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Fortum Corporation

Half-year Financial Report

January—June 2019

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Figures in brackets refer to the comparison period, i.e. the same period last year, unless otherwise stated.

Improved results in all business segments and strong cash flow

April-June 2019

- Comparable EBITDA was EUR 372 (282) million, +32%
- Comparable operating profit was EUR 232 (153) million, +52%
- Operating profit was EUR 184 (256) million, -28%
- Share of profits of associated companies and joint ventures was EUR 461 (24) million, mainly due to Fortum's share of Uniper's profit
- Earnings per share were EUR 0.69 (0.24), of which EUR -0.05 (0.11) related to items affecting comparability and 0.45 (-) to Uniper. In 2018, capital gain from the sale of the 10% stake in Hafslund Produksjon were EUR 0.09
- Strong cash flow from operating activities totalled EUR 740 (361) million, mainly related to dividends received of EUR 229 million and the change in settlements for futures
- The purchase price allocation of the Uniper investment was finalised

January-June 2019

- Comparable EBITDA was EUR 918 (820) million, +12%
- Comparable operating profit was EUR 640 (558) million, +15%
- Operating profit was EUR 542 (738) million, -27%
- Share of profits of associated companies and joint ventures was EUR 572 (70) million, mainly due to Fortum's share of Uniper's profit
- Earnings per share were EUR 1.07 (0.68), of which EUR -0.09 (0.18) related to items affecting comparability and 0.50 (-) to Uniper. In 2018, capital gain from the sale of the 10% stake in Hafslund Produksjon were EUR 0.09
- Strong cash flow from operating activities totalled EUR 1,491 (634) million, mainly due to the change in settlements for futures and dividends received

Summary of outlook

- The Generation segment's Nordic generation hedges: approximately 80% hedged at EUR 33 per MWh for the remainder of 2019 and approximately 60% at EUR 31 per MWh for 2020
- Capital expenditure, including maintenance but excluding acquisitions, is expected to be in the range of EUR 600-650 million in 2019. In 2020, capital expenditure is expected to decline

Key financial ratios

EUR million	2018	LTM
Return on capital employed, %	6.7	8.4
Comparable net debt/EBITDA	3.6	3.3

Key figures

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales	1,144	1,087	2,834	2,672	5,242	5,404
Comparable EBITDA	372	282	918	820	1,523	1,621
Comparable operating profit	232	153	640	558	987	1,069
Operating profit	184	256	542	738	1,138	942
Share of profits of associates and joint ventures	461	24	572	70	38	540
Profit before income taxes	652	241	1,076	734	1,040	1,382
Earnings per share, EUR	0.69	0.24	1.07	0.68	0.95	1.34
Net cash from operating activities	740	361	1,491	634	804	1,661
Shareholders' equity per share, EUR			13.93	13.34	13.33	
Interest-bearing net debt (at the end of the period)			5,422	5,271	5,509	

Fortum's President and CEO Pekka Lundmark:

"The second quarter of 2019 was a good quarter for Fortum. Results improved in all business segments, cash flow was strong and there was continued focus on strengthening the balance sheet. The higher achieved power price and the higher hydro and nuclear volumes were the main drivers for the clear result improvement in the Generation segment. The results of the Russia segment improved, with higher electricity margins and capacity prices as the main drivers. Part of the improvement was related to high bad-debt provisions in the second quarter of last year.

The weather was warmer than normal in most heating areas, but not as warm as last year. Although seasonally loss-making, the results of the City Solutions segment improved due to higher heat sales, favourable power prices, and better results in our recycling and waste business. Consumer Solutions showed a clear result improvement for the second quarter in a row, after a weaker year in 2018. Roughly half of the result improvement was due to higher margins; the other half was of a more temporary nature.

In the second quarter, Fortum received dividends from Uniper for the first time. The dividend of EUR 165 million strongly contributed to Fortum's cash flow. Fortum's EUR 399 million share of Uniper's profits clearly increased Fortum's net profit and had a EUR 0.45 positive effect on Fortum's earnings per share.

We remain convinced that Fortum and Uniper together can take a leading role in the European energy transition. Working in close alignment, we would be stronger and better positioned to address the key challenges of the future energy landscape: affordability, sustainability, and security of supply. The talks we held with Uniper during the spring only strengthened our conviction. Following the controversy around the Uniper annual general meeting in May, we have met with Uniper employee representatives, the new members of the Management Board and the Supervisory Board. I am pleased that we have now agreed that discussions will continue.

In June, the new Finnish Government presented its political programme. I am glad to see that the new government has indicated its commitment to an ambitious climate policy. The programme contains several positive tax-related proposals to support decarbonisation and electrification, but also increased taxes for heating fuels that overlap with the EU ETS. Similarly as in Sweden, also the Finnish Government proposes the introduction of a tax on waste incineration. Such a tax would be inefficient, as it would hardly steer towards efficient recycling and reuse. It is essential that rejects from sorting of non-recyclable waste and hazardous waste would be excluded from such a tax."

Financial results

Sales by segment

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation	500	427	1,101	925	1,842	2,018
City Solutions	228	193	633	574	1,110	1,169
Consumer Solutions	346	326	1,015	873	1,759	1,901
Russia	239	228	537	565	1,069	1,041
Other Operations	28	24	54	48	103	109
Netting of Nord Pool transactions	-99	-92	-291	-253	-516	-554
<i>Eliminations</i>	-98	-19	-214	-58	-125	-281
Total	1,144	1,087	2,834	2,672	5,242	5,404

Comparable EBITDA by segment

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation	225	182	484	435	763	812
City Solutions	31	23	168	154	310	324
Consumer Solutions	34	26	75	57	110	128
Russia	107	73	242	215	417	444
Other Operations	-25	-22	-50	-40	-78	-88
Total	372	282	918	820	1,523	1,621

Comparable operating profit by segment

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation	191	151	414	370	628	672
City Solutions	-15	-21	77	67	135	145
Consumer Solutions	19	11	44	29	53	68
Russia	69	37	168	141	271	298
Other Operations	-32	-26	-63	-49	-99	-113
Total	232	153	640	558	987	1,069

Operating profit by segment

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation	148	229	352	507	736	581
City Solutions	-10	-13	84	75	130	139
Consumer Solutions	9	22	3	38	75	40
Russia	69	37	168	142	273	299
Other Operations	-33	-19	-65	-24	-76	-117
Total	184	256	542	738	1,138	942

Share of profits of associated companies and joint ventures

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation	24	-4	39	-6	-72	-27
City Solutions	3	0	42	43	74	73
Consumer Solutions	0	0	0	0	0	0
Russia	34	26	43	31	36	48
Other Operations	399	2	448	2	0	446
Total	461	24	572	70	38	540

April-June 2019

Fortum's sales increased by 5%, mainly driven by higher power prices. Comparable operating profit increased by 52%. The result improved in all business segments, mainly supported by the higher achieved power price and higher hydro and nuclear volumes in the Generation segment as well as good improvements in the Russia segment's results.

Operating profit for the period was impacted by EUR -48 (103) million of items affecting comparability, mainly from the nuclear fund adjustment related to the regular Finnish technical update (Note 4 and 14). In the comparison period in 2018, Fortum recorded a capital gain of EUR 77 million from the sale of the 10% stake in Hafslund Produksjon.

The share of profit of associates and joint ventures was EUR 461 (24) million, including Fortum's share of Uniper's first-quarter 2019 results of EUR 384 (-) million and EUR 15 (-) million of fair value adjustments reversal according to the purchase price allocation of Uniper for the first and second quarter 2019 (Note 6). The share of profit of Uniper is based on Uniper's reported 'Net income/loss attributable to shareholders' including the impact from 'Non-operating results', e.g. fair value measurement of derivative financial instruments, which are subject to volatility. EUR 334 million of non-operating results are included in the share of profits in the second quarter 2019 (Note 4). Co-owned nuclear companies accounted for EUR 26 (-1) million and TGC-1 for EUR 25 (24) million. The share of profit of Uniper and TGC-1 are based on the companies' published first-quarter 2019 interim reports (Note 11).

Net finance costs amounted to EUR -7 (39) million, including a positive impact of EUR 40 million related to the regular nuclear technical update in Finland (Note 14).

January-June 2019

Fortum's sales increased by 6%, mainly driven by higher power prices. Comparable operating profit improved in all business segments and was up by 15%. The higher achieved power price and higher hydro and nuclear volumes in the Generation segment as well as the improved performance in the Russia segment were the main contributors to the result improvement.

Operating profit for the period was impacted by EUR -98 (180) million of items affecting comparability, mainly from the nuclear fund adjustment related to the regular Finnish technical update and from the fair-value change of non-hedge-accounted derivatives (Note 4 and 14). In the comparison period in 2018, Fortum recorded a capital gain of EUR 77 million from the sale of the 10% stake in Hafslund Produksjon.

The share of profit of associates and joint ventures was EUR 572 (70) million, including Fortum's share of Uniper's fourth-quarter 2018 and first-quarter 2019 results of EUR 433 (-) million and EUR 15 (-) million of fair value adjustments reversal according to the purchase price allocation of Uniper for the first and second quarter 2019 (Note 6). EUR 252 million of non-operating results are included in the share of profits in the first and second quarter 2019 (Note 4). Co-owned nuclear companies accounted for EUR 41 (-1) million, Stockholm Exergi for EUR 34 (37) million, and TGC-1 for EUR 33 (29) million.

Net finance costs amounted to EUR 38 (74) million, including a positive impact of EUR 40 million related to the regular nuclear technical update in Finland (Note 14).

Profit before income taxes was EUR 1,076 (734) million.

Taxes for the period totalled EUR 109 (119) million. The effective income tax rate, according to the income statement, was 10.1% (16.2%). 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 20.9% (21.0%) (Note 7).

The profit for the period was EUR 967 (615) million. Earnings per share were EUR 1.07 (0.68), of which EUR -0.09 (0.18) per share were related to items affecting comparability.

Financial position and cash flow

Cash flow

In January-June 2019, net cash from operating activities was strong and increased by EUR 857 million to EUR 1,491 (634) million, mainly impacted by a EUR 316 (-290) million change in settlements for futures on Nasdaq Commodities and dividends received from Uniper of EUR 165 million, however, offset by a change of realised foreign exchange gains and losses of EUR -123 million.

Net cash from investing activities was EUR -46 (-3,959) million. The comparison period in 2018 included the acquisition of Uniper shares. Capital expenditure increased by EUR 117 million to EUR 369 (252) million. Cash collaterals and restricted cash decreased by EUR 498 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 1,445 (-3,326) million.

Proceeds from long-term liabilities were EUR 2,809 (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 and repayment of a bond of EUR 750 million. The total payments of long-term liabilities were EUR 2,546 (551) million. The net increase in liquid funds was EUR 673 (-3,107) million.

Dividends received totalled EUR 229 (53) million, mainly related to dividends received from Uniper EUR 165 (-) million, Stockholm Exergi EUR 41 (39) million, and Turun Seudun Energiateollisuus EUR 20 (10) million.

Assets and capital employed

At the end of the reporting period, total assets amounted to EUR 22,813 (22,409 at the end of 2018) million. Liquid funds at the end of the period increased to EUR 1,297 (584 at the end of 2018) million. Capital employed was EUR 19,340 (18,170 at the end of 2018) million.

Equity

Equity attributable to owners of the parent company totalled EUR 12,374 (11,841 at the end of 2018) million. The 2018 dividend of EUR 1.10 per share, approved by the 2019 Annual General Meeting (AGM) on 26 March 2019, was paid on 4 April 2019. The increase in equity of EUR 533 million was mainly related to the net profit for the period of EUR 948 million, the positive impact from fair valuation of cash flow hedges of EUR 442 million, and the positive translation differences of EUR 170 million, partly offset by the dividend payment of EUR 977 million.

Financing

Net debt decreased by EUR 186 million to EUR 5,422 (5,509 at the end of 2018) million including lease liabilities recognised in 1 January 2019 due to IFRS 16 with an impact of EUR 99 million. Interest-bearing liabilities increased by EUR 626 million and liquid funds increased by EUR 713 million. The dividend, EUR 977 million, was paid on 4 April 2019.

At the end of the reporting period, the Group's liquid funds totalled EUR 1,297 (584 at the end of 2018) million. Liquid funds include cash and bank deposits held by PAO Fortum of EUR 133 (317 at the end of 2018) million. The decrease was related to dividends of EUR 352 million paid to the parent company. At the end of the second quarter, Fortum had, in addition to liquid funds, undrawn committed credit facilities amounting to EUR 1,800 (1,800) million (Note 13).

On 19 February 2019, Fortum issued bonds with a total nominal value of EUR 2.5 billion under its EMTN programme. The bonds were issued in three tranches with the following maturities; EUR 1,000 million with a 0.875% fixed coupon maturing on 27 February 2023; EUR 750 million with a 1.625% fixed coupon maturing on 27 February 2026; and EUR 750 million with a 2.125% fixed coupon maturing on 27 February 2029. 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 and repayment of a bond of EUR 750 million, which resulted in a more balanced debt maturity profile. In April 2019, Fortum draw a five-year EUR 300 million bilateral financial loan.

Net financial expenses totalled EUR 38 (74) million, of which net interest expenses were EUR 71 (59) million. Net financial expenses included the positive impact of EUR 40 million from a regulatory nuclear technical update in Finland (Note 14). EUR 13 million of the interest expenses represent the remaining amortised cost due to the prepayment of the bridge financing for the acquisition of Uniper shares.

Standard & Poor's long-term credit rating for Fortum is BBB with Negative Outlook. The short-term rating is at level A-2. In June 2019, Fitch Ratings affirmed Fortum's long-term credit rating at BBB with Stable Outlook and upgraded Fortum's short-term rating to F2 (earlier F3). Having a solid investment-grade rating is a key priority for Fortum.

Key figures

At the end of the reporting period, the comparable net debt-to-EBITDA ratio for the last 12 months was 3.3x (3.6x at the end of 2018). The target is to steer the leverage from the current net debt-to-EBITDA ratio towards the long-term over-the-cycle target of approximately 2.5x.

Gearing was 43% (46% at the end of 2018) and the equity-to-assets ratio was 55% (54% at the end of 2018). Equity per share was EUR 13.93 (13.33 at the end of 2018). Return on capital employed (ROCE) for the last 12 months was 8.4% (6.7% at the end of 2018). Fortum targets a long-term over-the-cycle return on capital employed of at least 10%.

Segment reviews

In 2018, the development units 'M&A and Solar & Wind Development' and 'Technology and New Ventures', reported within Other Operations, were reorganised and parts of the operations moved to the existing divisions. From the beginning of 2019, the management and segment reporting was changed accordingly. The wind business is reported as part of the Generation segment and the solar business as well as the bio-based solutions as part of the City Solutions segment. The Russian wind and solar operations continue as a part of the Russia segment. The restated figures in accordance with the new organisational structure were published on 19 March 2019.

Generation

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.

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales	500	427	1,101	925	1,842	2,018
- power sales	476	417	1,030	907	1,771	1,894
of which Nordic power sales*	383	346	800	760	1,415	1,455
- other sales	24	10	70	18	71	123
Comparable EBITDA	225	182	484	435	763	812
Comparable operating profit	191	151	414	370	628	672
Operating profit	148	229	352	507	736	581
Share of profits of associates and joint ventures**	24	-4	39	-6	-72	-27
Comparable net assets (at period-end)			6,140	5,908	6,485	
Comparable return on net assets, %					10.8	11.8
Capital expenditure and gross investments in shares	63	51	101	98	262	265
Number of employees			1,162	1,148	1,091	

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

** Power plants are often built jointly with other power producers, and owners purchase electricity at cost, including interest cost and production taxes. The share of profit/loss is mainly IFRS adjustments (e.g. accounting for nuclear-related assets and liabilities) and depreciations on fair-value adjustments from historical acquisitions (Note 19 in the Consolidated Financial Statements 2018).

Power generation by source

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Hydropower, Nordic	5.3	5.1	10.2	11.4	19.1	17.9
Wind power, Nordic	0.1	0.1	0.2	0.1	0.3	0.4
Nuclear power, Nordic	5.9	5.6	12.2	11.9	22.8	23.0
Thermal power, Nordic	0.0	0.0	0.1	0.1	0.1	0.2
Total	11.3	10.8	22.7	23.6	42.3	41.5

Nordic sales volumes

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Nordic sales volume	13.0	12.3	26.3	26.5	48.7	48.5
of which Nordic power sales volume*	10.9	10.4	21.8	22.8	40.8	39.8

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

Sales price

EUR/MWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Generation's Nordic power price*	35.0	33.1	36.7	33.4	34.6	36.5

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

April-June 2019

The Generation segment's total power generation in the Nordic countries increased due to higher hydro and nuclear volumes. The operational performance and the load factor for nuclear generation were at a good level. The CO₂-free production accounted for 100% (100%) of the total power generation.

The achieved power price in the Generation segment increased by EUR 1.9 per MWh, +6%, driven by higher hedge prices and successful generation and financial optimisation, which was partly offset by the lower spot power prices.

Comparable operating profit increased by 26%. The higher achieved power price, higher hydro and nuclear volumes, as well as lower nuclear waste costs were the main contributors to the improved result.

