Equity story of

FORTUM – For a cleaner world

Investor / Analyst material
October 2019
Disclaimer

This presentation does not constitute an invitation to underwrite, subscribe for, or otherwise acquire or dispose of any Fortum shares.

Past performance is no guide to future performance, and persons needing advice should consult an independent financial adviser.

Any references to the future represent the management’s current best understanding. However the final outcome may differ from them.
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Fortum at a glance

Description of Fortum

- A leading clean-energy company across the Nordic region, the Baltic countries, Poland, and Russia
- A circular economy champion, providing solutions for sustainable cities, including waste, recycling, and biomass
- Rated BBB (negative outlook) and BBB (stable outlook) by S&P and Fitch respectively
- In 2018, Fortum closed its tender offer to shareholders in Uniper (holding of 49.99% of the outstanding shares and voting rights as of 31.12.2018)

Key shareholders

- Listed on the Helsinki Stock Exchange since 1998
- Market capitalisation of ~EUR 17bn
- Finnish State is a majority owner

Operations by business segment

- EBITDA\(^{(1)}\) EUR 1.5 bn

Production by source

- Power 74.6 TWh
- Heat 29.8 TWh

Note: All data as of FYE 2018 unless otherwise stated

(1) Comparable EBITDA defined as operating profit plus depreciation and amortisation less items affecting comparability

30.9.2019
Fortum’s geographical footprint

### Nordic countries
- Power generation: 43.5 TWh
- Heat sales: 5.9 TWh
- Electricity customers: 2.4 million

### Russia
**PAO Fortum**
- Power generation: 29.5 TWh
- Heat sales: 20.7 TWh

### Key figures 2018
- Sales: EUR 5.2 bn
- Comparable EBITDA: EUR 1.5 bn
- Total assets: EUR 22 bn
- Personnel: 8,300

### Poland
- Power generation: 0.6 TWh
- Heat sales: 3.5 TWh

### Baltic countries
- Power generation: 0.7 TWh
- Heat sales: 1.4 TWh

### Sales by market area 2018
- **Nordics**: 69%
- **Russia**: 20%
- **Other**: 4%
- Total: EUR 5.2 bn

Note: Ranking based on year 2017 pro forma figures
Source: Fortum, company data, shares of the largest actors
Three main drivers are shaping the future electricity markets

**Climate and Environment**
- Decarbonisation to reach Paris agreement targets
- Electrification in heating, transportation and key industrial processes
- Resource efficiency

**Politics and Regulation**
- National and international interests
- Market models
- Emission trading
- Geopolitical uncertainty

**Technology Development**
- Solar and wind
- Digitalisation and artificial intelligence
- Short-term and seasonal storage
- E-mobility ecosystem
- Demand response
Europe needs to eliminate CO₂ emissions to reach climate goals – this requires actions from all sectors.

Greenhouse gas emissions

Sources: European Environmental Agency (total emissions), IEA World Energy Outlook 2018 (fuel emissions), EURELECTRIC (sector emissions), Fortum Industrial Intelligence

1 including international aviation and marine
2 iron & steel and chemicals are among the biggest contributors
3 residential and commercial heating & cooling
4 non-energy related emissions: industrial processes and product use, waste management, agriculture, fugitive emissions
The decades of electricity will affect several sectors – and Fortum is well positioned for decarbonisation.

<table>
<thead>
<tr>
<th>Global climate challenge (indicative)</th>
<th>Electricity demand (2018-2050)</th>
<th>Sector</th>
<th>Future solutions, examples</th>
<th>Fortum’s current offering, examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>4°C</td>
<td>+</td>
<td>Power</td>
<td>CO₂-free generation, hydrogen, batteries, demand response</td>
<td>Nuclear, hydro, solar, wind</td>
</tr>
<tr>
<td>1.5°C</td>
<td>+++</td>
<td>Transport</td>
<td>Electric vehicles, hydrogen/biofuels for heavy transport</td>
<td>E-mobility, pyrolysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Heating &amp; cooling</td>
<td>Low-CO₂ DH/CHP, heat pumps, hydrogen</td>
<td>Biofuel, waste-to-energy DH/CHP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Industry</td>
<td>Electrified processes, hydrogen, resource efficiency, CCS</td>
<td>B2B solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other</td>
<td>Recycling, biomaterials (e.g. fractioning)</td>
<td>Plastic recycling</td>
</tr>
</tbody>
</table>

