	1,842	601	500	458	583
City Solutions ¹⁾	381	193	178	359	1,110	405	228	200	366
Consumer Solutions	547	326	332	555	1,759	669	346	311	510
Russia	336	228	200	305	1,069	298	239	229	306
Other Operations ¹⁾	23	24	25	31	103	26	28	29	32
Netting of Nord Pool transactions ²⁾	-161	-92	-105	-157	-516	-192	-99	-100	-139
Eliminations	-39	-19	-17	-50	-125	-117	-98	-67	-105
IS Total	1,585	1,087	971	1,599	5,242	1,690	1,144	1,060	1,553

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	Q1/2018	Q2/2018	Q3/2018	Q4/2018	2018	Q1/2019	Q2/2019	Q3/2019	Q4/2019
Generation	220	151	69	188	628	223	191	140	239
City Solutions	88	-21	4	64	135	92	-15	-36	80
Consumer Solutions	17	11	7	17	53	26	19	16	19
Russia	104	37	40	89	271	99	69	53	94
Other Operations	-24	-26	-24	-26	-99	-32	-32	-21	-34
IS Comparable operating profit	405	153	96	333	987	408	232	153	398
Impairment charges	0	0	0	-4	-4	-3	0	-6	0
Capital gains and other	26	76	1	-1	102	3	3	3	-2
Changes in fair values of derivatives hedging future cash flow	54	49	-8	2	98	-46	-5	-27	5
Nuclear fund adjustment	-4	-22	2	-21	-45	-5	-46	0	42
IS Operating profit	482	256	91	309	1,138	358	184	124	444

The first and last quarters of the year are usually the strongest quarters for power and heat businesses.

Investor information

Fortum 2019 reporting entity comprises CEO's Business Review, Financials, Corporate Governance Statement and Remuneration Statement. Tax footprint as well as Sustainability.

Annual General Meeting 2020

The Annual General Meeting 2020 of Fortum Corporation will be held on Tuesday, 17 March 2020, starting at 11:00 EET at Finlandia Hall, address: Mannerheimintie 13 e, Helsinki, Finland. The reception of shareholders who have registered for the meeting will commence at 9:30 EET.

Payment of dividends

The Board of Directors proposes to the Annual General Meeting that Fortum Corporation pays a dividend of EUR 1.10 per share for 2019, totalling approximately EUR 977 million based on the registered shares as of 1 February 2020. The possible dividend related dates planned for 2020 are:

- the ex-dividend date 18 March 2020,
- the record date for dividend payment 19 March 2020 and
- the dividend payment date 26 March 2020.

Financial information in 2020

Fortum will publish three interim reports in 2020:

- January–March interim report on 29 April
- January–June half year financial review on 17 July, and
- January–September on 29 October.

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 analysts and the media. Webcasts of these conferences are available online at ► www.fortum.com/investors. Management also gives interviews on a one-on-one and group basis. Fortum observes closed and silent period of 30 days prior to publishing its results.

Fortum share basics

Listed on Nasdaq Helsinki
Trading ticker: FORTUM
Number of shares, 5 February 2020: 888,294,465
Sector: Utilities

Fortum's activities in capital markets during 2019

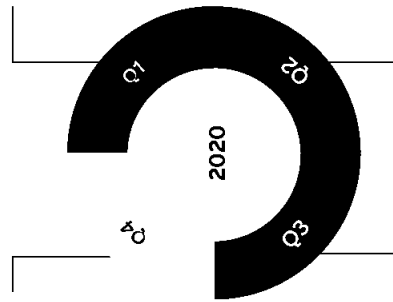
Fortum's Investor Relations activities cover equity and fixed-income markets to ensure full and fair of the Company's shares, access to funding sources and stable bond pricing. The key task of Investor Relations is to provide correct, adequate and up-to-date information regularly and equally to all participants. By doing this, Investor Relations aims to minimise the investor's risk and reduce the volatility. Investors and analysts primarily are met on a regular basis in Europe and North America.

In 2019, Fortum met approximately 230 professional equity investors individually or in group and at investor conferences and maintained regular contact with equity research analysts at investment banks and brokerage firms.