Operating profit was affected by EUR -43 (78) million of items affecting comparability, mainly related to the regular Finnish nuclear technical update (Note 4 and 14). In the comparison period in 2018, Fortum recorded a capital gain of EUR 77 million from the sale of the 10% stake in Hafslund Produksjon.

The share of profits of associated companies and joint ventures totalled EUR 24 (-4) million (Note 11).

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 licenses to operate.

January-June 2019

The Generation segment's total power generation in the Nordic countries decreased due to lower hydropower volumes in the first quarter. The overall operational performance and the load factor for nuclear generation were at a good level. The CO₂-free production accounted for 99% (100%) of the total power generation.

The achieved power price in the Generation segment increased by EUR 3.3 per MWh, +10%, 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 12%, due to the higher achieved power price and somewhat higher nuclear volumes. The lower hydropower volumes in the first quarter, however, partly offset the positive impact.

Operating profit was affected by EUR -63 (137) million of items affecting comparability, mainly related to fair-value change of non-hedge-accounted derivatives and the regular Finnish nuclear technical update (Note 4 and 14). In the comparison period in 2018, Fortum recorded a capital gain of EUR 77 million from the sale of the 10% stake in Hafslund Produksjon.

The share of profits of associated companies and joint ventures totalled EUR 39 (-6) million (Note 11).

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	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales	228	193	633	574	1,110	1,169
- heat sales	98	85	351	350	604	605
- power sales	26	22	81	62	134	153
- waste treatment sales*	59	47	121	97	211	235
- other sales**	45	39	80	64	161	177
Comparable EBITDA	31	23	168	154	310	324
Comparable operating profit	-15	-21	77	67	135	145
Operating profit	-10	-13	84	75	130	139
Share of profits of associates and joint ventures	3	0	42	43	74	73
Comparable net assets (at period-end)			3,792	3,771	3,794	
Comparable return on net assets, %					5.5	5.7
Capital expenditure and gross investments in shares	136	55	207	84	242	365
Number of employees			2,003	2,043	2,017	

* Waste treatment sales comprise gate fees and environmental construction services.

** Other sales mainly comprise operation and maintenance services, the sale of recycled products, and fuel sales.

Heat sales by country

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Finland	0.7	0.6	2.1	2.3	3.8	3.7
Poland	0.5	0.3	2.0	2.0	3.5	3.4
Norway	0.2	0.2	0.9	1.0	1.6	1.6
Other countries	0.3	0.3	1.1	1.0	1.9	1.9
Total	1.8	1.4	6.1	6.3	10.8	10.6

Power sales by country

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Finland	0.3	0.2	1.0	0.7	1.4	1.6
Poland	0.1	0.0	0.3	0.2	0.5	0.5
Other countries	0.2	0.3	0.4	0.6	1.0	0.9
Total	0.6	0.5	1.7	1.5	2.9	3.1

April-June 2019

Heat sales volumes increased by 24% from the very low levels in 2018. Temperatures were warmer than normal in most heating areas. The power sales volumes increased somewhat in the second quarter of 2019. The power sales volume in 'other countries' was lower as a consequence of the sale of a majority share of the operational Indian solar portfolio in the second quarter of 2018.

Comparable operating profit improved by EUR 6 million. The higher heat sales volumes and the improved results in the recycling and waste business had a positive effect on the results. This effect was partially

offset by higher fuel prices in Finland and higher CO₂ emission prices in the Finnish and Polish heating businesses. In the comparison period in 2018, the Indian solar portfolio contributed to the comparable operating profit.

Operating profit was affected by EUR 5 (8) million of items affecting comparability, mainly related to capital gains and the fair-value change of non-hedge-accounted derivatives (Note 4).

The share of profits of associated companies and joint ventures totalled EUR 3 (0) million, the main part of which was related to the share of profit of Turun Seudun Energiatuotanto, EUR 3 (3) million, and Stockholm Exergi, EUR -1 (-4) million (Note 11).

January-June 2019

Heat sales volumes declined by 3%, negatively impacted by the first-quarter weather being clearly warmer than the previous year, partly offset by slightly colder weather in the second quarter. In the first quarter the power sales volume in Finland increased by 41%, due to higher load factors in the combined heat and power (CHP) plants. The power sales volume in 'other countries' was lower in the first and second quarters as a consequence of the sale of a majority share of the operational Indian solar portfolio in the second quarter of 2018.

Comparable operating profit increased by 15%, mainly due to improved results in the recycling and waste business as well as in the Norwegian heating and cooling business. In the comparison period in the first and second quarter of 2018, the Indian solar portfolio contributed to the comparable operating profit.

Operating profit was affected by EUR 7 (8) million of items affecting comparability, mainly related to capital gains and the fair-value change of non-hedge-accounted derivatives (Note 4).

The share of profits of associated companies and joint ventures totalled EUR 42 (43) million, the main part of which was related to the share of profit of Stockholm Exergi, EUR 34 (37) million (Note 11).

Consumer Solutions

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.

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales	346	326	1,015	873	1,759	1,901
- power sales	305	278	903	760	1,547	1,690
- other sales	41	48	112	112	212	212
Comparable EBITDA	34	26	75	57	110	128
Comparable operating profit	19	11	44	29	53	68
Operating profit	9	22	3	38	75	40
Comparable net assets (at period-end)			512	645	648	
Capital expenditure and gross investments in shares	13	12	27	21	47	53
Number of employees			1,434	1,485	1,399	

Sales volumes

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Electricity	6.0	5.9	16.0	16.5	30.3	29.8
Gas*	0.8	0.7	2.1	2.2	4.1	4.0

* Not including wholesale volumes.

Number of customers

Thousands*	II/19	II/18	2018
Electricity	2,390	2,460	2,440
Gas	40	20	30
Total	2,430	2,480	2,470

* Rounded to the nearest 10,000.

April-June 2019

The electricity sales volume increased by 2%. Higher market prices were the main driver for the 6% increase in sales. The competition in the Nordics continued with high customer churn.

Comparable operating profit increased by 73%, driven by higher sales margins. The margins improved, both due to continued favourable market conditions in the second quarter and improved product margins in certain customer segments and product portfolios. Part of the profitability improvement was temporary.

Operating profit was affected by EUR -9 (10) million of items affecting comparability, due to the fair-value change of non-hedge-accounted derivatives (Note 4).

January-June 2019

The electricity sales volume decreased by 3%, mainly due to a slightly reduced number of customers and warmer weather in the first quarter. Higher market prices, especially in the first quarter, were the main driver for the increase in sales.

Comparable operating profit increased by 52%, mainly supported by higher sales margins. The improvement was, related both to favourable market conditions in the first half of the year, temporarily increasing profitability in certain areas of the customer portfolio, and to improved margins in certain product portfolios and customer segments.

Operating profit was affected by EUR -41 (9) million of items affecting comparability, due to the fair-value change of non-hedge-accounted derivatives (Note 4).

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	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales	239	228	537	565	1,069	1,041
- power sales	217	195	465	443	872	894
- heat sales	22	33	70	121	193	142
- other sales	1	0	1	1	4	4
Comparable EBITDA	107	73	242	215	417	444
Comparable operating profit	69	37	168	141	271	298
Operating profit	69	37	168	142	273	299
Share of profits of associates and joint ventures	34	26	43	31	36	48
Comparable net assets (at period-end)			3,084	2,986	2,789	
Comparable return on net assets, %					10.3	11.7
Capital expenditure and gross investments in shares	14	22	19	40	117	96
Number of employees			2,937	3,427	2,941	

Russian power generation and heat production

TWh	II/19	II/18	I-II/19	I-II/18	2018	LTM
Russian power generation	6.9	6.7	15.2	15.0	29.6	29.8
Russian heat production	2.7	3.7	9.6	12.4	20.4	17.6

Key electricity, capacity, and gas prices for Fortum Russia

	II/19	II/18	I-II/19	I-II/18	2018	LTM
Electricity spot price (market price), Urals hub, RUB/MWh	1,151	1,004	1,140	1,008	1,043	1,109
Average regulated gas price, Urals region, RUB/1000 m ³	3,883	3,755	3,883	3,755	3,801	3,883
Average capacity price for CCS and other, tRUB/MW/month* **	142	137	152	147	148	150
Average capacity price for CSA, tRUB/MW/month**	996	957	1,097	1,054	1,075	1,096
Average capacity price, tRUB/MW/month	563	539	621	600	609	620
Achieved power price for Fortum in Russia, RUB/MWh	1,976	1,803	1,990	1,840	1,888	1,964
Achieved power price for Fortum in Russia, EUR/MWh***	27.2	24.4	26.8	25.7	25.6	26.1

* Including capacity receiving payments under "forced mode status", regulated tariffs, and bilateral agreements.

** Capacity prices paid for the capacity volumes, excluding unplanned outages, repairs, and own consumption.

*** Translated using the average exchange rate.

April-June 2019

Power generation volumes increased due to the improved supply-demand balance on the electricity market in the Tyumen area. Heat production volumes decreased, following the transfer of the heat distribution business in Chelyabinsk, including certain heat-only boilers, to the Yustek joint venture in November 2018. Warmer weather in both the Chelyabinsk and Tyumen areas also impacted the heat production volumes.

Sales increased due to higher electricity prices and higher Capacity Supply Agreement (CSA) payments at Nyagan 2, partly offset by the decline in heat sales due to the transfer of the heat distribution business in Chelyabinsk to the Yustek joint venture and warmer weather in both the Chelyabinsk and Tyumen areas.

Comparable operating profit increased by 86%, supported by clearly lower bad-debt provisions, higher electricity margins, and higher received CSA payments. The increase in CSA payments was related to Nyagan 2 receiving higher payments for the last years of the CSA period starting from the third quarter of 2018 and to better availability. The effect of the change in the Russian rouble exchange rate was EUR 2 million.

The share of profits of associated companies and joint ventures totalled EUR 34 (26) million, mainly related to the share of profit of TGC-1, EUR 25 (24) million, and the Yustek joint ventures in Chelyabinsk and Tyumen, EUR 9 (3) million (Note 11).

January-June 2019

Power generation volumes increased due to the improved supply-demand balance on the electricity market in the Tyumen area. Heat production volumes decreased, following the transfer of the heat distribution business in Chelyabinsk, including certain heat-only boilers, to the Yustek joint venture and warmer weather in both Chelyabinsk and Tyumen.

Sales declined, impacted by the weaker Russian rouble, the transfer of the heat distribution business in Chelyabinsk to the Yustek joint venture, and lower heat volumes due to the warmer weather in Chelyabinsk and Tyumen. The effect was partly offset by higher electricity prices and higher CSA payments at Nyagan 2.

Comparable operating profit increased by 19%, supported by higher electricity margins, lower bad-debt provisions, and higher received CSA payments. The positive effect was, however, partly offset by the transfer of the heat distribution business in Chelyabinsk to the Yustek joint venture. In 2018, the businesses transferred to the Yustek joint venture had a marginal annual effect on the comparable operating profit in Russia. The increase in CSA payments was related to Nyagan 2 receiving higher payments for the last years of the CSA period starting from the third quarter of 2018. The effect of the change in the Russian rouble exchange rate was EUR -6 million.

The share of profits of associated companies and joint ventures totalled EUR 43 (31) million, mainly related to the share of profit of TGC-1, EUR 33 (29) million, and the Yustek joint ventures in Chelyabinsk and Tyumen, EUR 9 (3) million (Note 11).

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 6).

EUR million	II/19	II/18	I-II/19	I-II/18	2018	LTM
Sales*	28	24	54	48	103	109
Comparable EBITDA	-25	-22	-50	-40	-78	-88
Comparable operating profit	-32	-26	-63	-49	-99	-113
Operating profit	-33	-19	-65	-24	-76	-117
Share of profits of associates and joint ventures	399	2	448	2	0	446
Comparable net assets (at period-end)			4,287	3,777	4,023	
Capital expenditure and gross investments in shares	7	3,728	14	3,746	4,003	271

* Mainly internal sales.

Uniper investment and purchase price allocation

The total acquisition cost for 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 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 thereby 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 30 million annually. Fortum's second-quarter 2019 share of profits of Uniper include a EUR 15 million reversal of the fair-value adjustment for the first half of 2019. 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 6 and 11).

As Uniper publishes its interim reports later than Fortum, Fortum's share of Uniper's results will be accounted for with a time lag of one quarter, with potential adjustments. Fortum's January-June 2019 Interim Report includes Fortum's share of Uniper's fourth-quarter 2018 and first-quarter 2019 results (Note 6). Uniper will report its January-June 2019 results on 8 August 2019.

On 22 May 2019, Uniper hosted its AGM. The AGM approved the proposed dividend of EUR 0.90 per share, which, for Fortum, corresponds to a dividend received of EUR 165 million.

April-June 2019

Comparable operating profit declined, mainly as a result of increased spend on Business Technology including internal and external ventures.

The share of profits of associated companies and joint ventures totalled EUR 399 (2) million (Note 11), which comprises Fortum's share of Uniper's first-quarter 2019 results of EUR 384 (-) million and EUR 15 (-) million of fair-value adjustments reversed to share of profits of associates and joint ventures according to the purchase price allocation of Uniper for the first and second quarter of 2019 (Note 6). EUR 334 million of non-operating results are included in the share of profits in the second quarter 2019 (Note 4).

January-June 2019

Comparable operating profit declined, mainly as a result of increased spend on Business Technology including internal and external ventures.

The share of profits of associated companies and joint ventures totalled EUR 448 (2) million (Note 11), which comprises Fortum's share of Uniper's fourth-quarter 2018 and first-quarter 2019 results of EUR 433 (-) million and EUR 15 (-) million of fair-value adjustments reversed to share of profits of associates and joint ventures according to the purchase price allocation of Uniper for the first and second quarter of 2019 (Note 6). EUR 252 million of non-operating results are included in the share of profits in the first and second quarter 2019 (Note 4).

Capital expenditures, divestments, and investments in shares

In the second quarter of 2019, capital expenditures and investments in shares totalled EUR 234 (3,868) million (Note 6). Capital expenditures were EUR 226 (122) million (Note 4). Investments in shares in 2018 was mainly attributable to the purchase of Uniper shares.

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

	Type	Electricity capacity, MW	Heat capacity, MW	Supply starts/started
Generation				
Hydro plants in Sweden and Finland	Hydro	~15		2019
Sørfjord, Norway	Wind	97		IV/2019
Kalax, Finland	Wind	90		I/2021
City Solutions				
Zabrze, Poland	CHP	75	145	1 Apr 2019
Kivenlahti, Finland	Bio HOB*		58	2020
Suomenoja, Finland	Heat pump		20	2021
Pavagada 2, India	Solar	250		III/2019
Rajasthan, India	Solar	250		IV/2020
Russia				
Solar**	Solar	116		2021-2022

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

** Subject to separate investment decision.

Generation

Through its interest in Teollisuuden Voima (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 funding of the project pro rata. At the end of the reporting period, Fortum's outstanding receivables regarding 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 time schedule updated by plant supplier Areva-Siemens consortium in July 2019, the plant will start regular electricity generation in July 2020. (Note 18).

In May 2019, Fortum announced that Fortum and Skellefteå Kraft are to restructure their ownership in the two jointly owned Swedish wind parks Solberg and Blaiken. Through the proposed asset swap arrangement Fortum would become the sole owner of the 76-MW Solberg wind park and Skellefteå Kraft the sole owner of the 248-MW Blaiken wind park. The proposed transaction would have only a minor impact on Fortum's cash flow and results. The asset swap arrangement is expected to be finalised in the beginning of the third quarter 2019.

In May 2019, Fortum made the investment decision to start construction of the 90-MW Kalax wind park in Närpes, Finland. The project consists of 21 wind turbines with a total capacity of 90.3 MW and an annual production of more than 0.3 TWh. The Kalax wind park was chosen to the Finnish national renewables scheme in March 2019. The Kalax wind park will receive a subsidy of EUR 2.87 per MWh if the market price for power is below EUR 30 per MWh. The capital expenditure of the project is approximately EUR 90 million. The wind park is expected to be fully operational at the latest in the first quarter of 2021.

On 1 January 2019, Fortum acquired all remaining C-shares of TVO, entitling it to the power production of the Meri-Pori coal condensing power plant. Fortum is now entitled to 100% of the power production of the plant, an increase from 67% previously. The Meri-Pori power plant is mainly used in Fingrid's capacity reserve and as back-up capacity.

In Norway, Fortum is constructing the 97-MW Sørkjord wind farm, which is expected to be commissioned in the fourth quarter of 2019.

City Solutions

In May 2019, Fortum announced it is planning the construction of a new 20-MW heat pump unit at the Suomenoja power plant in Espoo 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 per cent. The final investment decision to build the unit will be made during 2019. The estimated capital expenditure is EUR 8 million.

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 is estimated to be approximately EUR 160 million. Commissioning of the plant is expected in the third quarter of 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 their 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, but it can also use a mixture of fuels. The new plant replaces the existing purely coal-fired units in Zabrze and Bytom. It has a production capacity of 145 MW of heat and 75 MW of electricity. 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 to become 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 (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 the years 2019-2023. During the fourth quarter of 2018, the wind investment fund made an investment decision on a 100-MW wind farm. Power production 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. The wind parks were to be commissioned during the years 2018-2022. In October 2017 and October 2018, the wind investment fund made investment decisions on a 50-MW and a 200-MW wind farm, respectively. On 1 January 2019, the 50-MW wind farm started operation. Power production at the 200-MW wind farm is expected to start during the first half of 2020.