DH/CHP = District heating/combined heat and power
CCS = Carbon capture and storage
Building the utility of the future

**FUTURE UTILITY**

**Power-to-Gas**
- Sustainable hydrogen production
- Synthetic “clean” gas production

**CO₂-sink**
- Carbon capture and storage
- Carbon capture and utilisation

**Sustainable materials**
- Recycling
- Energy recovery

**Bio economy**
- Traffic fuels
- Bio-based material production

**UTILITY TODAY**

**Decarbonising power and heat generation**

**Customer solutions**

- Hydrogen and methane for traffic and industrial use
- Hydrogen, methane and excess heat
- Recycling
- Energy recovery
- Raw material

**FUTURE UTILITY**

- Electricity
- Heat
- Hydrogen, methane and excess heat
- Recycling
- Energy recovery
- Raw material

**CO₂-sink**

- Carbon capture and storage
- Carbon capture and utilisation
Volatility and uncertainty in the European power market increases the value of flexible assets

- Intermittent renewables
- Nuclear and coal closures
- Increasing role of gas
- Supply-demand balance
- Increased interconnection between Nordics and Continent
- Commodity and CO₂ prices
- Weather conditions
The MSR introduces tightness to carbon market

Linear reduction factor (LRF) tightens the market

- Linear reduction factor (LRF) is the percentage of baseline supply by which the annual supply of allowances (cap) is reduced every year. LRF is set at
  - 1.74% for 2013-2020 (equals to a reduction of 38 MtCO2/year)
  - 2.2% for 2021-2030 (equals to a reduction of 48 MtCO2/year)
  - In total, emissions are set to decrease by 43% by 2030 vs. 2005
  - Next LRF review is scheduled for 2024
    - 3.03% LRF from 2030 onwards would deliver net zero emissions by 2050

Market stability reserve restores scarcity by reducing future auction volumes

- When TNAC\(^2\) > 833 Mt, MSR deducts 24% of the TNAC from the auction volume each year placing them into the reserve during 2019-2023
  - MSR rate is 12% during 2024-2030
  - When TNAC < 400 Mt, MSR releases 100 million EUAs annually from the reserve adding them to future auctions
  - 900 million back loaded allowances from 2014-2016 will be transferred into the MSR in 2019-2020
  - As from 2023, allowances in MSR above the total number of allowances auctioned during the previous year will be cancelled
  - Next MSR review is scheduled in 2021

Abatement from coal to gas switching depends on coal and gas prices, together represented by a switching range

- CO2 price has almost quadrupled since November 2017, when the final decision was reached on the future EU ETS rules, including the intake rate of the Market Stability Reserve, which became operational in January 2019
- Market tightness forces the EUA market to find ways to reducing demand, including by coal-to-gas switching, making the relative gas/coal price an important price anchor for CO2
- Political risks also continue to play a role in EUA prices, with developments around Brexit and national coal phase-out policies in particular being closely watched

Efficiency assumptions in switching range: at low-end: gas 52% and coal 34%; at high-end: gas 48% and coal 38%; O&M cost assumptions apply.