Årsredovisning regnskapsåret 2019 for 85361102

Financial Statement
Bulletin 2019, 6 Feb
Financial Statement
Latest week 88

Interim Report January–
September 2020, 29 October



Interim Report
January–June 2020, 17 July

Annual General Meeting
17 March
Interim Report
January–March 2020



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Til generalforsamlingen i Fortum Forvaltning AS

UAVHENGIG REVISORS BERETNING

Uttalelse om revisjonen av årsregnskapet

Konklusjon

Vi har revidert Fortum Forvaltning AS' årsregnskap som viser et underskudd på kr 129 176 393. Årsregnskapet består av balanse per 31. desember 2019, resultatregnskap og kontantstrømoppstilling for regnskapsåret avsluttet per denne datoen og noteopplysninger til årsregnskapet, herunder et sammendrag av viktige regnskapsprinsipper.

Etter vår mening er det medfølgende årsregnskapet avgitt i samsvar med lov og forskrifter og gir et rettviseende bilde av selskapets finansielle stilling per 31. desember 2019, og av dets resultater og kontantstrømmer for regnskapsåret avsluttet per denne datoen i samsvar med regnskapslovens regler og god regnskapsskikk i Norge.

Grunnlag for konklusjonen

Vi har gjennomført revisjonen i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder de internasjonale revisjonsstandardene International Standards on Auditing (ISA-ene). Våre oppgaver og plikter i henhold til disse standardene er beskrevet i Revisors oppgaver og plikter ved revisjon av årsregnskapet. Vi er uavhengige av selskapet slik det kreves i lov og forskrift, og har overholdt våre øvrige etiske forpliktelser i samsvar med disse kravene. Etter vår oppfatning er innhentet revisjonsbevis tilstrekkelig og hensiktsmessig som grunnlag for vår konklusjon.

Øvrig informasjon

Ledelsen er ansvarlig for øvrig informasjon. Øvrig informasjon omfatter informasjon i årsrapporten bortsett fra årsregnskapet og den tilhørende revisjonsberetningen.

Vår uttalelse om revisjonen av årsregnskapet dekker ikke øvrig informasjon, og vi attesterer ikke den øvrige informasjonen.

I forbindelse med revisjonen av årsregnskapet er det vår oppgave å lese øvrig informasjon med det formål å vurdere hvorvidt det foreligger vesentlig inkonsistens mellom øvrig informasjon og årsregnskapet, kunnskap vi har opparbeidet oss under revisjonen, eller hvorvidt den tilsynelatende inneholder vesentlig feilinformasjon.

Dersom vi konkluderer med at den øvrige informasjonen inneholder vesentlig feilinformasjon er vi pålagt å rapportere det. Vi har ingenting å rapportere i så henseende.

Styrets og daglig leders ansvar for årsregnskapet

Styret og daglig leder (ledelsen) er ansvarlig for å utarbeide årsregnskapet i samsvar med lov og forskrifter, herunder for at det gir et rettviseende bilde i samsvar med regnskapslovens regler og god regnskapsskikk i Norge. Ledelsen er også ansvarlig for slik internkontroll som den finner nødvendig for å kunne utarbeide et årsregnskap som ikke inneholder vesentlig feilinformasjon, verken som følge av misligheter eller utilsiktede feil.

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Registrert i Foretaksregisteret Medlemmer av
Den norske Revisorforening
Organisasjonsnummer: 980 211 282

Penneo Dokumentnøkkel: XSQMM-BPHKW-ZBN41-36WWO-7UBEL-CUEME



Deloitte.

side 2

Uavhengig revisors beretning -
Fortum Forvaltning AS

Ved utarbeidelsen av årsregnskapet må ledelsen ta standpunkt til selskapets evne til fortsatt drift og opplyse om forhold av betydning for fortsatt drift. Forutsetningen om fortsatt drift skal legges til grunn for årsregnskapet så lenge det ikke er sannsynlig at virksomheten vil bli avvirket.

Revisors oppgaver og plikter ved revisjonen av årsregnskapet

Vårt mål med revisjonen er å oppnå betryggende sikkerhet for at årsregnskapet som helhet ikke inneholder vesentlig feilinformasjon, verken som følge av misligheter eller utilsiktede feil, og å avgi en revisjonsberetning som inneholder vår konklusjon. Betryggende sikkerhet er en høy grad av sikkerhet, men ingen garanti for at en revisjon utført i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder ISA-ene, alltid vil avdekke vesentlig feilinformasjon som eksisterer. Feilinformasjon kan oppstå som følge av misligheter eller utilsiktede feil. Feilinformasjon blir vurdert som vesentlig dersom den enkeltvis eller samlet med rimelighet kan forventes å påvirke økonomiske beslutninger som brukerne foretar basert på årsregnskapet.