The investment decisions related to the renewable capacities won by Fortum and the Fortum-Rusnano wind investment fund in 2017, 2018, and 2019 are made on a case-by-case basis. Fortum's maximum equity commitment is RUB 15 billion. In the longer term, Fortum seeks to maintain an asset-light structure by forming potential partnerships and other forms of cooperation.

Operating and regulatory environment

Nordic countries

According to preliminary statistics, electricity consumption in the Nordic countries was 88 (88) TWh during the second quarter of 2019. Temperatures were close to the long-term average and industrial demand was almost unchanged. During January-June 2019, electricity consumption in the Nordic countries was 204 (209) TWh, as milder weather during the winter months caused a decrease in the power demand.

At the beginning of 2019, the Nordic water reservoirs were at 74 TWh, which is 10 TWh lower than the long-term average and 8 TWh lower than one year earlier. At the end of the second quarter of 2019, the reservoirs were at 90 TWh, which is 6 TWh above the long-term average and 14 TWh higher than one year earlier. In April 2019, the Norwegian energy regulator (NVE) revised the Norwegian reservoir statistics. The reported reference levels and historical deviations have been updated accordingly.

In the second quarter of 2019, the average system spot price in Nord Pool was EUR 35.6 (39.0) per MWh. The average area price in Finland was EUR 37.4 (42.0) per MWh and in Sweden (SE3, Stockholm) EUR 33.0 (38.5) per MWh. The rainy and mild weather during the first half of 2019 led to rapidly increasing water reservoirs, which in turn caused downward pressure on the Nordic spot price. In addition, declining gas prices kept the Continental European spot market stable, despite the significant increase in the CO₂ price. During January-June 2019, the average system spot price in Nord Pool was EUR 41.2 (38.8) per MWh. The average area price in Finland was EUR 42.4 (42.0) per MWh and in Sweden (SE3, Stockholm) EUR 39.7 (38.8) per MWh.

In Germany, the average spot price decreased marginally to EUR 35.8 (36.0) per MWh in the second quarter of 2019. In January-June 2019, the average German spot price was EUR 38.3 (35.7) per MWh.

The market price of CO₂ emission allowances (EUA) increased from EUR 22 per tonne at the beginning of the second quarter to EUR 26 per tonne at the end of the second quarter of 2019.

Russia

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

According to preliminary statistics, Russian electricity consumption was 244 (241) TWh during the second quarter of 2019. The corresponding figure for the First Price Zone was 186 (185) TWh. In January-June 2019, Russian electricity consumption was 523 (530) TWh and 406 (406) TWh in the First Price Zone.

In the second quarter of 2019, the average electricity spot price, excluding capacity prices, increased by 12% to RUB 1,334 (1,191) per MWh in the First Price Zone. The spot price in the Urals hub increased by 15% and was RUB 1,151 (1,004) per MWh. In January-June 2019, the average electricity spot price, excluding capacity

prices, was RUB 1,321 (1,189) per MWh in the First Price Zone and RUB 1,140 (1,008) per MWh in the Urals hub.

More detailed information about the market fundamentals is included in the tables at the end of the report (pages 63-65).

Regulatory environment

Agreement on the EU long-term climate target postponed

The European Council failed to agree on the 2050 climate target in June 2019, but a large majority of member states back the 2050 climate neutrality target. Only Poland, Hungary, the Czech Republic, and Estonia are blocking an agreement. In line with the Paris Agreement, the EU has to submit its long-term strategy to the UNFCCC by early 2020. The issue will likely be on the agenda of an October summit of EU leaders. After the adoption of the 2050 target, proposals for the EU intermediary targets and policies for 2030-2050 are expected from the next Commission.

Fortum encourages the EU to adopt the net-zero emission target for 2050 as soon as possible. Following that, targets for 2030-2040 should be aligned with the new 2050 target. Strengthening and extending the EU Emission Trading Scheme (ETS) is important for a cost-efficient decarbonisation of the EU economy.

Taxonomy of sustainable finance progressing

In March 2019, the European Parliament adopted its position on the Commission's proposal for the taxonomy of sustainable finance. In the Parliament's position, non-renewable energy (including nuclear), gas pipelines, and waste incineration are not considered sustainable. The Council's position is expected at the earliest in September 2019. The financing costs are likely to increase for investments not being classified as sustainable. Technologies classified as unsustainable would also be excluded from public financing.

As such, the objective of the sustainable finance initiative is in line with Fortum's strategy, but Fortum has advocated for an approach based on CO₂ emissions and technology-neutrality taking into account compliance with the Paris Agreement.

Taxation in the Finnish governmental programme

The political programme of the new Finnish Government, published on 3 June 2019, contains several tax-related proposals. In order to support decarbonisation through electrification, the electricity tax applicable to energy-consuming industries will be lowered towards the EU minimum (to EUR 0.5 per MWh from the current EUR 7.03 per MWh). This proposed tax reduction would make the tax levels more aligned with Sweden. Heat pumps connected to a district heating network will be included in the same tax category as energy-consuming industries. The details of the tax reduction process, including the timetable, are still open but overall this is a very positive change and supports electrification.

In line with Finland's decarbonisation ambition to become carbon neutral by 2035, the Government will further increase the environmental taxes of heating fuels. EUR 100 million of tax revenues will be collected from heating fuels during the next four years. The estimated negative result impact for Fortum from the tax increases of heating fuels and lower electricity taxes is around EUR 7 million annually.

Impact of Swedish tax proposals on energy production

On 10 April 2019, the Swedish Government proposed new taxes on fossil fuels used for heat production in CHP plants. Without taking any actions the new tax would increase the costs for Stockholm Exergi by SEK 300 million annually for the period 2020-2022. Following the tax proposal, the Board of Stockholm Exergi decided to decommission one unit of the CHP6 in Stockholm and to keep the other one only as a reserve. Stockholm Exergi expects that these actions and optimisation of the district heat system will limit the costs to SEK 150 million annually.

There is also a proposal for tax on waste incineration estimated at 100 SEK/tonne. If realised, the total annual costs for Stockholm Exergi would increase by SEK 100 million. A final decision on the new tax is expected during September 2019.

German Coal Commission's recommendations proceeding into legislation

In January 2019, the German Coal Commission proposed a step-wise phase-out of coal in energy production by 2038 at the latest. In May, the Government proposed, as a first implementation measure, draft legislation that offers financial support for the regions affected most by the coal and lignite phase-out. Other key elements, including the detailed timing and rules on selecting the plants to be closed, are expected in the autumn. In accordance with the recommendations by the Coal Commission, the Government is also expected to give a proposal for withdrawal of emission allowances from the market corresponding to the coal phase-out in order to avoid weakening the EU ETS.

Legislation on Polish electricity end-use prices into force

The Polish Parliament has approved legislation related to the electricity price freeze and it entered into force on 1 July 2019. According to the Ministry of Energy, this third amendment meets the requirements set by the European Commission. According to the law, electricity prices will remain unchanged in 2019 for households, small enterprises, state organisational units, local governments, and hospitals. The related secondary legislation concerning compensation methodology to compensate losses for electricity suppliers is still under preparation.

The law also changes legislation on energy efficiency and biofuels, and extends the validity of white certificates until 30 June 2021.

Key drivers and risks

Fortum's financial results are exposed to a number of economic, strategic, energy policy and regulation, financial, and operational risks. Fortum is exposed to these risks both directly and indirectly through its associated companies and joint ventures.

Some of the key factors influencing Fortum's business performance are the European commodity and electricity wholesale prices. The key short-term drivers behind the electricity wholesale price development in the Nordic region are the prices of fuels and CO₂ emission allowances, the hydrological situation, temperature, economic development, and the electricity import-export balance.

Global economic growth impacts commodity and CO₂ emission allowance prices, which, in turn, impact the Nordic wholesale price of electricity. In all regions, fuel prices and power plant availability also impact profitability. 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.

In the Nordic countries, changes in the regulatory and fiscal environment add risks for the energy and environmental management sectors. 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 has analysed and assessed a number of future energy market and regulation scenarios, including the impact of these on different generation forms and technologies. As a result, Fortum's updated strategy includes broadening of the revenue base and diversification into new businesses, technologies, and markets. The environmental management business is based on the framework and opportunities created by environmental regulation. Being able to respond to customer needs created by the tightening regulation is a key success factor.

For Fortum's Russian business, the key drivers are economic growth, the rouble exchange rate, regulation of the heat business, and the further development of the electricity and capacity markets. A key profitability driver

is the received capacity payment based on the CSA contracts and Competitive Capacity Selection (CCS) auctions. The main part of Fortum's generation capacity built after 2007 is entitled to CSA payments for approximately 10 years after commissioning of each new unit (approximately 15 years for renewable generation). The received capacity payments vary, depending on the age, location, type, and size of the plant, as well as on seasonality and availability. The CSA payments are adjusted for, among other factors, the weighted average cost of capital (WACC), the consumer price index (CPI), and re-examination of earnings from the electricity-only (spot) market (done every three and six years after commissioning of a unit). In addition, thermal power plants are entitled to clearly higher CSA payments starting approximately six years after commissioning.

For further information about the risks, see Fortum's Annual Report.

Outlook

Hedging

At the end of June 2019, approximately 80% of the Generation segment's estimated Nordic power sales volume was hedged at EUR 33 per MWh for the remainder of 2019, and approximately 60% at EUR 31 per MWh for 2020 (at the end of the first quarter 2019: 55% at EUR 31 per MWh).

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

Capital expenditure and divestments

Fortum currently estimates its capital expenditure, including maintenance but excluding acquisitions, to be in the range of EUR 600-650 million in 2019. This includes solar and wind investments, which can be divested through the capital recycling business model. The maintenance capital expenditure in 2019 is estimated at approximately EUR 300 million, well below the level of depreciation.

In 2020, capital expenditure is expected to decline.

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 second quarter of 2019, there was a general decline in oil, coal, and gas prices, while EUA prices increased.

In mid-July 2019, the forward quotation for coal (ICE Rotterdam) for the remainder of 2019 was around USD 63 per tonne and the market price for EUAs for 2019 at the level of EUR 28 per tonne. The Nordic system electricity forward price on Nasdaq Commodities for the remainder of 2019 was around EUR 41 per MWh and for 2020 around EUR 38 per MWh. In Germany, the electricity forward price for the remainder of 2019 was around EUR 48 per MWh and for 2020 around EUR 51 per MWh. The Nordic water reservoirs were about 5 TWh above the long-term average and 17 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.

On 19 June 2018, the Swedish Parliament adopted new hydro legislation that came into force on 1 January 2019. In the new legislation it is stated that the industry shall create a joint hydropower fund to finance major parts of the environmental actions needed. A fund has been established with a total financial cap of SEK 10 billion to be paid over a 20-year period. The major utilities will contribute to the fund based on their share of hydropower production. Fortum's share is 23% of the fund's total financing. 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.

On 11 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 50 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 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 proposal for the coming years, presented in September 2016, the Swedish hydropower real-estate tax will decrease from 2.8% to 0.5%. The tax is being reduced in four steps: in January 2017 to 2.2%; in January 2018 to 1.6%; in January 2019 to 1.0%; and in January 2020 to 0.5%. In 2018, the tax for Fortum was EUR 65 million. In addition to the decrease in the tax rate, the hydropower real-estate tax values, which are linked to electricity prices, were updated in 2019. The real-estate tax values are updated every six years. In 2019, the hydropower real-estate tax for Fortum is estimated to decrease by approximately EUR 20 million from 2018.

City Solutions

In City Solutions, growth in cash flow and earnings is mainly achieved through investments in new plants and through acquisitions. Heat prices, fuel cost, availability, flexibility and efficiency of the plants, as well as gate fees for receiving waste are key drivers for profitability, but power prices and weather conditions also affect profitability. Fortum aims to create new businesses with potential for sizeable profit contribution, e.g. within the areas of waste and recycling and bio economy.

The development of Fortum Oslo Varme's business operations is estimated to require one-time integration-related costs and investments over the coming years. The realisation of cost synergies is estimated to gradually start materialising from 2019 onwards, with targeted annual synergies of EUR 5-10 million expected to be achieved by the end of 2020.

On 10 April 2019, the Swedish Government proposed new taxes on fossil fuels used for heat production in CHP plants. Following the tax proposal, the Board of Stockholm Exergi decided to decommission one unit of the CHP6 in Stockholm and to keep the other one only as a reserve. Stockholm Exergi expects to be able to limit the costs to SEK 150 million annually with these actions and optimisation of the district heat system. There is also a proposal for tax on waste incineration which, if realised, would increase the annual costs for Stockholm Exergi by SEK 100 million. A final decision on the new tax is expected during September 2019.

In March 2019, Fortum announced that it had won the right from Solar Energy Corporation of India to build a 250-megawatt (MW) solar power plant in Rajasthan, India. The solar park will be entitled to a fixed tariff of 2.48 INR/kWh for 25 years. 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 is estimated to be approximately EUR 160 million, and the solar park will be entitled to a fixed tariff of 2.85 INR/kWh for 25 years. Commissioning of the plant is expected in the third quarter of 2019.

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 create a solid foundation for competitive operations, Consumer Solutions will continue its cost spend in developing new digital services for consumers.

The combined Hafslund Markets and Fortum Markets business, while largely complementary, has identified synergy potential, in terms of both revenue and costs. The short-term priority will be on achieving identified revenue synergies by leveraging established best practices and providing additional products and services to the whole customer base. The realisation of cost synergies will start materialising once the integration of Hafslund Markets is completed, expected in 2019, with cost synergy realisation gradually increasing over the coming years and targeted annual synergies of approximately EUR 10 million to be achieved by the end of 2020.

Russia

In the Russia segment, capacity payments based on CSA contracts are a key driver for earnings growth, as capacity payments through CSA contracts are considerably higher than through the CCS auctions. Currently, Fortum's CSA capacity amounts to 2,368 MW. In February 2019, the System Administrator of the wholesale market published data on the WACC and the CPI for 2018, which were used to calculate the 2019 CSA price. The CSA payments were revised downwards accordingly to reflect the lower bond rates. The regulator also reviewed the guaranteed CSA payments by re-examining earnings from the electricity-only market and revised the CSA payments upwards due to the lower earnings from the electricity-only market. In addition, thermal power plants are entitled to clearly higher CSA payments starting approximately six years after commissioning. In 2019, no such increase in CSA payments is expected.

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. Fortum also obtained "forced mode status", i.e. it receives payments for the capacity at a higher rate for some of the units at the Argayash power plant. For the years 2018-2019, "forced mode status" was obtained for 195 MW; for the year 2020 for 175 MW, and for the year 2021 for 105 MW. The CCS price, excluding payments for "forced mode status", was 111 tRUB/MW/month for 2018, 110 tRUB/MW/month for 2019, 115 tRUB/MW/month for 2020, 134 tRUB/MW/month for 2021. The CCS auction for 2022-2024 is expected to be held in August 2019, and for 2025 in November 2019.

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 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, and 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 October 2017 and October 2018, the wind investment fund made investment decisions on a 50-MW and a 200-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 Note 6 and 11.

Income taxation

In 2019, the effective corporate income tax rate for Fortum is estimated to be 19-21%, excluding the impact of the share of profits of associated companies and joint ventures, non-taxable capital gains, as well as tax rate changes.

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

Fortum has received income tax assessments in Belgium 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 not to be based on the local regulation and has appealed the decisions. The court of First instance in Antwerpen rejected Fortum's appeal for the years 2008 and 2009 in June 2014. 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. 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. Based on legal analysis and a supporting legal opinion, no provision has been accounted for. The amount of additional tax claimed 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 decided not to grant leave to appeal to Fortum 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 the second-quarter 2017 results. There are strong grounds to argue that these decisions of the Administrative Court of Appeal and the Supreme Administrative Court violate EU law and fundamental rights under EU law. On these grounds, Fortum filed a summons application in December 2018 to the District Court of Stockholm in which damages are claimed from the Swedish state in these cases. Fortum also filed a request to initiate a mutual agreement procedure between Sweden and the Netherlands for the year 2012 (Note 18).