1 Average annual total quantity of allowances released in 2008-2012.

2 TNAC = total number of allowances in circulation = supply – (demand + allowances in the MSR). According to the latest publication May 15, 2018 the TNAC corresponds to 1655 million allowances.
Several Western European countries exiting coal over the next decade

- France to phase out coal from power sector at latest in 2022
- United Kingdom to exclude coal condense from capacity market by capping allowed emissions from 2025
- Netherlands’ new government aims at exit by 2030, regulation not yet in place
- Poland: investments in new coal generation, after 2025 will be based on CHP or other technologies, which will allow the emission standards on the level of 450kg CO₂ per MWh of generated energy
- Germany to set a binding coal exit date by end of 2019
  - Closure of 12.5 GW by 2022 (compared to 42.5 GW in 2017), additional 13 GW by 2030, latest 2038 all remaining capacity
  - Compensation for hard coal operators expected to be based on auctions, lignite operators negotiate compensations directly with the government
  - Coal regions to receive EUR 40 billion over next 20 years
  - EUR 2 billion annual compensation to customers in lower grid fees and/or taxes proposed
  - Respective amount of CO₂ allowances to be cancelled in the EU Emission Trading Scheme (ETS)
Positioning Fortum for the decade of electricity – For a cleaner world

1. Pursue operational excellence and increased flexibility

2. Ensure value creation from investments and portfolio optimisation

3. Drive focused growth in the power value chain

4. Build options for significant new businesses

(Emerging uncertainty)

Profitability

Today

2030’s

Fortum’s strategic route
## Fortum’s strategic priorities in a changing energy market

1. **Pursue operational excellence and increased flexibility**
   - Ensure benchmark performance
   - Focus on cash flow and efficient use of balance sheet

2. **Ensure value creation from investments and portfolio optimisation**
   - Increase shareholder value from Uniper
   - Optimise portfolio to fit the changing business environment

3. **Drive focused growth in the power value chain**
   - Grow in CO₂-free power generation
   - Develop value-adding offerings and solutions for customers

4. **Build options for significant new businesses**
   - Create new sizeable profit contributor independent of power prices
   - Build on industrial logic and synergies with current businesses and competences
Delivering on financial targets through operational excellence and portfolio optimisation in the short to mid term

Strategic priorities…

**Operational excellence**
- Continue productivity improvement
- Prioritise capital expenditure

**Increased flexibility**
- Maximise flexibility in current businesses and assets
- Develop new sources of flexibility

**Value creation and portfolio optimisation**
- Ensure competitive asset fit for changing business environment
- Focus on core businesses
- Selective investments

… creating value

- Benchmark performance
- Optimise cash flow
- Strengthen balance sheet
- Create financial flexibility
- Solid investment grade rating
Scale, competences and resources to prosper, grow and lead European energy transition

Q2 2019 LTM combined Comparable EBITDA(1)

<table>
<thead>
<tr>
<th></th>
<th>EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fortum</td>
<td>1.6bn</td>
</tr>
<tr>
<td>Uniper</td>
<td>1.3bn</td>
</tr>
</tbody>
</table>

Total c.€2.9bn

Combined capacity split(3)

Total 50.3GW

- Low + Zero emission: 86%
- Hydro: 16%
- Nuclear: 32%
- Gas: 7%
- Thermal: 8%
- Other: 32%

Coal phased out over time

Combined power generation assets(2)

1. Comparable EBITDA is based on the Fortum's Comparable EBITDA and Uniper's Adjusted EBITDA as defined in Fortum's and Uniper's financial statements. No impacts from the assumed transaction has been included.
2. Market positions for Central-Europe/Europe and Nordics are based on total installed capacity; the market position in Russia is based on thermal capacity.
Portfolio well positioned for energy transition - overall combined share of coal based activities is moderate

Coal share from generation and from sales
(calculated from disclosed numbers assumptions below)