Som del av en revisjon i samsvar med lov, forskrift og god revisjonsskikk i Norge, herunder ISA-ene, utøver vi profesjonelt skjønn og utviser profesjonell skepsis gjennom hele revisjonen. I tillegg:

- identifiserer og anslår vi risikoen for vesentlig feilinformasjon i regnskapet, enten det skyldes misligheter eller utilsiktede feil. Vi utformer og gjennomfører revisjonshandlinger for å håndtere slike risikoer, og innhenter revisjonsbevis som er tilstrekkelig og hensiktsmessig som grunnlag for vår konklusjon. Risikoen for at vesentlig feilinformasjon som følge av misligheter ikke blir avdekket, er høyere enn for feilinformasjon som skyldes utilsiktede feil, siden misligheter kan innebære samarbeid, forfalskning, bevisste utelatelser, uriktige fremstillinger eller overstyring av internkontroll.
- opparbeider vi oss en forståelse av den interne kontroll som er relevant for revisjonen, for å utforme revisjonshandlinger som er hensiktsmessige etter omstendighetene, men ikke for å gi uttrykk for en mening om effektiviteten av selskapets interne kontroll.
- evaluerer vi om de anvendte regnskapsprinsippene er hensiktsmessige og om regnskapsestimaterne og tilhørende noteopplysninger utarbeidet av ledelsen er rimelige.
- konkluderer vi på hensiktsmessigheten av ledelsens bruk av fortsatt drift-forutsetningen ved avleggelsen av regnskapet, basert på innhentede revisjonsbevis, og hvorvidt det foreligger vesentlig usikkerhet knyttet til hendelser eller forhold som kan skape tvil av betydning om selskapets evne til fortsatt drift. Dersom vi konkluderer med at det eksisterer vesentlig usikkerhet, kreves det at vi i revisjonsberetningen henleder oppmerksomheten på tilleggsopplysningene i regnskapet, eller, dersom slike tilleggsopplysninger ikke er tilstrekkelige, at vi modifierer vår konklusjon om årsregnskapet og årsberetningen. Våre konklusjoner er basert på revisjonsbevis innhentet inntil datoen for revisjonsberetningen. Etterfølgende hendelser eller forhold kan imidlertid medføre at selskapet ikke fortsetter driften.
- evaluerer vi den samlede presentasjonen, strukturen og innholdet, inkludert tilleggsopplysningene, og hvorvidt årsregnskapet representerer de underliggende transaksjonene og hendelsene på en måte som gir et rettviseende bilde.

Vi kommuniserer med dem som har overordnet ansvar for styring og kontroll blant annet om det planlagte omfanget av revisjonen og til hvilken tid revisjonsarbeidet skal utføres. Vi utveksler også informasjon om forhold av betydning som vi har avdekket i løpet av revisjonen, herunder om eventuelle svakheter av betydning i den interne kontrollen.

Uttalelse om andre lovmessige krav

Konklusjon om årsberetningen

Basert på vår revisjon av årsregnskapet som beskrevet ovenfor, mener vi at opplysningene i årsberetningen og i redegjørelsene om foretaksstyring og samfunnsansvar om årsregnskapet, forutsetningen om fortsatt drift og forslaget til resultatdisponering er konsistente med årsregnskapet og i samsvar med lov og forskrifter.

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Deloitte.

side 3

Uavhengig revisors beretning -
Fortum Forvaltning AS

Konklusjon om registrering og dokumentasjon

Basert på vår revisjon av årsregnskapet som beskrevet ovenfor, og kontrollhandlinger vi har funnet nødvendig i henhold til internasjonal standard for attestasjonsoppdrag (ISAE) 3000

«Attestasjonsoppdrag som ikke er revisjon eller forenklet revisorkontroll av historisk finansiell informasjon», mener vi at ledelsen har oppfylt sin plikt til å sørge for ordentlig og oversiktlig registrering og dokumentasjon av selskapets regnskapsopplysninger i samsvar med lov og god bokføringsskikk i Norge.