Sustainability

Fortum gives balanced consideration in its operations to climate and resource issues, as well as its impacts on personnel and society, emphasising the following focus areas:

	Personnel and society	Climate and resources
Economic benefits to stakeholders	Operational and occupational safety	Energy and resource efficiency
Long-term value and growth	Secure energy supply for customers	Reduction of environmental impacts
Sustainable supply chain	Personnel wellbeing	Climate-benign energy production and systems
Customer satisfaction	Business ethics and compliance	Solutions for sustainable cities

The Group-level sustainability targets are linked to the main sustainability focus 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*

	Target	II/19	II/18	I-II/19	I-II/18	2018	Five-year average
Climate and resources							
Specific CO ₂ emissions from total energy production as a five-year average, g/kWh	< 200	184	186	189	182	186	187
Major EHS incidents, no.	≤ 18	6	4	6	12	18	-
Personnel and society							
Energy availability of CHP plants, %	> 95.0	96.8	95.4	97.2	96.3	96.4	-
Lost Workday Injury Frequency, own personnel and contractors	≤ 1.7	2.0	2.2	2.0	1.8	1.8	-
Severe occupational accidents, no.	0	0	1	0	1	4	-
Quality of investigation process of occupational accidents, major EHS incidents and near misses	Level 3.0	Level 2.0	Level 3.0	Level 3.0	Level 3.0	Level 3.0	-
GAP index, implementation of EHS minimum requirements	Level 3.0	Level 3.0	-	Level 3.0	-	Level 2.0	-
Contractor safety improvement index	Level 2.0	Level 2.0	-	-**	-	-	-
Sickness-related absences, %	≤ 2.5	3.1***	2.5***	3.4***	2.9***	2.8	-

* Group targets for energy efficiency, Reputation index, and Customer Satisfaction index are monitored annually.

** The reporting of the Contractor safety improvement index started in the second quarter of 2019. The figure is still excluding the Russia division, City Solutions's Environmental Construction, and solar power sites.

*** Sickness-related absences in April-May and January-May correspondingly.

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 listed on the Nasdaq Helsinki exchange and is included in the STOXX Global ESG Leaders, OMX Sustainability Finland, ECPI®, Euronext Vigeo Eurozone 120, Euronext Vigeo Europe 120, MSCI ESG Ratings, and Equileap Gender Equality indices. Fortum is also ranked in category B in the annual CDP Climate Change rating 2018, and it has received a Prime Status (B-) rating by ISS-oekom Corporate Rating. In June 2019, Fortum became a constituent of the FTSE4Good Index Series.

Fortum's sustainability reporting covers all functions under Fortum's operational control, including subsidiaries in all countries of operation.

Climate and resources

Fortum's environmental targets are related to CO₂ emissions, energy efficiency, and major Environmental, Health, and Safety (EHS) incidents. Operational-level activities follow the requirements set forth in the ISO 14001 environmental management standard, and 99.9% (99.8%) of Fortum's power and heat production worldwide has ISO 14001 certification.

Fortum's aim is to promote resource efficiency improvements and the transition towards a more extensive circular economy. Fortum's energy production is primarily based on carbon dioxide-free hydropower and nuclear power and on energy-efficient CHP. In line with the strategy, Fortum is targeting a multi-gigawatt solar and wind portfolio. 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.

In January-June 2019, Fortum's direct CO₂ emissions were 10.1 (10.6) Mt. Of the total CO₂ emissions, 1.2 (1.4) Mt were within the EU ETS. The estimate for Fortum's free emission allowances in 2019 is 0.7 (0.8) Mt.

Fortum's total CO₂ emissions (million tonnes, Mt)	II/19	II/18	I-II/19	I-II/18	2018	LTM
Total emissions	4.1	4.3	10.1	10.6	20.1	19.6
Emissions subject to ETS	0.3	0.3	1.2	1.4	2.5	2.3
Free emission allowances	-	-	-	-	0.8	-
Emissions in Russia	3.6	3.8	8.5	8.9	16.9	16.5

In January-June 2019, Fortum's specific carbon dioxide emissions from total energy production were 189 (182) g/kWh. The specific CO₂ emissions from total energy production as a five-year average were 187 (186) g/kWh, which is better than Fortum's Group target of 200 g/kWh.

Fortum's target regarding major EHS incidents is to have no more than 18 major EHS incidents annually. Major EHS incidents are monitored, reported and investigated, and corrective actions are implemented. In January-June 2019, there were 6 (12) major EHS incidents in Fortum's operations. The major EHS incidents included two fires, one environmental non-compliance, two leaks, and one explosion. The major EHS incidents did not have significant environmental impacts.

Personnel and society

Fortum's key targets are related to the secure supply of electricity and heat for customers, operational and occupational safety, as well as employee wellbeing. For Fortum, excellence in safety is the foundation of the company's business and an absolute prerequisite for efficient and interruption-free production. Fortum strives to be a safe workplace for the employees, contractors, and service providers who work for the company. A certified OHSAS 18001 or ISO 45001 safety management system covers 97.0% (98.4%) of Fortum's power and heat production worldwide.

In January-June 2019, the combined Lost Workday Injury Frequency (LWIF) for own personnel and contractors was 2.0 (1.8), which was worse than the set target level (≤ 1.7). In January-June 2019, there were no (1) severe occupational accidents in the company's operations. The Group target for 2019 is zero severe occupational accidents.

In January-June 2019, the quality of the investigation process of occupational accidents, major EHS incidents, and serious near misses was at the level of 3.0 (3.0), achieving the set target level (3.0).

In January-June 2019, the GAP index was at the level of 3.0, achieving the set target level (3.0). The GAP index measures how well the Group's EHS minimum requirements are realised at the power plant level. The most significant deviations were detected in companies that Fortum had acquired in recent years and at the sites operated by contractors.

In April-June 2019, the Contractor safety improvement index was at the level of 2.0, achieving the set target level (2.0). However, the assessment had not yet covered all Fortum operations. The Contractor safety improvement index measures how well Fortum has managed to implement measures targeting improvements in contractor safety.

Fortum's goal of workplace wellbeing activities is to promote the health and occupational safety of employees and the functionality of the work community. In January-May 2019, the percentage of sickness-related absences was 3.4 (2.9), which did not meet the target level of ≤ 2.5 .

An uninterrupted and reliable energy supply is critical for society to function. The energy availability of the company's CHP plants in January-June 2019 was, on average, 97.2% (96.3%), outperforming the target of $>95.0\%$.

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 January-June 2019, Fortum conducted a total of 10 (6) supplier audits in Poland, Russia, India, China, and Indonesia. In addition, one of Fortum's Kazakh coal suppliers was assessed against the Bettercoal Code by a third party.

Shares and share capital

Fortum shares on Nasdaq Helsinki

January-June 2019	No. of shares traded	Total value EUR	High EUR	Low EUR	Average EUR*	Last EUR
FORTUM	204,934,213	3,947,761,336	21.14	18.09	19.26	19.44

* Volume weighted average.

	30 June 2019	30 June 2018
Market capitalisation, EUR million	17,264	18,158
Number of shareholders	128,710	124,845
Finnish State holding, %	50.8	50.8
Nominee registrations and direct foreign shareholders, %	29.3	30.6
Households, %	9.7	19.8
Financial and insurance corporations, %	1.7	1.5
Other Finnish investors, %	8.6	7.4

In addition to Nasdaq Helsinki, Fortum shares were traded on several alternative market places, for example Boat, Cboe and Turquoise, and on the OTC market. In the second quarter of 2019, approximately 73% of Fortum's shares were traded on markets other than Nasdaq Helsinki.

On 30 June 2019, Fortum Corporation's share capital was EUR 3,046,185,953 and the total number of registered shares was 888,294,465. Fortum Corporation does not hold any of the company's own shares.

Authorisations of the Board

On 26 March 2019, the AGM 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. The authorisation will be effective until the next AGM and, in any event, for a period no longer than 18 months. The authorisation has not been used as of 19 July 2019.

The AGM authorised the Board of Directors to decide on contributions in the total maximum amount of EUR 500,000 for charitable or similar purposes, and to decide on the recipients, purposes and other terms of the contributions. The authorisation will be effective until the next AGM. The authorisation has not been used as of 19 July 2019.

Group personnel

Fortum's operations are mainly based in the Nordic countries, Russia, Poland and the Baltic Rim area. The total number of employees at the end of June 2019 was 8,383 (8,286 at the end of 2018).

At the end of June 2019, the Generation segment had 1,162 (1,091 at the end of 2018) employees, City Solutions 2,003 (2,017 at the end of 2018), Consumer Solutions 1,434 (1,399 at the end of 2018), Russia 2,937 (2,941 at the end of 2018), and Other Operations 847 (838 at the end of 2018).

Research and development

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

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

The Group reports its R&D expenditure on a yearly basis. In 2018, Fortum's R&D expenditure was EUR 56 (53) million, or 1.1% (1.2%) of sales.

Espoo, 18 July 2019

Fortum Corporation
Board of Directors

Further information:

Investor Relations and Financial Communications: Ingela Ulfves, tel. +358 40 515 1531, Måns Holmberg, tel. +358 44 518 1518, Rauno Tiihonen, tel. +358 10 453 6150, Pirjo Lifländer, tel. +358 40 643 3317, and investors@fortum.com

Media: Pauliina Vuosio, tel. +358 50 453 2383

The condensed Interim Report has been prepared in accordance with International Accounting Standard (IAS) 34, Interim Financial Reporting, as adopted by the EU. The interim financials have not been audited.

Financial calendar in 2019:

January-September 2019 Interim Report on 24 October at approximately 9:00 EEST.

Distribution:

Nasdaq Helsinki
Key media
www.fortum.com

More information, including detailed quarterly information, is available on Fortum's website at www.fortum.com/investors

Condensed consolidated income statement

EUR million	Note	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Sales	4	1,144	1,087	2,834	2,672	5,242	5,404
Other income		23	18	44	42	130	132
Materials and services		-526	-555	-1,443	-1,380	-2,795	-2,858
Employee benefits		-123	-121	-245	-235	-459	-469
Depreciation and amortisation	4,9,10	-141	-130	-278	-262	-536	-552
Other expenses		-146	-145	-273	-278	-594	-589
Comparable operating profit	4	232	153	640	558	987	1,069
Items affecting comparability		-48	103	-98	180	151	-127
Operating profit	4	184	256	542	738	1,138	942
Share of profit/loss of associates and joint ventures	4, 11	461	24	572	70	38	540
Interest expense		-37	-36	-88	-77	-148	-159
Interest income		8	10	17	18	34	33
Fair value gains and losses on financial instruments		0	-2	-1	-2	-8	-7
Other financial expenses - net		36	-11	33	-13	-15	31
Finance costs - net		7	-39	-38	-74	-136	-100
Profit before income tax		652	241	1,076	734	1,040	1,382
Income tax expense	7	-45	-25	-109	-119	-181	-171
Profit for the period		607	215	967	615	858	1,210
Attributable to:							
Owners of the parent		607	216	948	600	843	1,191
Non-controlling interests		0	-1	19	15	15	19
		607	215	967	615	858	1,210
Earnings per share for profit attributable to the equity owners of the company (EUR per share)							
Basic		0.69	0.24	1.07	0.68	0.95	1.34

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

EUR million	Note	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Comparable operating profit		232	153	640	558	987	1,069
Impairment charges	4	0	0	-3	0	-4	-7
Capital gains and other	4, 6	3	76	6	102	102	6
Changes in fair values of derivatives hedging future cash flow	4	-5	49	-50	103	98	-55
Nuclear fund adjustment	4, 14	-46	-22	-51	-26	-45	-70
Items affecting comparability		-48	103	-98	180	151	-127
Operating profit		184	256	542	738	1,138	942

See Definitions for key ratios

Condensed consolidated statement of comprehensive income

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Profit for the period	607	215	967	615	858	1,210
Other comprehensive income						
Items that may be reclassified to profit or loss in subsequent periods:						
Cash flow hedges						
Fair value gains/losses in the period ¹⁾	-80	-456	175	-642	-778	39
Transfers to income statement	148	-5	376	15	15	376
Transfers to inventory/fixed assets	0	-2	-1	-2	-2	-1
Deferred taxes	-15	96	-117	130	162	-85
Net investment hedges						0
Fair value gains/losses in the period	5	-31	-15	18	32	-1
Deferred taxes	-1	6	3	-4	-6	1
Exchange differences on translating foreign operations ²⁾	-27	-105	178	-355	-525	8
Share of other comprehensive income of associates and joint ventures	63	3	15	1	-37	-23
Other changes	0	1	4	0	0	4
	92	-492	616	-839	-1,141	314
Items that will not be reclassified to profit or loss in subsequent periods:						
Actuarial gains/losses on defined benefit plans	1	0	1	0	3	4
Actuarial gains/losses on defined benefit plans in associates and joint ventures	0	0	-39	0	43	4
	1	0	-38	0	46	8
Other comprehensive income for the period, net of deferred taxes	93	-492	578	-838	-1,094	322
Total comprehensive income for the period	700	-277	1,545	-224	-236	1,533
Total comprehensive income attributable to						
Owners of the parent	700	-268	1,514	-230	-239	1,505
Non-controlling interests	1	-9	31	7	3	27
	700	-277	1,545	-224	-236	1,533

1) Fair valuation of cash flow hedges 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).

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

Condensed consolidated balance sheet

EUR million	Note	June 30 2019	June 30 2018	Dec 31 2018
ASSETS				
Non-current assets				
Intangible assets	9	1,113	1,110	1,087
Property, plant and equipment and right-of-use assets	10	10,288	10,088	9,981
Participations in associates and joint ventures	4, 11	6,295	5,668	5,978
Share in State Nuclear Waste Management Fund	14	805	846	899
Other non-current assets		139	107	139
Deferred tax assets		78	59	70
Derivative financial instruments	5	219	244	229
Long-term interest-bearing receivables	12	709	776	683
Total non-current assets		19,645	18,898	19,065
Current assets				
Inventories		247	243	233
Derivative financial instruments	5	210	362	326
Short-term interest-bearing receivables	12	338	569	409
Income tax receivables		139	163	172
Trade and other receivables		938	1,041	1,620
Deposits and securities (maturity over three months)		98	68	29
Cash and cash equivalents		1,200	701	556
Liquid funds	13	1,297	770	584
Total current assets		3,168	3,148	3,344
Total assets		22,813	22,045	22,409
EQUITY				
Equity attributable to owners of the parent				
Share capital		3,046	3,046	3,046
Share premium		73	73	73
Retained earnings		9,358	9,150	9,232
Other equity components		-103	-419	-510
Total		12,374	11,850	11,841
Non-controlling interests		246	243	236
Total equity		12,621	12,093	12,077
LIABILITIES				
Non-current liabilities				
Interest-bearing liabilities	13	6,184	5,030	5,007
Derivative financial instruments	5	227	316	362
Deferred tax liabilities		853	740	720
Nuclear provisions	14	805	846	899
Other provisions	15	86	89	91
Pension obligations		99	101	98
Other non-current liabilities		185	169	182
Total non-current liabilities		8,439	7,290	7,358
Current liabilities				
Interest-bearing liabilities	13	535	1,011	1,086
Derivative financial instruments	5	372	724	829
Trade and other payables		846	928	1,058
Total current liabilities		1,753	2,663	2,973
Total liabilities		10,193	9,953	10,332
Total equity and liabilities		22,813	22,045	22,409

Condensed consolidated statement of changes in total equity

EUR million	Share capital	Share premium	Retained earnings		Other equity components			Owners of the parent	Non-controlling interests	Total equity
			Retained earnings	Translation of foreign operations	Cash flow hedges	Other OCI items	OCI items associated companies and joint ventures			
Total equity 31 December 2018	3,046	73	11,937	-2,705	-638	99	30	11,841	236	12,077
Net profit for the period			948					948	19	967
Translation differences				160	10	1	-2	170	8	178
Other comprehensive income			0		432	-12	-23	396	4	400
Total comprehensive income for the period			947	160	442	-11	-25	1,514	31	1,545
Cash dividend			-977					-977	-23	-1,000
Other			-3					-3	2	-1
Total equity 30 June 2019	3,046	73	11,904	-2,545	-196	88	5	12,374	246	12,621
Total equity 31 December 2017	3,046	73	12,062	-2,187	-40	70	24	13,048	239	13,287
Impact from change in accounting principle (IFRS 9 and 15)			7					7		7
Total equity 1 January 2018	3,046	73	12,069	-2,187	-40	70	24	13,055	239	13,295
Net profit for the period			600					600	15	615
Translation differences				-358	1	2	-2	-358	3	-355
Other comprehensive income			0		-489	15	1	-473	-10	-483
Total comprehensive income for the period			600	-358	-488	17	-1	-230	7	-224
Cash dividend			-977					-977	-3	-980
Other			2					2	-1	2
Total equity 30 June 2018	3,046	73	11,695	-2,545	-528	86	23	11,850	243	12,093
Total equity 31 December 2017	3,046	73	12,062	-2,187	-40	70	24	13,048	239	13,287
Impact from change in accounting principle (IFRS 9 and 15)			7					7		7
Total equity 1 January 2018	3,046	73	12,069	-2,187	-40	70	24	13,055	239	13,295
Net profit for the period			843					843	15	858
Translation differences				-519	0	1	-1	-518	-7	-525
Other comprehensive income			0		-599	28	6	-564	-5	-569
Total comprehensive income for the period			843	-519	-598	29	6	-239	3	-236
Cash dividend			-977					-977	-6	-983
Other			2					2	0	2
Total equity 31 December 2018	3,046	73	11,937	-2,705	-638	99	30	11,841	236	12,077

Translation differences

Translation differences impacted equity attributable to owners of the parent company with EUR 170 million during Q1-Q2 2019 (Q1-Q2 2018: -358). 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 -10 million during Q1-Q2 2019 (Q1-Q2 2018: 18), is included in the other OCI items.

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 booked to equity. For information regarding exchange rates used, see Note 2 Accounting policies.

Cash flow hedges

The impact on equity attributable to owners of the parent from fair valuation of cash flow hedges, EUR 442 million during Q1-Q2 2019 (Q1-Q2 2018: -488), 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 8 Dividend per share.

Condensed consolidated cash flow statement

EUR million	Note	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Cash flow from operating activities							
Profit for the period		607	215	967	615	858	1,210
Adjustments:							
Income tax expenses	7	45	25	109	119	181	171
Finance costs - net		-7	39	38	74	136	100
Share of profit of associates and joint ventures	11	-461	-24	-572	-70	-38	-540
Depreciation and amortisation	9, 10	141	130	278	262	536	552
Operating profit before depreciations (EBITDA)		324	385	820	1,000	1,674	1,494
Items affecting comparability	4	48	-103	98	-180	-151	127
Comparable EBITDA		372	282	918	820	1,523	1,621
Non-cash flow items		1	-23	-5	-26	-90	-69
Interest received		13	6	17	10	23	30
Interest paid		-45	-44	-114	-134	-171	-151
Dividends received		229	53	229	53	61	237
Realised foreign exchange gains and losses		15	91	10	133	231	108
Income taxes paid		-76	-30	-67	-46	-94	-115
Other items		-2	-1	1	-3	-9	-5
Funds from operations		507	334	989	807	1,474	1,656
Change in settlements for futures		24	-199	316	-290	-524	82
Change in working capital		209	226	186	116	-146	-76
Net cash from operating activities		740	361	1,491	634	804	1,661
Cash flow from investing activities							
Capital expenditures	9, 10	-219	-118	-369	-252	-579	-696
Acquisitions of shares	6	-4	-3,732	-16	-3,750	-4,088	-354
Proceeds from sales of fixed assets	9, 10	5	34	5	35	38	8
Divestments of shares and capital returns	6	24	170	32	170	259	121
Shareholder loans to associated companies and joint ventures	12	-33	-4	-34	-5	-24	-53
Change in cash collaterals and restricted cash	12	12	-113	322	-176	-36	462
Change in other interest-bearing receivables	12	3	17	14	19	31	26
Net cash from investing activities		-213	-3,747	-46	-3,959	-4,398	-485
Cash flow before financing activities							
		527	-3,386	1,445	-3,326	-3,594	1,177
Cash flow from financing activities							
Proceeds from long-term liabilities	13	303	1,733	2,809	1,764	1,764	2,809
Payments of long-term liabilities	13	-38	-94	-2,546	-551	-586	-2,581
Change in short-term liabilities	13	-197	4	-38	-17	135	114
Dividends paid to the owners of the parent	8	-977	-977	-977	-977	-977	-977
Dividends paid to non-controlling interests ¹⁾		-23	-3	-23	-3	-5	-25
Other financing items		5	1	2	3	-4	-5
Net cash used in financing activities		-927	662	-773	218	326	-665
Net increase(+)/decrease(-) in liquid funds		-400	-2,724	673	-3,107	-3,268	512
Liquid funds at the beginning of the period	13	1,692	3,504	584	3,896	3,896	770
Foreign exchange differences in liquid funds		6	-11	40	-19	-43	16
Liquid funds at the end of the period	13	1,297	770	1,297	770	584	1,297

1) Dividends paid to non-controlling interests have in previous interim reports been presented in 'Other financing items'.

Realised foreign exchange gains and losses

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

Change in settlements for futures

In Fortum's cash flow statement the daily cash settlements for futures are shown in cash flow from operating activities whereas the changes in cash collaterals for forwards are included in cash flow from investing activities. The daily cash settlements are included in trade and other receivables and the cash collaterals are included in the short-term interest-bearing receivables, see Note 12 Interest-bearing receivables for additional information.

Additional cash flow information

Change in working capital

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Change in interest-free receivables, decrease(+)/increase(-)	306	365	354	260	-186	-92
Change in inventories, decrease(+)/increase(-)	-11	-28	-11	-16	-3	2
Change in interest-free liabilities, decrease(-)/increase(+)	-86	-111	-157	-128	43	14
Total	209	226	186	116	-146	-76

Capital expenditure in cash flow

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Capital expenditure	226	122	355	224	584	715
Change in not yet paid investments, decrease(+)/increase(-)	-5	-2	19	30	5	-6
Capitalised borrowing costs	-2	-2	-5	-3	-10	-12
Total	219	118	369	252	579	696

Capital expenditures for intangible assets and property, plant and equipment were in Q1-Q2 2019 EUR 355 million (Q1-Q2 2018: 224). Capital expenditure in cash flow in Q1-Q2 2019 EUR 369 million (Q1-Q2 2018: 252) is including payments related to capital expenditure made in previous year i.e. change in trade payables related to investments EUR 19 million (Q1-Q2 2018: 30) and excluding capitalised borrowing costs EUR -5 million (Q1-Q2 2018: -3), which are presented in interest paid.

Acquisition of shares in cash flow

Acquisition of shares, net of cash acquired, amounted to EUR 16 million during Q1-Q2 2019 (Q1-Q2 2018: 3,750). For additional information, see note 6 Acquisitions and disposals.

Divestment of shares in cash flow

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Proceeds from sales of subsidiaries, net of cash disposed	0	0	4	0	88	92
Proceeds from sales and capital returns of associates and joint ventures	24	170	24	170	171	25
Proceeds from sales of other investments	0	0	4	0	0	4
Total	24	170	32	170	259	121

During Q1-Q2 2019 there were no material divestments. For further information, see note 6 Acquisitions and disposals.

Capital structure and key figures

Fortum updated its strategy and reconfirmed the dividend policy and long-term financial targets in November 2018. 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.

Change in net debt

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Net debt, beginning of the period	4,995	899	5,509	988	988	5,271
Impact from change in accounting principle (IFRS 16 and IFRS 9)			99	1	1	99
Foreign exchange rate differences	-9	13	-43	-3	15	-25
Comparable EBITDA	372	282	918	820	1,523	1,621
Non-cash flow items	2	-23	-5	-26	-90	-69
Paid net financial costs	210	105	145	60	138	223
Income taxes paid	-76	-30	-67	-46	-94	-115
Change in working capital	233	27	503	-174	-670	7
Capital expenditures	-219	-118	-369	-252	-579	-696
Acquisitions	-4	-3,732	-16	-3,750	-4,088	-354
Divestments	29	204	37	204	298	131
Shareholder loans to associated companies	-33	-4	-34	-5	-24	-53
Change in other interest-bearing receivables	15	-96	336	-157	-5	488
Dividends to the owners of the parent	-977	-977	-977	-977	-977	-977
Dividends to non-controlling interests	-23	-3	-23	-3	-5	-25
Other financing activities	4	0	1	2	-7	-8
Net cash flow (- increase in net debt)	-468	-4,366	447	-4,303	-4,580	170
Fair value change of bonds, amortised cost valuation, debt from non-cash collateral arrangement, acquired debt and other changes ¹⁾	-32	-6	304	-18	-75	247
Net debt, end of the period	5,422	5,271	5,422	5,271	5,509	5,422

1) Q1-Q2 2019 includes impact from a non-cash collateral arrangement amounting to EUR 246 million, see Note 13 Interest-bearing net debt.

Comparable Net debt/EBITDA ratio

EUR million	Last twelve months	2018
Interest-bearing liabilities	6,719	6,093
- Liquid funds ¹⁾	1,297	584
Net debt	5,422	5,509
Operating profit	942	1,138
+ Depreciation and amortisation	552	536
EBITDA	1,494	1,674
- Items affecting comparability	-127	151
Comparable EBITDA	1,621	1,523
Comparable net debt/EBITDA	3.3	3.6

1) Net debt is calculated as interest-bearing liabilities minus liquid funds without deducting interest-bearing receivables amounting to EUR 1,046 million (Dec 31 2018: 1,092).

Return on capital employed, %

EUR million	Last twelve months	2018
Profit before income tax	1,382	1,040
Interest expenses	159	148
Other financial expenses ¹⁾	25	26
+Interest and other financial expenses	184	174
Profit before taxes + interest and other financial expenses	1,566	1,214
1) Other financial expenses as disclosed in Note 12 Finance costs-net in Financial statements 2018		
Capital employed		
Total assets	22,813	22,409
Total liabilities	10,193	10,332
- Interest-bearing liabilities	6,719	6,093
- Total interest-free liabilities	3,474	4,239
Capital employed	19,340	18,170
Capital employed at the end of previous period	18,134	18,172
Average capital employed	18,737	18,171
Return on capital employed, %	8.4 %	6.7 %

Key ratios

Definition of key figures are presented in Note 21.

	June 30 2019	June 30 2018	Dec 31 2018	Last twelve months
Comparable EBITDA, EUR million	918	820	1,523	1,621
Earnings per share (basic), EUR	1.07	0.68	0.95	1.34
Capital employed, EUR million	19,340	18,134	18,170	
Interest-bearing net debt, EUR million	5,422	5,271	5,509	
Capital expenditure and gross investments in shares, EUR million	369	3,988	4,672	1,053
Capital expenditure, EUR million	355	224	584	715
Return on capital employed, %			6.7	8.4
Return on shareholders' equity, %			6.8	9.8
Comparable net debt / EBITDA			3.6	3.3
Interest coverage			10.0	7.5
Interest coverage including capitalised borrowing costs			9.2	6.9
Funds from operations/interest-bearing net debt, %			26.8	30.5
Gearing, %	43	44	46	
Equity per share, EUR	13.93	13.34	13.33	
Equity-to-assets ratio, %	55	55	54	
Number of employees	8,383	8,951	8,286	
Average number of employees	8,265	8,811	8,767	
Average number of shares, 1,000 shares	888,294	888,312	888,312	
Diluted adjusted average number of shares, 1,000 shares	888,294	888,312	888,312	
Number of registered shares, 1,000 shares ¹⁾	888,294	888,367	888,294	
Number of registered shares excluding treasury shares, 1,000 shares	888,294	888,294	888,294	

1) On 17 December 2018, Board of Directors decided to cancel all 72,580 treasury shares owned by the company without decreasing the share capital. The cancellation was entered in the Trade Register on 21 December 2018.

Notes to the condensed consolidated interim financial statements

1. Basis of preparation

The condensed interim financial statements have been prepared in accordance with International Accounting Standard (IAS) 34, Interim Financial Reporting, as adopted by the EU. The condensed interim financial report should be read in conjunction with the consolidated financial statements for the year ended 31 December 2018.

The figures in the consolidated interim 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.

Due to the seasonal nature of Fortum's operations the comparable operating profits are usually higher for the first and fourth quarter of the year. Columns labelled as "LTM" or "last twelve months" are presenting figures for twelve months preceding the reporting date.

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

Fortum's financial targets for capital structure and long-term value creation and profitability are measured with Comparable net debt to EBITDA (long-term over-the-cycle target: around 2.5 times) and Return on capital employed (long-term over-the-cycle target: at least 10%).

Definitions and reconciliation tables are presented in the section 'Capital structure and key figures' after cash flow statement and in Note 21.

2. Accounting policies

The same accounting policies and presentation have been followed in these condensed interim financial statements as were applied in the preparation of the consolidated financial statements for the year ended 31 December 2018 except for the new IFRS 16 Leases standard that was adopted 1 January 2019. Other standards effective from 1 January 2019 do not have a material impact on Fortum's financial statements.

2.1 New standards effective from 1 January 2019 onwards

Adoption of IFRS 16 standard

IFRS 16 Leases standard has been adopted as of 1 January 2019. IFRS 16 requires lessees to recognise all leases, except for short-term leases (lease term less than 12 months), leases of low value assets, and leases for which consideration is based on lessee's performance, in the balance sheet as right-of-use assets and lease liabilities. The assets and liabilities are recognised based on the present value of future lease payments. The right-of-use asset is depreciated on a straight-line basis during the lease term. In addition, the assets' carrying values are reviewed continuously to determine whether there is any indication of impairment. However, at transition, Fortum has applied the relief in IFRS 16 that permits reliance on assessment of onerous contracts.

Interest expense from lease liabilities is recognised using the effective interest method, presented in Finance costs – net. In the cash flow statement, the principal portion of the lease payment is presented under Payments of long-term liabilities, and the interest portion as Interest paid under Funds from operations. For leases not capitalised due to exemptions in the standard, the lease payments are recognised on a straight-line basis and presented in Other expenses.

For lessors, there are no significant changes.

Fortum has applied the standard using the modified retrospective method, which means the comparative figures are not restated. Right-of-use assets have been recognised equal to the value of lease liabilities, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognised in the balance sheet before the initial application. In addition, Fortum has applied the exemption of not recognising short-term leases and leases of low-value assets in the balance sheet.

IFRS 16 - Transition impacts

The application of IFRS 16 had the following impact to the 1 January 2019 opening balance:

- Increase of EUR 96 million in Property, plant and equipment and right-of-use assets
- Increase of EUR 99 million in Interest-bearing liabilities
- Decrease of EUR 1 million in Other non-current assets
- Decrease of EUR 3 million in Other provisions
- Decrease of EUR 1 million in Trade and other payables

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%.

Accounting policies according to IFRS 16

A contract is or contains a lease if Fortum has a right to control the use of an identified asset for a non-cancellable period of time in exchange for consideration. When determining the non-cancellable period, Fortum assesses the probability of exercising extension and termination options by considering all relevant facts and circumstances.

When the future lease payments are revised due to changes in index-linked considerations or due to changes in lease terms, the right-of-use asset and the corresponding lease liability is remeasured to reflect these changes. Any differences that may arise from these reassessments, are recognised in the income statement.

2.2 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 will not have an impact to net profit. Fortum is currently assessing the impacts to its accounting principles and presentation.

2.3 The key exchange rates applied in the Fortum Group accounts

The balance sheet date rate is based on exchange rate published by the European Central Bank for the closing date. The average exchange rate is calculated as an average of each month's ending rate from the European Central Bank during the year and ending rate previous year.

Key exchange rates for Fortum Group applied in the accounts:

Average rate	Jan-June 2019	Jan-Mar 2019	Jan-Dec 2018	Jan-Sept 2018	Jan-June 2018	Jan-Mar 2018
Sweden (SEK)	10.4782	10.3776	10.2591	10.2392	10.1722	9.9962
Norway (NOK)	9.7356	9.7491	9.6432	9.6121	9.6294	9.6737
Poland (PLN)	4.2865	4.2961	4.2614	4.2467	4.2316	4.1790
Russia (RUB)	74.2121	75.6930	73.8035	72.9249	71.5430	69.7770

Balance sheet date rate	June 30 2019	Mar 31 2019	Dec 31 2018	Sept 30 2018	June 30 2018	Mar 31 2018
Sweden (SEK)	10.5633	10.3980	10.2548	10.3090	10.4530	10.2843
Norway (NOK)	9.6938	9.6590	9.9483	9.4665	9.5115	9.6770
Poland (PLN)	4.2496	4.3006	4.3014	4.2774	4.3732	4.2106
Russia (RUB)	71.5975	72.8564	79.7153	76.1422	73.1582	70.8897

3. Critical accounting estimates and judgements

The preparation of interim financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of assets and liabilities, income and expense. Actual results may differ from these estimates. 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.

In preparing these interim financial statements, the significant judgements made by management applying the Group's accounting policies and the key sources of estimation uncertainty were the same as those that applied to the consolidated financial statements for the year ended 31 December 2018 except for the judgement made when finalising the purchase price allocation for acquisition of Uniper shares (see Note 6).

4. Segment information

Fortum's reportable segments under IFRS 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 comparison segment reporting figures in accordance with the new organisation structure. The restated and previously communicated quarterly information for 2018 were published on 19 March 2019 and can be found in the Interim reports section in Fortum's webpage.

Quarter	Note	Generation ¹⁾		City Solutions ¹⁾		Consumer Solutions		Russia		Other Operations		Total	
		Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018	Q2 2019	Q2 2018
Income statement data by segment													
Power sales ²⁾		476	417	26	22	305	278	217	195	0	0	1,023	912
Heat sales		0	0	98	85	0	0	22	33	0	0	120	118
Waste treatment sales		0	0	59	47	0	0	0	0	0	0	59	47
Other sales		24	10	45	39	41	48	1	0	28	24	139	121
Sales		500	427	228	193	346	326	239	228	28	24	1,341	1,198
Internal eliminations		-50	8	-9	-7	-17	-1	0	0	-22	-20	-98	-19
Netting of Nord Pool transactions ³⁾												-99	-92
External sales		450	435	219	186	329	325	239	228	6	5	1,144	1,087
Comparable EBITDA		225	182	31	23	34	26	107	73	-25	-22	372	282
Depreciation and amortisation		-35	-32	-46	-44	-15	-14	-37	-36	-7	-4	-141	-130
Comparable operating profit		191	151	-15	-21	19	11	69	37	-32	-26	232	153
Impairment charges		0	0	0	0	0	0	0	0	0	0	0	0
Capital gains and other	6	0	77	4	-1	0	0	0	0	-1	0	3	76
Changes in fair values of derivatives hedging future cash-flow		4	23	1	8	-9	10	0	0	0	8	-5	49
Nuclear fund adjustment	14	-46	-22	0	0	0	0	0	0	0	0	-46	-22
Items affecting comparability		-43	78	5	8	-9	10	0	0	-1	7	-48	103
Operating profit		148	229	-10	-13	9	22	69	37	-33	-19	184	256
Share of profit/loss of associates and joint ventures	11	24	-4	3	0	0	0	34	26	399	2	461	24
Finance costs - net												7	-39
Income taxes	7											-45	-25
Profit for the period												607	215
Gross investments / divestments by segment													
Gross investments in shares	6	5	6	0	6	0	0	1	13	2	3,721	8	3,746
Capital expenditure	9, 10	58	45	136	49	13	12	13	9	5	7	226	122
of which capitalised borrowing costs		2	1	0	1	0	0	0	0	0	0	2	2
Gross divestments of shares	6	0	160	2	0	0	0	0	0	0	0	2	160

1) Sales, both internal and external, include effects from realised hedging contracts. Effect on sales can be negative or positive depending on the difference between average contract price and 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 Spot are 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.