Oslo, 31 august 2020
Deloitte AS

Reidar Ludvigsen
statsautorisert revisor

Penneo Dokumentnøkkel: XSQMM-BPHKW-ZBN41-36WWO-7UBEL-CUEME



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Signers:

Name

Marit Nesheim Hauge
TIMO TAPANI KARTTINEN
SUSANNE JONSSON

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Fortum Forvaltning AS

Årsberetning 2019

Virksomhetens art

Selskapets virksomhet omfatter hovedsaklig investering og forvaltning av eierskap i andre foretak og virksomheter med tilknytning til Fortum konsernets virksomheter i Norge. Selskapet har forretningsadresse i Oslo.

Utvikling i resultat og stilling

Etter styrets oppfatning gir resultatregnskapet og balansen et tilfredsstillende uttrykk for utviklingen gjennom året og stillingen ved årets utgang.

I juli 2019 gjennomførte Fortum Forvaltning AS 100% salg av sine aksjer i to av vindelskapene - Nygårdstjelllet Vindpark AS og Ånstadblåheia Vindpark AS til Nordic Wind Norway AS.

Fortsatt drift

I samsvar med regnskapslovens § 3-3 bekreftes det at forutsetningen om fortsatt drift er lagt til grunn ved utarbeidelsen av regnskapet.

Arbeidsmiljø og personale

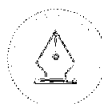
Selskapet har ingen ansatte. Det har således ikke vært sykefravær, skader eller ulykker i 2019.

Ytre miljø

Selskapet forurensar ikke det ytre miljø.

Finansiell risiko

Selskapet har ikke rentebærende gjeld. Selskapets fremtidige utvikling er knyttet til kursutviklingen på selskapets investeringer.



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**Disponering av årets resultat**

Styret foreslår følgende disponering av årets underskudd kr 129 176 393:

Overført fra annen	kr	129 176 393
egenkapital Sum disponert	kr	129 176 393

Oslo, 31.august 2020

Timo Karttinen
Styrets leder

Susanne Jonsson
styremedlem /daglig leder

Marit Nesheim Hauge
styremedlem



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FF_Årsregnskap 2019.pdf

Signers:

Name

Marit Nesheim Hauge
TIMO TAPANI KARTTINEN
SUSANNE JONSSON

Method

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BANKID

Date

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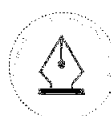


Fortum Forvaltning AS

Org.nr 885 361 102

Årsregnskap 2019

Resultatregnskap
Balanse
Kontantstrømoppstilling
Noter



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Fortum Forvaltning AS

Org.nr: 885 361 102

Resultatregnskap 01.01 - 31.12

	Note	2019	2018
DRIFTSINNTEKTER			
Driftsinntekter	11	4,880,637	-
DRIFTSKOSTNADER			
Ordinære avskrivninger	3	107,266	-
Annen driftskostnad	8	6,638,996	4,534,487
Sum driftskostnader		6,746,262	4,534,487
DRIFTSRESULTAT		-1,865,625	-4,534,487
FINANSINNTEKTER OG FINANSKOSTNADER			
Inntekt på andre investeringer	11	67,302,288	264,912,800
Annen finansinntekt	11	6,693,006	4,114,457
Nedskrivning finansielle anleggsmidler	10	-181,000,000	-
Annen finanskostnad	11	-460,328	-1,034,057
Netto finansposter		-107,465,034	267,993,200
ORDINÆRT RESULTAT FØR SKATTEKOSTNAD		-109,330,659	263,458,713
Skattekostnad på ordinært resultat	7	19,845,734	61,089,035
ÅRSRESULTAT		-129,176,393	202,369,678
Overføringer:			
Konsernbidrag	2	-	45,938,739
Overføringer annen egenkapital	2	-129,176,393	156,430,939
Sum disponert		-129,176,393	202,369,678



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Fortum Forvaltning AS

Org.nr: 885 361 102

BALANSE

Eiendeler pr 31.12.