4. Segment information

Year-to-date

EUR million	Note	Generation ¹⁾		City Solutions ¹⁾		Consumer Solutions		Russia		Other Operations		Total	
		Q1-Q2 2019	Q1-Q2 2018	Q1-Q2 2019	Q1-Q2 2018	Q1-Q2 2019	Q1-Q2 2018	Q1-Q2 2019	Q1-Q2 2018	Q1-Q2 2019	Q1-Q2 2018	Q1-Q2 2019	Q1-Q2 2018
Income statement data by segment													
Power sales ²⁾		1,030	907	81	62	903	760	465	443	0	0	2,479	2,172
Heat sales		0	0	351	350	0	0	70	121	0	0	421	472
Waste treatment sales		0	0	121	97	0	0	0	0	0	0	121	97
Other sales		70	18	80	64	112	112	1	1	54	48	318	243
Sales		1,101	925	633	574	1,015	873	537	565	54	48	3,339	2,983
Internal eliminations		-163	-1	-21	-18	12	-2	0	0	-42	-37	-214	-58
Netting of Nord Pool transactions ³⁾												-291	-253
External sales		938	924	612	555	1,026	870	537	565	12	10	2,834	2,672
Comparable EBITDA		484	435	168	154	75	57	242	215	-50	-40	918	820
Depreciation and amortisation		-70	-65	-91	-87	-31	-28	-73	-73	-13	-9	-278	-262
Comparable operating profit		414	370	77	67	44	29	168	141	-63	-49	640	558
Impairment charges		-3	0	0	0	0	0	0	0	0	0	-3	0
Capital gains and other	6	3	77	4	-1	0	0	0	0	-2	25	6	102
Changes in fair values of derivatives hedging future cash-flow		-12	85	3	9	-41	9	0	0	0	0	-50	103
Nuclear fund adjustment	14	-51	-26	0	0	0	0	0	0	0	0	-51	-26
Items affecting comparability		-63	137	7	8	-41	9	0	0	-2	25	-98	180
Operating profit		352	507	84	75	3	38	168	142	-65	-24	542	738
Share of profit/loss of associates and joint ventures	11	39	-6	42	43	0	0	43	31	448	2	572	70
Finance costs - net												-38	-74
Income taxes	7											-109	-119
Profit for the period												967	615
Gross investments / divestments by segment													
Gross investments in shares	6	5	6	4	8	0	0	1	20	4	3,730	15	3,764
Capital expenditure	9, 10	96	92	203	76	27	21	18	20	10	16	355	224
of which capitalised borrowing costs		3	1	2	2	0	0	0	0	0	0	5	3
Gross divestments of shares	6	4	160	2	0	0	0	0	0	4	0	10	160

1) Sales, both internal and external, include effects from realised hedging contracts. Effect on sales can be negative or positive depending on the difference between average contract price and 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 Spot are 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.

4. Segment information

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

EUR million	Note	Generation		City Solutions		Consumer Solutions		Russia		Other Operations	
		LTM	Dec 31 2018	LTM	Dec 31 2018	LTM	Dec 31 2018	LTM	Dec 31 2018	LTM	Dec 31 2018
Comparable operating profit		672	628	145	135	68	53	298	271	-113	-99
Share of profit of associated companies and joint ventures	11	-27	-72	73	74	0	0	48	36	446	0
Adjustment for Share of profit of associated companies and joint ventures		85	94	0	0	0	0	0	0	-359	-38
Comparable operating profit including share of profits from associates and joint ventures		730	650	217	209	68	53	346	307	-26	-137
Segment assets at the end of the period		7,143	7,715	4,194	4,223	836	1,044	3,169	2,903	4,414	4,161
Segment liabilities at the end of the period		1,004	1,230	403	429	325	396	86	114	128	138
Comparable net assets		6,140	6,485	3,792	3,794	512	648	3,084	2,789	4,287	4,023
Comparable net assets average ¹⁾		6,166	6,019	3,786	3,808	616	671	2,948	2,976	3,999	2,361
Comparable return on net assets, %		11.8	10.8	5.7	5.5	11.1	7.8	11.7	10.3	-0.6	-5.8

1) Average net assets are calculated using the opening balance and end of each quarter values.

5. Financial risk management

The Group has not made any significant changes in policies regarding risk management during the period. Aspects of the Group's financial risk management objectives and policies are consistent with those disclosed in the consolidated financial statements for the year ended 31 December 2018.

Fair value hierarchy information

Financial instruments that are measured in the balance sheet at fair value are presented according to following fair value measurement hierarchy:

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices);

Level 3: inputs for the asset or liability that is not based on observable market data (unobservable inputs).

See also accounting policies in the consolidated financial statements 2018, in Note 16 Financial assets and liabilities by fair value hierarchy.

Financial assets

EUR million	Level 1			Level 2			Level 3			Netting ¹⁾			Total		
	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018
In non-current assets															
Other investments ²⁾	0	0	0				53	48	49				53	48	49
Derivative financial instruments															
Electricity derivatives															
Hedge accounting				19	26	23				-16	-25	-22	4	0	1
Non-hedge accounting				89	165	146				-58	-117	-94	30	48	52
Interest rate and currency derivatives															
Hedge accounting				170	162	149							170	162	149
Non-hedge accounting				3	6	4							3	6	4
Other commodity future and forward contracts															
Non-hedge accounting	57	70	29							-46	-42	-5	11	28	24
Interest-bearing receivables							28	60	41				28	60	41
Total in non-current assets	57	70	29	281	359	322	81	108	90	-120	-184	-121	300	352	319
In current assets															
Derivative financial instruments															
Electricity derivatives															
Hedge accounting				58	125	93				-50	-115	-83	8	10	10
Non-hedge accounting	1	58	2	194	413	585				-137	-367	-502	58	103	84
Interest rate and currency derivatives															
Hedge accounting				31	70	19							31	70	19
Non-hedge accounting				7	87	97							7	87	97
Other commodity future and forward contracts															
Non-hedge accounting	331	284	203	1	1					-226	-193	-87	106	92	116
Interest-bearing receivables	246						34	31	30				280	31	30
Total in current assets	578	342	205	291	696	794	34	31	30	-413	-675	-672	490	393	356
Total	635	412	234	572	1,055	1,116	115	139	120	-533	-859	-793	790	745	675

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

2) Other investments i.e. shares which are not classified as associated companies or joint ventures, consist mainly of shares in unlisted companies of EUR 53 million (Dec 31 2018: 49). This includes Fortum's indirect shareholding in Fennovoima of EUR 33 million (Dec 31 2018: 33). Fair value gains and losses of other investments are booked through profit and loss.

Financial liabilities

EUR million	Level 1			Level 2			Level 3			Netting ¹⁾			Total		
	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018
In non-current liabilities															
Interest-bearing liabilities ²⁾				2,385	934	930							2,385	934	930
Derivative financial instruments															
Electricity derivatives															
Hedge accounting				119	268	257				-16	-25	-22	103	242	235
Non-hedge accounting				104	149	163				-58	-117	-94	45	32	70
Interest rate and currency derivatives															
Hedge accounting				63	33	42							63	33	42
Non-hedge accounting				2	2	2							2	2	2
Other commodity future and forward contracts															
Non-hedge accounting	60	49	18	0	1	0				-46	-42	-5	14	7	13
Total in non-current liabilities	60	49	18	2,673	1,387	1,394	0	0	0	-120	-184	-121	2,612	1,250	1,292
In current liabilities															
Interest-bearing liabilities				246									246		
Derivative financial instruments															
Electricity derivatives															
Hedge accounting				217	629	724				-50	-115	-83	167	514	641
Non-hedge accounting	1	4	1	200	473	566				-137	-367	-502	63	110	65
Interest rate and currency derivatives															
Hedge accounting				2	2	1							2	2	1
Non-hedge accounting				40	41	45							40	41	45
Other commodity future and forward contracts															
Non-hedge accounting	323	243	158	1	9	7				-226	-193	-87	98	58	77
Total in current liabilities	324	247	159	706	1,154	1,343	0	0	0	-413	-675	-672	616	725	829
Total	384	296	177	3,379	2,541	2,737	0	0	0	-533	-859	-793	3,228	1,975	2,121

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 105 million, including assets EUR 211 million and liabilities EUR 107 million. Fortum has cash collaterals based on Credit Support Annex agreements with some counterparties. At the end of June 2019 Fortum had received EUR 66 million from Credit Support Annex agreements. The received cash has been booked as short-term liability.

Regarding the interest-bearing receivables and liabilities, see Note 12 Interest-bearing receivables, Note 13 Interest-bearing net debt and Note 17 Pledged assets and contingent liabilities.

6. Acquisitions and disposals

6.1 Acquisitions

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Gross investments in shares in subsidiary companies	5	6	5	12	36	29
Gross investments in shares in associated companies and joint ventures	1	3,741	5	3,749	4,041	297
Gross investments in other shares	2	0	5	2	11	14
Gross investments in shares	8	3,746	15	3,764	4,088	339

Acquisitions during 2019

There were no material acquisitions during Q1-Q2 2019.

Acquisitions during 2018

In September 2017, Fortum signed a transaction agreement with E.ON under which E.ON had the right to decide to tender its 46.65% shareholding in Uniper SE into Fortum's public takeover offer. In November 2017, Fortum launched a voluntary public takeover offer ("offer") to all Uniper shareholders. On 8 January 2018, E.ON decided to tender its shares to Fortum's offer. In February 2018, Fortum announced that shareholders representing 47.12% of the shares in Uniper had accepted the offer. The completion of Fortum's offer was subject to several competition and regulatory approvals. The final regulatory decisions were received 15 June 2018. In line with the Russian 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 as of 31 December 2018. There has been no change in the ownership during 2019.

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 (Note 11).

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

The purchase price allocation was finalised during Q2/2019. 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. The total acquisition cost including direct costs relating to the acquisition, EUR 3,968 million, is reported in the 'Participations in associated companies and joint ventures'.

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 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 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 30 million on annual basis. Fortum's Q2/2019 share of profits from Uniper includes a positive impact of EUR 15 million from the reversal of the fair value adjustment for the first half of 2019. 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.

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 the unique circumstances, preparing the purchase price allocation has required management judgement.

For information about Fortum's share of profit from Uniper, see note 11 Changes in participations in associates and joint ventures.

In August 2018 Fortum acquired all shares of three independent Latvian heat producers SIA BK Energija, SIA Energy & Communication and SIA Sprino as well as the shares of SIA Lake Development. The acquired production companies will continue to deliver heat to Daugavpils municipal district heating company PAS Daugavpils 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-Patentti Oy.

During 2018 Fortum invested EUR 61 million to the wind investment fund 50/50 owned by Fortum and RUSNANO in Russia.

There were no other material acquisitions during 2018.

6.2 Disposals

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Gross divestments of shares in subsidiary companies	0	0	4	0	147	151
Gross divestments of shares in associated companies and joint ventures	2	160	2	160	160	2
Gross divestments of other investments	0	0	4	0	0	4
Gross divestments of shares	2	160	10	160	306	156

Disposals during 2019

There were no material disposals during Q1-Q2 2019.

Disposals during 2018

In June 2018 Fortum sold its 10% ownership in Hafslund Produksjon Holding AS to Svartisen Holding AS, a Norwegian company owned by the Finnish energy companies Vantaan Energia Oy, Oy Turku Energia – Åbo Energi Ab and Oulun Seudun Sähkö. As part of the restructuring of the Hafslund ownership in 2017, Fortum acquired the ownership in Hafslund Produksjon. The sales price for the shares was EUR 160 million and Fortum booked a sales gain of EUR 77 million in the Generation segment in the second quarter 2018 results.

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, was recognized 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, was EUR 147 million. In addition, Elite Alfred Berg has an option to buy up to an additional 16% from Fortum. In April 2019, Elite Alfred Berg used their option to buy an additional 2% from Fortum.

7. Income taxes

Taxes for the period totalled EUR 109 (Q1-Q2 2018: 119) million. The effective income tax rate according to the income statement was 10.1% (Q1-Q2 2018: 16.2%). The comparable effective income tax rate, excluding the impact of the share of profit from associated companies, joint ventures as well as non-taxable capital gains, tax rate changes and other major one time income tax effects, was 20.9% (Q1-Q2 2018: 21.0%).

Fortum has paid taxes in previous years regarding ongoing tax disputes. The appeal processes are ongoing and based on legal analysis and legal opinions the payments are booked as a receivable, EUR 114 (Dec 31 2018: 114) million, included in Income tax receivables. For additional information see Note 18 Legal actions and official proceedings.

8. Dividend per share

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

9. Changes in intangible assets

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Closing balance 31 Dec	1,087	1,064	1,064
Impact from change in accounting principle (IFRS 15) ¹⁾	-	20	20
Opening balance 1 Jan	1,087	1,083	1,083
Acquisitions	6	16	22
Capital expenditures	28	23	53
Changes in emission rights	-11	-4	16
Depreciation and amortisation	-41	-38	-81
Divestments	0	0	-6
Reclassifications	10	27	37
Translation differences and other adjustments	34	3	-37
Closing balance	1,113	1,110	1,087

1) See additional information in Financial Statements 2018 Note 1 Accounting policies.

Goodwill included in the intangible assets

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Goodwill included in opening balance	588	613	613
Translation differences and other adjustments	24	1	-25
Goodwill included in closing balance	613	614	588

10. Changes in property, plant and equipment, and right-of-use assets

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Closing balance 31 Dec	9,981	10,510	10,510
Impact from change in accounting principle (IFRS 16) ¹⁾	107	-	-
Opening balance 1 Jan	10,088	10,510	10,510
Acquisitions	1	1	14
Capital expenditures	327	201	532
Additions and decreases in right-of-use assets	6	-	-
Changes of nuclear asset retirement cost	-15	-16	16
Disposals	-1	0	-2
Depreciation and amortisation	-237	-224	-455
Divestments	0	0	-136
Reclassifications	-10	-27	-37
Translation differences and other adjustments	128	-357	-459
Closing balance	10,288	10,088	9,981

1) See additional information in note 2 Accounting policies.

11. Changes in participations in associates and joint ventures

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Closing balance 31 Dec	5,978	1,900	1,900
Impact from change in accounting principle (IFRS 9) ¹⁾	-	165	165
Opening balance 1 Jan	5,978	2,066	2,066
Investments	5	3,749	4,066
Share of profits from associates and joint ventures	572	70	38
Dividend income received	-229	-53	-61
Divestments and capital returns	-23	-93	-95
Reclassifications	-20	0	58
OCI items associated companies	-25	-1	6
Translation differences and other adjustments	36	-69	-99
Closing balance	6,295	5,668	5,978

1) See additional information in Financial Statements 2018 note 1 Accounting policies.

There were no material acquisitions during Q1-Q2 2019.

During 2018 Fortum acquired 49.99% of the shares in Uniper. On 31 August 2018, Fortum sold a 54% share of its solar power company and as a consequence the subsidiary was reclassified as a joint venture.

For more information, see note 6 Acquisitions and disposals.

Share of profits from associates and joint ventures

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Principal associates						
Uniper	399	0	448	0	-2	446
OKG AB	10	0	20	1	-58	-39
Forsmarks Kraftgrupp AB	5	0	11	-1	-7	5
Kemijoki Oy	-2	-4	-2	-6	-9	-5
TGC-1	25	24	33	29	40	44
Principal associates, total	438	19	510	22	-35	453
Principal joint ventures						
Stockholm Exergi AB	-1	-4	34	37	61	58
TVO Oyj	11	-1	10	-1	1	12
Principal joint ventures, total	9	-4	44	35	62	71
Other associates	0	3	0	3	3	0
Other joint ventures	13	6	18	8	9	19
Total	461	24	572	70	38	540

The share of profit from associates and joint ventures during Q2 2019 increased to EUR 461 million (Q2 2018: 24) and during Q1-Q2 2019 to 572 million (Q1-Q2 2018: 70), mainly due to share of profit from Uniper.

Uniper's share of profit is based on reported Net income/loss attributable to shareholders of Uniper SE including impact from Non-operating results e.g. fair value measurement of derivative financial instruments which are subject to volatility. Non-operating results impacted the share of profits in Q2 2019 with EUR 334 million and EUR 252 million in Q1-Q2 2019. Fortum's Q2 2019 share of profits from Uniper include EUR 15 million reversal of the fair value adjustment for the first half of 2019. See more information in Note 6 Acquisitions and disposals.

The share of profit from associates and joint ventures in 2018 EUR 38 million included nuclear-related adjustments of EUR -37 million and other items relating to nuclear decommissioning of EUR -33 million, mainly from OKG. For more information, see Note 19 Participations in associated companies and joint ventures in Financial Statements 2018.

According to Fortum Group accounting policies the share of profits from associates and joint ventures are included in Fortum Group figures based on the latest available information. As Uniper is a listed company and publishes its interim reports later than Fortum, Fortum's share of Uniper's results will be accounted for with a time-lag of one quarter with potential adjustments. This means that the half-year 2019 interim report includes Fortum's share of Uniper's fourth quarter 2018 and first quarter 2019 results. The share of profit of TGC-1 is also accounted for based on previous quarter information since updated interim information is normally not available.

Dividends received

During Q1-Q2 2019 Fortum received EUR 229 million (Q1-Q2 2018: 53) in dividends from associates and joint ventures of which EUR 165 million (Q1-Q2 2018: 0) was received from Uniper and EUR 41 million (Q1-Q2 2018: 39) from Stockholm Exergi.

12. Interest-bearing receivables

EUR million	Carrying amount	Fair value	Carrying amount	Fair value
	June 30 2019	June 30 2019	Dec 31 2018	Dec 31 2018
Long-term loan receivables from associated companies	607	623	581	601
Long-term loan receivables from joint ventures	71	77	60	68
Other long-term interest-bearing receivables	31	32	43	43
Total long-term interest-bearing receivables	709	732	683	712
Collateral arrangement securities	246	246	-	-
Other short-term interest-bearing receivables	92	92	409	409
Total short-term interest-bearing receivables	338	338	409	409
Total interest-bearing receivables	1,046	1,070	1,092	1,121

Long-term interest-bearing receivables include receivables from associated companies and joint ventures EUR 678 million (Dec 31 2018: 641). These receivables include EUR 601 million (Dec 31 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.

Interest-bearing receivables include also EUR 63 million (Dec 31 2018: 70) receivable from SIBUR, a Russian gas processing and petrochemicals company regarding divested shares of OOO Tobolsk CHP.

Other short-term interest-bearing receivables include EUR 53 million (Dec 31 2018: 379) restricted cash.

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 June Fortum booked a short term interest bearing receivable of EUR 246 million and a corresponding short-term liability. See Note 13 Interest-bearing net debt and Note 17 Pledged assets and contingent liabilities.

13. Interest-bearing net debt

Net debt

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Interest-bearing liabilities	6,719	6,041	6,093
Liquid funds	1,297	770	584
Net debt	5,422	5,271	5,509

Net debt is calculated as interest-bearing liabilities less liquid funds without deducting interest-bearing receivables amounting to EUR 1,046 million (Dec 31 2018: 1,092). Interest-bearing receivables mainly consist of shareholder loans to partly owned nuclear companies regarded as long-term financing. For more information see Note 12 Interest-bearing receivables.

Loans and borrowings

EUR million	Carrying amount	Fair value	Carrying amount	Fair value
	June 30 2019	June 30 2019	Dec 31 2018	Dec 31 2018
Bonds	4,266	4,455	2,496	2,629
Loans from financial institutions	377	395	1,847	1,901
Reborrowing from the Finnish State Nuclear Waste Management Fund ¹⁾	1,185	1,249	1,158	1,218
Other long-term interest-bearing debt ²⁾	310	352	309	351
Total long-term interest-bearing debt ³⁾	6,138	6,451	5,810	6,099
Collateral arrangement liability	246	246	-	-
Other short-term interest-bearing debt	238	239	283	284
Total short-term interest-bearing debt	484	485	283	284
Total	6,623	6,936	6,093	6,383

1) The reborrowing from the Finnish State Nuclear Waste Management Fund includes the part relating to Loviisa nuclear power plant as well as borrowing done through TVO.

2) Including loans from Finnish pension institutions EUR 33 million (Dec 31 2018: 38) and other loans EUR 277 million (Dec 31 2018: 270).

3) Including current portion of long-term debt EUR 51 million (Dec 31 2018: 803).

Interest-bearing liabilities

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Loans and borrowings	6,623	6,041	6,093
Lease liabilities ¹⁾	97	-	-
Total interest-bearing liabilities	6,719	6,041	6,093

1) See additional information in Note 2 Accounting policies.

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 0.875% fixed coupon and two EUR 750 million bonds for seven- and ten-years with 1.625%/2.125% fixed coupons respectively.

In March 2019 Fortum repaid maturing bond of EUR 750 million and prepaid the bridge loan of EUR 1.75 billion drawn in June 2018 for the financing of the shares in Uniper.

The amount of reborrowing from the Finnish State Nuclear Waste Management Fund and TVO was also increased by EUR 27 million to EUR 1,185 million. Further Fortum signed a five-year EUR 300 million bilateral financial loan agreement which was drawn at the beginning of April 2019.

Fortum also entered into a non-cash collateral arrangement to release pledged cash from Nordic power exchange. At end of June Fortum booked a short term interest bearing debt of EUR 246 million to the lender of the securities, which are included in interest-bearing receivables. See Note 12 Interest-bearing receivables and Note 17 Pledged assets and contingent liabilities.

At the end of June 2019, the amount of short-term financing included EUR 66 million (Dec 31 2018: 75) from Credit Support Annex agreements. The interest-bearing debt increased during the second quarter by EUR 32 million from EUR 6,687 million to EUR 6,719 million.

The average interest rate for the portfolio consisting mainly of EUR and SEK loans was 1.4% at the balance sheet date (Dec 31 2018: 1.7%). Part of the external loans, EUR 769 million (Dec 31 2018: 686) have been swapped to RUB and the average interest cost for these loans including cost for hedging the RUB was 8.5% at the balance sheet date (Dec 31 2018: 8.3%). The average interest rate on total loans and derivatives at the balance sheet date was 2.2% (Dec 31 2018: 2.4%).

Maturity of loans and borrowings

EUR million	June 30 2019
2019 ¹⁾	500
2020	33
2021	529
2022	1,045
2023	1,093
2024 and later	3,423
Total	6,623

1) The cash received as collateral based on Credit Support Annex agreements, amounting to EUR 66 million, has been booked as short-term liability.

Maturity of undiscounted lease liabilities

EUR million	June 30 2019
Due within a year	19
Due after one year and within five years	46
Due after five years	60
Total	125

In addition, Fortum has a EUR 41 million commitment to leases that have not yet commenced.

Liquid funds

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Deposits and securities with maturity more than 3 months	98	68	29
Cash and cash equivalents	1,200	701	556
Total	1,297	770	584

Total liquid funds decreased by EUR 395 million from EUR 1,692 million to EUR 1,297 million during Q2 2019.

Liquid funds consist of deposits and cash in bank accounts amounting to EUR 989 million and commercial papers EUR 308 million. Deposits and securities include fixed term deposits and commercial papers with maturity more than three months but less than twelve months. The average interest rate on deposits and securities excluding Russian deposits on 30 June 2019 was -0.18% (Dec 31 2018: -0.11%). Liquid funds held by PAO Fortum amounted to EUR 133 million (Dec 31 2018: 317), of which EUR 111 million (Dec 31 2018: 316) was held as bank deposits. The average interest rate for this portfolio was 2.4% at the balance sheet date.

Liquid funds totaling EUR 936 million (Dec 31 2018: 168) are placed with counterparties that have an investment grade credit rating. In addition, EUR 361 million (Dec 31 2018: 416) have been placed with counterparties separately reviewed and approved by the Group's credit control department.

At the end of June 2019, the committed and undrawn credit facilities amounted to EUR 1.8 billion (Dec 31 2018: 1.8).

14. Nuclear related assets and liabilities

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 also has minority interests in nuclear power companies, i.e. Teollisuuden Voima Oyj (TVO) in Finland and OKG 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 Swedish companies are non-profit making, i.e. electricity production is invoiced to the owners at cost including depreciations, interest costs and production taxes accounted for according to local GAAP.

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

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

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Carrying values in the balance sheet			
Nuclear provisions	805	846	899
Fortum's share of the State Nuclear Waste Management Fund	805	846	899
Legal liability and actual share of the State Nuclear Waste Management Fund			
Liability for nuclear waste management according to the Nuclear Energy Act	1,180	1,161	1,180
Funding obligation target	1,180	1,153	1,180
Fortum's share of the State Nuclear Waste Management Fund	1,180	1,153	1,153
Share of the fund not recognised in the balance sheet	375	307	254

Legal liability for Loviisa nuclear power plant

The legal liability on 30 June 2019, decided by the Ministry of Economic Affairs and Employment in November 2018, was EUR 1,180 million.

The legal liability is based on a cost estimate, which is updated every year, and a technical plan, which is updated every third year. The legal liability is determined by assuming that the decommissioning would start at the beginning of the year following the assessment year.

Finnish nuclear operators have submitted updated technical plan and cost estimates to the Ministry of Economic Affairs and Employment in June 2019. The new technical plan and the legal liability will be decided by the end of the year. Based on the updated technical plan, costs for nuclear waste management are expected to decrease.

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. The current funding obligation target decided in November 2018 is EUR 1,180 million.

Nuclear provision and fund accounted for according to IFRS

Nuclear provisions include the provision for decommissioning and the provision for disposal of spent fuel. 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. The provision on 30 June 2019 reflects the updated technical plan and cost estimates that have been sent to the Ministry of Economic Affairs and Employment while the legal liability will be decided at the end of the year 2019.

The carrying value of the nuclear provisions, calculated according to IAS 37, decreased by EUR 94 million compared to 31 December 2018, totaling EUR 805 million on 30 June 2019.

Fortum's share of the Finnish Nuclear Waste Management Fund is from an IFRS perspective overfunded with EUR 375 million, since Fortum's share of the Fund on 30 June 2019 was EUR 1,180 million and the carrying value in the balance sheet was EUR 805 million. The Fund in Fortum's balance sheet can at maximum be equal to the amount of the provisions according to IFRS. As long as the Fund is overfunded from an IFRS perspective, the operating profit is adjusted positively if the provisions increase more than the Fund and negatively if the provision decreases below the actual value of the fund. This accounting effect is not included in Comparable operating profit but as Nuclear fund adjustment in Items affecting comparability, see Note 4 Segment information.

The updated cost estimates decreased the nuclear provision for the Loviisa power plant by EUR 100 million, of which the part relating to spent fuel was recognized immediately to income statement and the part relating to decommissioning was capitalised as property plant and equipment. The reduced provision leads to negative nuclear fund adjustment of EUR 54 million and positive effect to other financial expenses - net of EUR 40 million.

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 13 Interest-bearing net debt and Note 17 Pledged assets and contingent liabilities.

14.2 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 according to local GAAP. In addition to the invoiced electricity production cost, Fortum makes IFRS adjustments to comply with Fortum's accounting principles. These adjustments include also Fortum's share of the companies' nuclear waste funds and nuclear provisions.

The tables below present the 100% figures relating to nuclear funds and provisions for the companies as well as Fortum's net share.

TVO's total nuclear related assets and liabilities (100%)

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Carrying values in TVO with Fortum assumptions			
Nuclear provisions	1,036	966	1,016
Share of the State Nuclear Waste Management Fund	1,036	966	1,016
of which Fortum's net share consolidated with equity method	0	0	0
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	1,506	1,482	1,506
Share of the State Nuclear Waste Management Fund	1,506	1,471	1,471
Share of the fund not recognised in the balance sheet	470	505	455

TVO's legal liability, provision and share of the fund are based on same principles as described above for Loviisa nuclear power plant. The updated technical plan and cost estimates 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 overfunded with EUR 470 million (of which Fortum's share EUR 125 million), since TVO's share of the Fund on 30 June 2019 was EUR 1,506 million and the carrying value in the balance sheet was EUR 1,036 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 ownership. See more information in Note 13 Interest-bearing net debt.

OKG's and Forsmark's total nuclear related assets and liabilities (100%)

EUR million	June 30 2019	June 30 2018	Dec 31 2018
OKG's and Forsmark's nuclear related assets and liabilities ¹⁾			
Nuclear provisions	3,854	3,200	3,930
Share in the State Nuclear Waste Management Fund	3,309	2,965	3,230
Net amount	-545	-234	-701
of which Fortum's net share consolidated with equity method	-194	-94	-242

1) Accounted for according to Fortum's accounting principles. The companies' statutory financial statements are not prepared according to IFRS.

In Sweden Svensk Kärnbränslehantering AB (SKB), a company owned by the nuclear operators, takes care of all nuclear waste management related activities on behalf of nuclear operators. SKB receives its funding from the Swedish 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 a 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. The latest technical plan for nuclear waste management was decided by SKB during 2016. In 2017 SKB submitted the cost estimates based on the revised technical plan to SSM. In December 2017 the Swedish government decided the waste fees and guarantees for years 2018-2020. Nuclear waste fees are currently based on future costs with the assumed lifetime of 50 years (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 uncovered liability and unexpected events. Fortum's guarantees given on behalf of nuclear associated companies are presented in Note 17 Pledged assets and contingent liabilities.

15. Other provisions

EUR million	Environmental provisions			Other provisions		
	June 30 2019	June 30 2018	Dec 31 2018	June 30 2019	June 30 2018	Dec 31 2018
Opening balance	41	43	43	65	79	79
Increase in the provisions	1	0	0	7	5	25
Provisions used	0	0	0	-9	-17	-33
Unused provisions reversed	0	0	0	0	-1	-4
Unwinding of discount	0	0	0	0	0	0
Exchange rate differences and other changes	-1	-1	-1	-2	-3	-3
Closing balance	41	42	41	59	63	65
Current provisions ¹⁾	0	0	0	14	15	14
Non-current provisions	41	42	41	45	47	50

1) Included in trade and other payables in the balance sheet.

Environmental provisions include mainly provisions for obligations to cover and monitor landfills as well as to clean contaminated land areas. Main part of the provisions are estimated to be used within 10-15 years.

Dismantling provisions for the Finnish coal fired power plants are included in Other provisions.

16. Capital commitments

EUR million	2019	2018	2018
Property, plant and equipment	286	352	322

Other commitments

Fortum has committed to provide a maximum of EUR 85 million to Voimaosakeyhtiö SF, for its participation in the Fennovoima nuclear power project in Finland. Furthermore, Fortum's remaining direct commitment regarding the construction of a waste-to-energy combined heat and power plant (CHP) in Kaunas, Lithuania is EUR 7 million at maximum. The investment is made through Kauno Kogeneracinė Jėgainė (KKJ), a joint venture owned together with Lietuvos Energija.

Fortum has also committed to provide a maximum of EUR 8 million to a joint venture with Numaligarh Refinery 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 funded through external loans, share issues and shareholder loans according to shareholders' agreement between the owners of TVO. At end of June 2019 Fortum had EUR 170 million (Mar 31 2019: 170) outstanding receivables regarding Olkiluoto 3 and is additionally committed to provide at maximum EUR 63 million. TVO shareholder loan is classified as 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 create a common hydro-power fund to finance large parts of the environmental actions needed. The fund will have a total financial cap of SEK 10 billion to be paid over a 20-year period, and the largest operators will contribute to the fund proportionately based on their respective market share of hydro-power production. Fortum's share is 23% of the funds' total financing.

17. Pledged assets and contingent liabilities

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Pledged assets on own behalf			
For debt			
Pledges	288	288	288
Real estate mortgages	137	137	137
For other commitments			
Pledges	268	461	346
Real estate mortgages	2	21	21
Pledged assets on behalf of others			
Pledges	30	25	31
Contingent liabilities on own behalf			
Other contingent liabilities	77	164	167
Contingent liabilities on behalf of associated companies and joint ventures			
Guarantees	934	553	622

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. As of 30 June 2019 the value of the pledged shares amounted to EUR 269 million (Dec 31 2018: 269).

Fortum Tartu in Estonia (60% owned by Fortum) has given real estate mortgages for a value of EUR 96 million (Dec 31 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 (Dec 31 2018: 41).

Regarding the relevant interest-bearing liabilities, see Note 13 Interest-bearing net debt.

Pledged assets for other commitments

Pledges also include restricted cash of EUR 20 million (Dec 31 2018: 346) and securities of EUR 246 million (Dec 31 2018: 0) for trading of electricity, gas and CO₂ emission allowances in Nasdaq Commodities, Intercontinental Exchange (ICE), European Energy Exchange (EEX) and Polish Power Exchange (TGE). See also Note 12 Interest-bearing receivables.

Fortum has given real estate mortgages in power plants in Finland, total value of EUR 2 million as of 30 June 2019 (Dec 31 2018: 21), as a security to the Finnish State Nuclear Waste Management Fund for the uncovered part of the legal liability and unexpected events relating to future costs for decommissioning and disposal of spent fuel in Loviisa nuclear power plant. According to the Nuclear Energy Act, Fortum is obligated to contribute the funds in full to the State Nuclear Waste Management Fund to cover the legal liability. Any uncovered legal liability relates to periodising of the payments to the fund. The size of the securities given is updated yearly in Q2 based on the decisions regarding the legal liabilities and the funding target which are determined at the end of the previous year.