	Note	2019	2018
ANLEGGSMIDLER			
Varige driftsmidler			
Maskiner, inventar, og lignende	3	11,339,923	-
Sum varige driftsmidler		<u>11,339,923</u>	<u>-</u>
Finansielle anleggsmidler			
Aksjer i datterselskaper	10	5,420,020,618	5,604,094,635
Investeringer i aksjer og andeler	10	-	-
Sum finansielle anleggsmidler		<u>5,420,020,618</u>	<u>5,604,094,635</u>
Sum anleggsmidler		<u>5,431,360,541</u>	<u>5,604,094,635</u>
OMLØPSMIDLER			
Fordringer			
Andre fordringer		2,710,668	30,254
Andre fordringer, konsern	5	852,745,433	930,669,956
Finansielle eiendeler	12	-	709,320
Sum fordringer		<u>855,456,101</u>	<u>931,409,530</u>
Sum omløpsmidler		<u>855,456,101</u>	<u>931,409,530</u>
SUM EIENDELER		<u>6,286,816,642</u>	<u>6,535,504,164</u>



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Fortum Forvaltning AS

Org.nr: 885 361 102

BALANSE

Egenkapital og Gjeld pr 31.12.

	Note	2019	2018
EGENKAPITAL			
Innskutt egenkapital			
Aksjekapital	2,6	757,000,000	757,000,000
Annen innskutt egenkapital	2	1,448,612,661	1,448,612,661
Sum innskutt egenkapital		<u>2,205,612,661</u>	<u>2,205,612,661</u>
Opptjent egenkapital			
Annen egenkapital	2	3,990,078,280	4,119,807,944
Sum opptjent egenkapital		<u>3,990,078,280</u>	<u>4,119,807,944</u>
Sum egenkapital		<u>6,195,690,941</u>	<u>6,325,420,605</u>
GJELD			
Annen langsiktig gjeld			
Utsatt skatt	7	259,582	156,050
Sum annen langsiktig gjeld		<u>259,582</u>	<u>156,050</u>
Kortsiktig gjeld			
Leverandørgjeld		4,403,202	165,513
Leverandørgjeld, konsern		247,116	267,387
Betalbar skatt	7	19,586,152	66,328,439
Annen kortsiktig gjeld	10	66,629,649	49,859,900
Annen kortsiktig gjeld, konsern	5	-	93,306,270
Sum kortsiktig gjeld		<u>90,866,119</u>	<u>209,927,509</u>
Sum gjeld		<u>91,125,701</u>	<u>210,083,559</u>
SUM EGENKAPITAL OG GJELD		<u>6,286,816,642</u>	<u>6,535,504,164</u>

Oslo, 31.08.2020

Timo T Karttinen
Styrets leder

Susanne Jonsson
Styremedlem / Daglig leder

Marit Nesheim Hauge
Styremedlem



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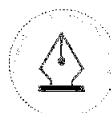
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Fortum Forvaltning AS

Kontantstrømoppstilling 01.01 - 31.12

	2019	2018
Kontantstrømmer fra operasjonelle aktiviteter		
Resultat før skatt	-109,330,659	263,458,713
Betalt skatt	-66,328,440	-92,338,283
Ordinære avskrivninger	107,266	-
Nedskrivning finansielle eiendeler	181,000,000	-
- Gevinst/tap salg av aksjer	18,498,539	-
Endring i kundefordringer, leverandørgjeld og fordring		
konsernselskap	-73,962,128	-269,242,784
Endring i andre tidsavgrensningsposter	1,200,000	-
Netto kontantstrøm fra operasjonelle aktiviteter	-48,815,422	-98,122,354
Kontantstrømmer fra investeringsaktiviteter		
Investeringer i varige driftsmidler	-11,447,189	-
Investering i aksjer og andeler	-209,744,583	-366,736,069
Salg av aksjer og andeler	193,120,061	-
Netto kontantstrøm fra investeringsaktiviteter	-28,071,711	-366,736,069
Kontantstrømmer fra finansieringsaktiviteter		
Mottatt konsernbidrag	380,999,092	517,434,650
Utbetaling av konsernbidrag	-93,306,270	-144,107,458
Utbytte	-	-500,000,000
Netto kontantstrøm fra finansieringsaktiviteter	287,692,822	-126,672,808
Netto endring i konsernkontoordning	210,805,689	-591,531,231
Innskudd konsernkonto 01.01	549,670,864	1,141,202,095
Innskudd konsernkonto 31.12	760,476,553	549,670,864



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Fortum Forvaltning AS

Org.nr: 885 361 102

Note 1 Regnskapsprinsipper

Årsregnskapet er satt opp i samsvar med regnskapsloven av 1998 og god regnskapsskikk.