See additional information in Note 14 Nuclear related assets and liabilities.

Pledged assets on behalf of others

Pledged assets on behalf of others consist of restricted cash EUR 30 million (Dec 31 2018: 31) posted as collateral 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 Nordic power exchange (OMX Nasdaq Commodities) post collateral in relation to their exposure on the market in order to cover potential defaults by members which may cause losses exceeding the members' own collateral. See also Note 12 Interest-bearing receivables.

Contingent liabilities on own behalf

In May 2019 Fortum signed an agreement with Vestas for the turbine supply to the Kalax wind park in Närpes, Finland. Fortum has given a EUR 37 million guarantee as a security for the agreement.

Fortum owns the coal condensing power plant Meri-Pori in Finland. Teollisuuden Voima Oyj (TVO) has the contractual right to participate in the plant with 45.45%. Based on the participation agreement Fortum had to give a guarantee to TVO against breach in contract. On 1 January 2019, Fortum acquired all remaining C-shares of TVO entitling to the power production of the Meri-Pori coal condensing power plant. Fortum is now entitled to 100% of the power production of the plant. The amount of the guarantee amounted to EUR 125 million in December 2018 until the guarantee was released on 1 January 2019. The Meri-Pori power plant is mainly used in Fingrid's capacity reserve and as back-up capacity.

Contingent liabilities on behalf of associated companies

Guarantees on behalf of associated companies and joint ventures mainly consist of guarantees relating to Fortum's 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 780 million) as of 30 June 2019 (Dec 31 2018: EUR 526 million). There are two types of guarantees given. The Financing Amount is given to cover Fortum's share of the uncovered part in the Nuclear Waste Fund, assuming no further production and that no further nuclear waste fees are paid in. The uncovered amount is calculated by the authorities and is based on the difference between the expected costs and the funds to cover these costs at the time of the calculation. The Supplementary Amount constitutes a guarantee for deficits that can arise as a result of unplanned events. The amounts for the guarantees are updated every third year by governmental decision. The Financing Amount given by Fortum on behalf of Forsmarks Kraftgrupp AB and OKG AB was SEK 5,695 million (EUR 539 million) and the Supplementary Amount was SEK 2,544 million (EUR 241 million) as of 30 June 2019.

The guarantee given on behalf of Teollisuuden Voima Oyj to the Finnish State Nuclear Waste Management Fund amounted to EUR 21 million as of 30 June 2019 (Dec 31 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 14 Nuclear related assets and liabilities.

Fortum has given guarantees to secure bank loans obtained by WEDF Second Wind Farm LLC and WEDF Third Wind Farm LLC, which are subsidiaries of the 50-50 Wind fund with Rusnano. The guarantees given on pro rata basis are security for loans relating to the wind farms' development and amount to RUB 5,883 million (EUR 82 million) as of 30 June 2019 (Dec 31 2018: EUR 48 million).

Other contingent liabilities

Fortum's 100% owned subsidiary Fortum Heat and Gas Oy has a collective contingent liability with Neste Oyj of the in 2004 demerged Fortum Oil and Gas Oy's liabilities based on the Finnish Companies Act's (734/1978) Chapter 14a Paragraph 6.

18. Legal actions and official proceedings

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 leave to appeal to Fortum 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 claimed, in total SEK 1,175 million (EUR 122 million), was paid in 2016 and booked as a cost in 2017. There are strong grounds to argue that the aforementioned decisions of the Administrative Court of Appeal and the Supreme Administrative Court violate EU law and fundamental rights under EU law. On these grounds Fortum has in December 2018 filed a summons application to the District Court of Stockholm in which damages are claimed from 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 rate 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. 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 has now been transferred back to the Administrative Court concerning the other legal arguments. The disputed amount, excluding interest for the time period, totals approximately SEK 510 million (approximately EUR 48 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 paid the real estate tax in accordance with the legislation. If the final court decision would be unfavorable to 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 Swedish 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 Swedish court decisions are in line with EU state aid rules.

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. The court of First instance in Antwerp rejected Fortum's appeal for the years 2008 and 2009 in June 2014. 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 book 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.

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.

Status of TVO's Olkiluoto 3 project

In Finland, Fortum is participating in the country's fifth nuclear power plant unit, Olkiluoto 3 (OL3), through the shareholding in Teollisuuden Voima Oyj (TVO) with an approximately 25% share representing some 400 MW in capacity. OL3 was procured as a fixed-price turnkey project from a consortium (Supplier) formed by AREVA GmbH, AREVA NP SAS and Siemens AG.

A comprehensive settlement agreement between TVO and the Supplier was signed and it came into force in March 2018. The settlement agreement concerns the completion of the OL3 EPR project and related disputes.

The settlement agreement stipulated that in the event that the Supplier fails to complete the OL3 project by the end of 2019, they will pay a penalty to TVO for such delay in an amount which will depend on the actual time of completion of the OL3 project and may not exceed EUR 400 million.

The modification outage work during the first quarter of the year at Olkiluoto 3 has not been progressing according to the schedule issued by the Supplier. According to the Supplier's schedule, nuclear fuel was planned to be loaded into the reactor in June 2019, the first connection to the grid was planned to take place in October 2019, and the start of regular electricity production of the OL3 EPR nuclear power plant unit was planned to take place in January 2020. According to the time schedule updated by plant supplier Areva-Siemens consortium in July 2019, the plant will start regular electricity generation in July 2020.

More information on the settlement agreement, see Note 37 Legal actions and official proceedings of the consolidated financial statements 2018.

19. Related party transactions

Related parties are described in the consolidated financial statements for the year ended 31 December 2018. There has been no material changes during 2019.

At year-end 2018 the Finnish State owned 50.76% of the shares in Fortum. There has been no change in the number of shares the Finnish State owns in Fortum during 2019.

Transactions with associated companies and joint ventures

EUR million	Q2 2019	Q2 2018	2018
Sales	17	20	39
Purchases	186	190	379
Interest income on loan receivables	6	7	13

Balances with associated companies and joint ventures

EUR million	June 30 2019	June 30 2018	Dec 31 2018
Long-term interest-bearing loan receivables	678	683	641
Finance lease receivable from joint ventures	0	37	0
Trade receivables	36	16	54
Other receivables	18	19	18
Long-term loan payables	302	293	294
Trade payables	6	5	33
Other payables	2	4	14

20. Events after the balance sheet date

On 17 July 2019 TVO informed that they have received an updated schedule for the commissioning of the OL3 nuclear power plant. According to the time schedule updated by plant supplier Areva-Siemens consortium in July 2019, the plant will start regular electricity generation in July 2020.

21. Definitions of key figures

Alternative performance measures

Business performance	Definition	Reason to use the measure	Reference to reconciliation
Comparable EBITDA	Operating profit + depreciations and amortisations - items affecting comparability	Comparable EBITDA is representing the underlying cash flow generated by the total Group and segments. Used as a component in the capital structure target of Comparable net debt /EBITDA.	Capital structure and key ratios after cash flow statement
Comparable operating profit	Operating profit - items affecting comparability	Comparable operating profit is used in financial target setting and forecasting, management's follow up of financial performance and allocation of resources in the group's performance management process.	Income statement
Items affecting comparability	Impairment charges + 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
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
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
Changes in fair values of derivatives hedging future cash flow	Effects from financial derivatives hedging future cash-flows where hedge accounting is not applied according to IFRS 9, which are adjusted from other income.	Component used in calculating comparable operating profit and comparable EBITDA.	Income statement

21. Definitions of key figures

Business performance	Definition	Reason to use the measure	Reference to reconciliation
Nuclear fund adjustment	Effects from the accounting of Fortum's part of the Finnish Nuclear Waste Fund where the asset in the balance sheet cannot exceed the related liabilities according to IFRIC interpretation 5, which is 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.	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 <u>companies and joint ventures</u> / Comparable net assets average	x 100 Comparable return on net assets is used in financial target setting and forecasting, management's follow up of financial performance and allocation of resources in the group's performance management process.	Note 4 Segment information
Adjustment for Share of profit of associated companies and joint ventures	Adjustment for material items affecting comparability.	Share of profit of associates and joint ventures is included in profit component in the comparable return on net assets calculation and the adjustments are done based on similar components as in Items affecting comparability.	Note 4 Segment information
Comparable net assets	Non-interest bearing assets + interest-bearing assets related to the Nuclear Waste Fund - non-interest bearing liabilities - provisions (non-interest bearing assets and liabilities do not include finance related items, tax and deferred tax and assets and liabilities from fair valuations of derivatives used for hedging future cash flows).	Comparable net assets is a component in Comparable return on net assets calculation where return on capital allocated directly to the businesses is measured.	Note 4 Segment information

21. Definitions of key figures

Capital structure	Definition	Reason to use the measure	Reconciliation
Comparable net debt / EBITDA	<u>Interest-bearing net debt</u> 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.	Capital structure and key ratios after cash flow statement
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 13 Interest-bearing net debt
Return on capital employed (ROCE), %	$\frac{\text{Profit before taxes + interest and other financial expenses}}{\text{Capital employed average}} \times 100$	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.	Capital structure and key ratios after cash flow statement
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.	Capital structure and key ratios after cash flow statement
Other key figures			
Share based key figures			
Earnings per share (EPS)	$\frac{\text{Profit for the period - non-controlling interests}}{\text{Average number of shares during the period}}$		
Equity per share	$\frac{\text{Shareholder's equity}}{\text{Number of shares at the end of the period}}$		

21. Definitions of key figures

Other key figures

FFO/Net debt, %	$\frac{\text{Funds from operations (FFO)}}{\text{Interest-bearing net debt}} \times 100$
Funds from operations (FFO)	Net cash from operating activities before change in working capital and change in settlements for futures
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 useage/availability and/or maintains reliability. Productivity investments improve productivity in an existing asset. Growth investments' purpose is to build new assets and/or to increase customer base within existing businesses. Legislation investments are done at certain point of time due to legal requirements.
Gross investments in shares	Investments in subsidiary shares, shares in associated companies and joint ventures and other investments. Investments in subsidiary shares are net of cash and grossed with interest-bearing liabilities in the acquired company.
Return on shareholders' equity (ROE), %	$\frac{\text{Profit for the year}}{\text{Total equity average}} \times 100$
Gearing, %	$\frac{\text{Interest-bearing net debt}}{\text{Total equity}} \times 100$
Equity-to-assets ratio, %	$\frac{\text{Total equity including non-controlling interest}}{\text{Total assets}} \times 100$
Interest coverage	$\frac{\text{Operating profit}}{\text{Net interest expenses}}$
Interest coverage including capitalised borrowing costs	$\frac{\text{Operating profit}}{\text{Net interest expenses - capitalised borrowing costs}}$

Definitions for tax figures

Effective income tax rate,%	$\frac{\text{Income tax expense}}{\text{Profit before income tax}} \times 100$
Comparable effective income tax rate,%	$\frac{\text{Income tax expense - effects from tax rate changes and major one time tax effects}}{\text{Profit before income tax decreased by profits from associated companies and joint ventures as well as tax exempt capital gains or losses}} \times 100$
Last twelve months (LTM)	Twelve months preceding the reporting date

Market conditions and achieved power prices

Power consumption

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Nordic countries	88	88	204	209	399	394
Russia	244	241	533	530	1,055	1,058
Tyumen	22	22	46	46	92	92
Chelyabinsk	8	8	17	18	35	34
Russia Urals area	61	61	131	131	260	260

Average prices

	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Spot price for power in Nord Pool power exchange, EUR/MWh	35.6	39.0	41.2	38.8	44.0	45.2
Spot price for power in Finland, EUR/MWh	37.4	42.0	42.4	42.0	46.8	47.0
Spot price for power in Sweden, SE3, Stockholm EUR/MWh	33.0	38.5	39.7	38.8	44.5	45.0
Spot price for power in Sweden, SE2, Sundsvall EUR/MWh	33.0	38.5	39.5	38.7	44.2	44.6
Spot price for power in the First Price Zone of Russia, RUB/MWh ¹⁾	1,334	1,191	1,321	1,189	1,247	1,313
Average capacity price, tRUB/MW/month	563	539	621	600	609	620
Spot price for power in Germany, EUR/MWh	35.8	36.0	38.3	35.7	44.5	45.8
Average regulated gas price in Urals region, RUB/1000 m ³	3,883	3,755	3,883	3,755	3,801	3,883
Average capacity price for CCS, tRUB/MW/month ²⁾	142	137	152	147	148	150
Average capacity price for CSA, tRUB/MW/month ²⁾	996	957	1,097	1,054	1,075	1,096
Spot price for power (market price), Urals hub, RUB/MWh ¹⁾	1,151	1,004	1,140	1,008	1,043	1,109
CO ₂ , (ETS EUA), EUR/tonne CO ₂	25	14	24	12	16	22
Coal (ICE Rotterdam), USD/tonne	56	89	66	87	92	81
Oil (Brent Crude), USD/bbl	68	75	66	71	72	69

1) Excluding capacity tariff.

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

Water reservoirs

TWh	June 30 2019	June 30 2018	Dec 31 2018
Nordic water reservoirs level	90	76	74
Nordic water reservoirs level, long-term average	84	83	83

Export/import

TWh (+ = import to, - = export from Nordic area)	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Export / import between Nordic area and Continental Europe + Baltics	-4	-2	-4	-4	-10	-10
Export / import between Nordic area and Russia	2	2	4	3	8	9
Export / import Nordic area, Total	-2	0	0	-1	-2	-1

Power market liberalisation in Russia

%	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Share of power sold at the liberalised price	81%	80%	80%	80%	80%	80%

Achieved power prices

	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Generation segment's Nordic power price, EUR/MWh	35.0	33.1	36.7	33.4	34.6	36.5
Russia segment's power price, RUB/MWh	1,976	1,803	1,990	1,840	1,888	1,964
Russia segment's power price, EUR/MWh ¹⁾	27.2	24.4	26.8	25.7	25.6	26.1

1) Translated using average exchange rate.

Fortum's production and sales volumes

Power generation

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Power generation in Europe	11.6	11.2	24.0	24.9	44.4	43.5
Power generation in Russia	6.9	6.7	15.2	15.0	29.6	29.8
Power generation in other countries	0.0	0.1	0.0	0.2	0.4	0.2
Total	18.5	18.0	39.2	40.1	74.6	73.7

Heat production

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Heat production in Europe	1.3	1.7	4.6	5.3	9.4	8.7
Heat production in Russia	2.7	3.7	9.6	12.4	20.4	17.6
Total	4.0	5.3	14.2	17.7	29.8	26.3

Power generation capacity by segment

MW	June 30 2019	June 30 2018	Dec 31 2018
Generation ¹⁾	8,218	7,969	8,024
City Solutions	812	967	788
Russia	4,928	4,913	4,912
Other	0	0	0
Total	13,958	13,848	13,724

1) Including 308 MW of Meri-Pori power plant, which will be under reserve capacity agreement during period July 2017 - June 2020. Capacity decreases due to closure of unit 1 (205 MW) in Oskarshamn in end of June 2017.

Heat production capacity by segment

MW	June 30 2019	June 30 2018	Dec 31 2018
City Solutions	4,826	4,771	4,780
Russia	8,437	10,229	10,229
Total	13,263	14,999	15,009

Power generation by source in the Nordic area

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Hydro and wind power	5.4	5.1	10.4	11.6	19.4	18.2
Nuclear power	5.9	5.6	12.2	11.9	22.8	23.1
Thermal power	0.0	0.2	0.7	0.8	1.3	1.2
Total	11.3	11.0	23.3	24.3	43.5	42.5

Power generation by source in the Nordic area

%	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Hydro and wind power	45	47	45	48	45	43
Nuclear power	52	51	52	49	52	54
Thermal power	3	2	3	3	3	3
Total	100	100	100	100	100	100

Power sales

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Power sales in Europe	654	625	1,612	1,453	2,922	3,081
Power sales in Russia	217	195	465	443	872	894
Power sales in other countries	0	6	0	12	15	3
Total	871	826	2,078	1,908	3,810	3,980

Fortum's production and sales volumes

Heat sales

EUR million	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Heat sales in Europe	98	85	352	351	615	616
Heat sales in Russia	22	33	70	121	193	142
Total	119	118	422	471	808	759

Power sales by area

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Finland	6.8	5.7	14.1	12.3	23.1	24.9
Sweden	7.7	7.3	16.0	16.6	29.7	29.1
Russia	8.0	8.0	17.3	17.2	34.1	34.2
Norway	3.0	2.9	8.1	8.3	15.3	15.1
Other countries	0.5	-0.3	1.1	0.9	1.8	2.0
Total	25.9	23.6	56.6	55.3	104.0	105.3

NordPool transactions are calculated as a net amount of hourly sales and purchases at the Group level.

Heat sales by area

TWh	Q2 2019	Q2 2018	Q1-Q2 2019	Q1-Q2 2018	2018	Last twelve months
Russia	2.7	3.5	9.2	11.9	20.7	18.0
Finland	0.7	0.6	2.1	2.3	3.8	3.6
Poland	0.5	0.3	2.0	2.0	3.5	3.5
Other countries	0.6	0.5	2.0	2.0	3.5	3.5
Total	4.4	5.0	15.3	18.2	31.5	28.6