Hovedregel for vurdering og klassifisering av eiendeler og gjeld

Eiendeler bestemt til varig eie eller bruk er klassifisert som anleggsmidler. Andre eiendeler er klassifisert som omløpsmidler. Fordringer som skal tilbakebetales innen et år er klassifisert som omløpsmidler. Ved klassifisering av kortsiktig og langsiktig gjeld er tilsvarende kriterier lagt til grunn.

Omløpsmidler vurderes til laveste av anskaffelseskost og virkelig verdi.

Anleggsmidler vurderes til anskaffelseskost, men nedskrives til gjenvinnbart beløp dersom dette er lavere enn bokført verdi, og verdifallet forventes ikke å være forbigående. Anleggsmidler med begrenset økonomisk levetid avskrives planmessig.

Langsiktig gjeld og kortsiktig gjeld er vurdert til pålydende beløp.

Valuta

Pengeposter i utenlandsk valuta omregnes til balansedagens kurs.

Aksjer og andeler klassifisert som anleggsmidler

Aksjer og andeler i datterselskap klassifisert som anleggsmidler er vurdert etter kostmetoden. Investeringene nedskrives til virkelig verdi ved verdifall som forventes ikke å være forbigående. Mottatt utbytte fra selskapene inntektsføres som finansinntekt.

Andel av resultat ved deltakelse i Joint Venture resultatføres. Investeringene nedskrives til virkelig verdi ved verdifall som forventes ikke å være forbigående.

Fordringer

Kundefordringer og andre fordringer er oppført til pålydende etter fradrag for avsetning til forventet tap. Avsetning til tap gjøres på grunnlag av en individuell vurdering av de enkelte fordringer.

Bankinnskudd, kontanter og lignende

Bankinnskudd, kontanter ol. inkluderer kontanter, bankinnskudd og andre betalingsmidler med forfallsdato som er kortere enn tre måneder fra anskaffelse.

Skatt

Skattekostnaden sammenstilles med regnskapsmessig resultat før skatt. Skatt knyttet til egenkapitaltransaksjoner føres mot egenkapitalen. Skattekostnaden består av betalbar skatt (skatt på årets direkte skattepliktige inntekt) og endring i netto utsatt skatt. Utsatt skatt er beregnet med 22 % av midlertidige forskjeller mellom regnskapsmessige og skattemessige verdier, samt ligningsmessig underskudd til fremføring ved utgangen av regnskapsåret. Skatteøkende og skattereduserende midlertidige forskjeller som reverserer eller kan reversere i samme periode er utlignet. Utsatt skattefordel balanseføres på bakgrunn av at den utsatte skattefordelen kan nyttiggjøres gjennom konsernstrukturen.

Kontantstrømoppstilling

Kontantstrømoppstillingen er utarbeidet etter den indirekte metode.



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Note 2 Egenkapital

Spesifikasjon av egenkapital:

	Aksjekapital	Annen innskutt egenkapital	Annen egenkapital	Sum
Egenkapital pr 01.01.	757,000,000	1,448,612,661	4,119,807,944	6,325,420,605
Årets resultat			-129,176,393	-129,176,393
Endring virkelig verdi finansielle eiendeler ført mot egenkapitalen, netto etter skatt			-553,270	-553,270
Egenkapital pr 31.12.	757,000,000	1,448,612,661	3,990,078,280	6,195,690,941

Note 3 Driftsmidler og avskrivninger

	Varige driftsmidler	Anlegg under utførelse	Sum
Anskaff.-kostnad 01.01	-	-	-
Årets tilgang	6,435,930	5,011,259	11,447,189
Årets avgang	-	-	-
Anskaff.-kostnad 31.12	6,435,930	5,011,259	11,447,189
Akk. Av- og nedskrivninger 1.1.	-	-	-
Årets av-/nedskrivninger	107,266	-	107,266
Akk. Av- og nedskrivninger 31.12	107,266	-	107,266
Bokført 31.12	6,328,665	5,011,259	11,339,923
Årets avskrivning	-	-	-
Årets nedskrivning	-	-	-
Økonomisk levetid	3-4 år	-	-
Avskrivningssats	25-33 %	-	-

Note 4 Fordringer og gjeld

Fordringer med forfall senere enn ett år etter balansedato

Ingen av selskapets fordringer forfaller senere enn ett år etter balansedato.

Gjeld med forfall senere enn fem år etter balansedato

Selskapet har ikke gjeld som forfaller senere enn fem år etter balansedato.



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Note 5 Mellomværende med selskap i samme konsern

Fordringer		2019	2018
Innskudd konsernkontosystem	Kortsiktig	760,476,553	549,670,864
Solvencia AS	Konsernbidrag	32,000,000	35,621,000
NorgesEnergi AS	Konsernbidrag	28,111,000	118,092,292
Hafslund Strøm AS	Konsernbidrag	26,927,000	97,923,800
Fortum Oslo Varme AS	Kortsiktig	1,751,209	-
Hafslund Strøm AS	Kortsiktig	991,707	-
Fortum Kundesenter AS	Kortsiktig	887,316	-
Fortum Tellier AS	Kortsiktig	887,316	-
Fortum Consumer Solutions	Kortsiktig	330,569	-
Fortum Markets AS	Kortsiktig	208,780	-
Fortum Hedging AS	Kortsiktig	173,983	-
Fortum Tellier AS	Konsernbidrag	-	28,166,000
Fortum Hedging AS	Konsernbidrag	-	87,000,000
Hallingkraft AS	Konsernbidrag	-	6,046,000
Fredrikstad EnergiSalg AS	Konsernbidrag	-	8,150,000
Sum		852,745,433	930,669,956

Gjeld		2019	2018
Ånstadblåheia Vindpark AS	Konsernbidrag	-	27,376,104
Sørfjord Vindpark AS	Konsernbidrag	-	6,269,466
Fortum Markets AS	Konsernbidrag	-	59,660,700
Sum		-	93,306,270

Note 6 Aksjekapital og aksjonærinformasjon

Aksjekapitalen består av:	Antall	Pålydende	Bokført
Aksjer	757,000	1,000	757,000,000

Aksjene eies av:	Antall	Andel	Stemmeandel
Fortum Holding B.V. (Nederland)	757,000	100%	100%

Konsernregnskap utarbeides av morselskapet i konsernet, Fortum Oyj, Espoo, Finland, og kan fås ved henvendelse til selskapets kontor.



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Note 7 Skatt

Årets skattekostnad fordeler seg på:	2019	2018
Betalbar skatt	19,586,152	66,328,439
Betalbar skatt på konsernbidrag	-	-5,239,404
Endring i utsatt skattefordel	103,532	156,050
Utsatt skatt ført mot egenkapitalen	156,050	-156,050
Sum skattekostnad	19,845,734	61,089,035

Beregning av årets skattegrunnlag:	2019	2018
Resultat før skattekostnad	-109,330,659	263,458,713
Resultatført mottatt konsernbidrag	-87,038,000	-264,912,800
Skattefri gevinst salg aksjer	18,498,539	-
Andre permanente forskjeller	40,002	2,145,785
Endring i midlertidige forskjeller	-1,179,920	-
Nedskrivning av finansielle eiendeler	181,000,000	-
Avgitt(-)/Mottatt konsernbidrag	87,038,000	287,692,822
Årets skattegrunnlag	89,027,962	288,384,520

Betalbar skatt utgjør 22%/23 % av grunnlag:	19,586,152	66,328,439
Skyldig betalbar skatt	19,586,152	66,328,439

Oversikt over midlertidige forskjeller:	2019	2018
Anleggsmidler	1,179,920	-
Finansielle eiendeler	-	709,320
Sum	1,179,920	709,320

Utsatt skatteforpliktelse/(Utsatt skattefordel) (22%/22%)	259,582	156,050
Ordinær skattesats er uendret fra 1.1.2019, 22% pr. 1.1.2019 og 22% pr. 1.1.2020. Satsen pr 1.1.2020 er benyttet for å beregne utsatt skatt pr 31.12.2019.		

Avstemming fra nominell til faktisk skattesats:	2019	2018
Resultat før skatt	-109,330,659	263,458,713
Forventet inntektsskatt etter nominell skattesats (22%/23%)	-24,052,745	60,595,504
<i>Skatteeffekten av følgende poster:</i>		
Nedskrivning av finansielle eiendeler	39,820,000	-
Permanente forskjeller	4,078,479	493,531
Skattekostnad	19,845,734	61,089,035
Effektiv skattesats	-18.2 %	23.2 %



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Note 8 Ansatte, godtgjørelser mv

Selskapet har ikke hatt ansatte i 2019. Det er ikke utbetalt lønn eller godtgjørelse til daglig leder eller selskapets styre. Det er heller ikke gitt lån eller stilt sikkerhet til daglig leder eller leder for styret.

Honorar til revisor fordeler seg som følger mellom ordinær revisjon og bistandsoppgaver:

	2019	2018
Ordinær revisjon	161,686	32,450
Annen bistand	-	406,378
Sum kostnadsført	161,686	438,828

Beløpene er oppgitt ekskl. mva.

Note 9 Bundne bankinnskudd

Selskapet har ingen bundne bankinnskudd.

Note 10 Investering i datterselskap og i andre aksjer og andeler

Investering i datterselskap

Selskapsnavn	Antall aksjer	Eierandel	Bokført verdi	Bokført egenkapital
Fortum Consumer Solutions AS	1,000	100%	5,212,775,323	1,458,666,555
Sørfjord Vindpark AS ⁽¹⁾	1	100%	199,645,294	200,619,656
Fortum Waste Solutions Norway AS	7,000	100%	7,600,000	7,985,177
Sum			5,420,020,618	1,667,271,388

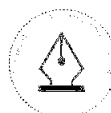
⁽¹⁾ Det er avsatt et betinget vederlag på EUR 5 millioner i forbindelse med kjøp av aksjene i Sørfjord Vindpark AS. Avsetningen er bokført som "Annen kortsiktig gjeld."

I 2019 er aksjene i Nygårdsfjellet Vindpark AS og Ånstadblåheia Vindpark avhendet. Totalt tap ved avhendelsen var NOK 18 498 539, jfr note 11.

Investering i andre selskaper

Selskapsnavn	Antall aksjer/andeler	Eierandel	Bokført verdi	Bokført andel egenkapital
Fortum Nordkraft Vind DA	1	50%	-37,173	-37,173
Sum			-37,173	-37,173

⁽¹⁾ Andel av underskudd i Fortum Nordkraft Vind DA, NOK 1 237 173, er kostnadsført, jfr note 11.



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Note 11 Poster som er slått sammen i regnskapet

Driftsinntekter	2019	2018
Leieinntekter	3,802,634	-
Salg av tjenester	1,078,003	-
Sum driftsinntekter	4,880,637	-
Inntekt på andre investeringer	2019	2018
Gevinst / (tap) salg aksjer	-18,498,539	-
Inntekt / (kostnad) fra deltakelse i JV	-1,237,173	-
Resultatført konsernbidrag	87,038,000	264,912,800
Sum finansinntekter	67,302,288	264,912,800
Finansinntekter	2019	2018
Renteinntekt konsern	6,693,006	4,114,457
Sum finansinntekter	6,693,006	4,114,457
Finanskostnader	2019	2018
Annen rentekostnad	-428	-262,725
Agiotap	-459,900	-771,333
Sum finanskostnader	-460,328	-1,034,057

Note 12 Finansielle eiendeler

Selskapet har inngått avtaler om valutasikring i 2019. Pr 31.12.2019 hadde selskapet en urelaisert tap på NOK 153.

Årets endring i virkelig verdi er ført direkte mot egenkapitalen etter fradrag for utsatt skatt, jfr note 2.

Note 13 Heldelser etter balansedagen

Med bakgrunn i utbruddet av det nye coronaviruset og Covid-19 følger selskapet utviklingen nøye for å minimere eller eliminere virkningen dette vil ha på selskapets virksomhet. Selskapet følger retningslinjene til myndighetene, Folkehelseinstituttet, WHO og ECDC (Europeisk sentrum for forebyggende og kontroll av sykdommer). Fortum Forvaltning forventer i liten grad å bli påvirket av coronaviruset, men gitt de raske endringene på tidspunktet, er det vanskelig å presisere de faktiske slutteffektene dette vil medføre.

Selskapets virksomhet omfatter hovedsaklig investeringer og forvaltning av eierskap i andre foretak og virksomheter tilknyttet Fortum konsernet virksomheter i Norge. Selskapet og konsernet har solid økonomi og ser ikke noen større risiko for selskapets finansielle situasjon.



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