<table>
<thead>
<tr>
<th></th>
<th>Fortum 2018</th>
<th>Uniper 2018</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales, MEUR</td>
<td>5,242</td>
<td>78,176</td>
<td>83,418(1)</td>
</tr>
<tr>
<td>Coal and lignite generation based sales, MEUR</td>
<td>242</td>
<td>1,590</td>
<td>1,832(1)</td>
</tr>
<tr>
<td><strong>Share of coal based sales, (%)</strong></td>
<td>5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Generation (power and heat), TWh</td>
<td>104</td>
<td>114</td>
<td>218</td>
</tr>
<tr>
<td>Coal and lignite based, TWh</td>
<td>7</td>
<td>32</td>
<td>39</td>
</tr>
<tr>
<td><strong>Share of coal based generation, (%)</strong></td>
<td>7</td>
<td>28</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: For Fortum avg. coal based power sales price assumption 35 €/MWh and for heat 35 €/MWh, for Uniper avg. coal based sales price assumption 50 €/MWh.
Fortum data includes also heat production, Uniper data only power generation.

1. Combined sales is presented for illustrative purposes only and do not include possible impacts from aligning differences in accounting principles, effects from co-owned power companies or eliminations of sales between the Groups.

Fortum is a forerunner in sustainability

We engage our customers and society to drive the change towards a cleaner world. Our role is to accelerate this change by reshaping the energy system, improving resource efficiency, and providing smart solutions. This way we deliver excellent shareholder value.

Increasing CO₂-free power generation
Annual CO₂-free power generation has almost tripled from 15 TWh in 1990 to 43 TWh in 2018.

Among the lowest specific emissions
96% of its power generation in the EU and 57% of its total power generation was CO₂-free in 2018. Fortum’s specific emissions from power generation in the EU were 28 gCO₂/kWh in 2018, total 174 gCO₂/kWh.

Growing in solar and wind
Targeting a multi-gigawatt portfolio in solar and wind.

Fortum listed in several sustainability indexes and ratings:
Fortum’s long-term financial targets and dividend policy

- Return on capital employed (ROCE) of at least 10%
- Comparable Net debt/EBITDA ratio at around 2.5x
- Fortum’s dividend policy is to pay a stable, sustainable, and over time increasing dividend of 50-80% of earnings per share, excluding one-time items

Having a solid investment grade rating is a key priority for Fortum.
Strong results improvement and agreement on majority stake in Uniper

- Nordic spot power price down, -31% Y/Y
  - Achieved power price at EUR 35.7, up 1.1 EUR/MWh
- Reservoir levels around long-term average
- Comparable EBITDA at EUR 295 million, +28%
- Comparable operating profit at EUR 153 million, +59%
- Share of profits of associates and JVs at EUR 106 (12) million
- EPS at EUR 0.20 (0.05)
  - Items affecting comparability EUR -0.02 (-0.01)
  - Uniper contribution EUR 0.10 (-)
- Strong cash flow from operating activities at EUR 262 (133) million
- Comparable Net debt/EBITDA at 3.2x (LTM)
Fortum to take majority position in Uniper

**Agreement**
- Fortum has entered into agreements with Elliott and Knight Vinke to acquire in excess of 20.5% in Uniper for approximately EUR 2.3 billion, corresponding to EUR 29.93 per share, increasing Fortum’s share in Uniper to more than 70.5% and the total investment in Uniper to approximately EUR 6.2 billion (average price paid EUR 23.97 per share)
- Fortum rules out a domination and/or profit and loss transfer agreement or squeeze-out for a period of at least two years
- Fortum intends to be represented on Uniper’s Supervisory Board commensurate with its ownership without delay
- Fortum offers commitments to Uniper’s employees and seeks continued dialogue with employee representatives

**Regulatory approvals**
- Closing of the transaction, subject to customary regulatory clearances in Russia and the United States, is expected by the end of the first quarter of 2020. Fortum is in discussions with the Russian state authorities and has made a preparatory filing to the Russian Federal Antimonopoly Service
- No further European Commission clearance is required; in 2018, Fortum already received unconditional merger clearance from the Commission

**Financials**
- Fortum will fully consolidate Uniper as a subsidiary in its financial statements from closing of the transaction
- The transaction will be financed with existing cash resources and committed credit facilities underwritten by Barclays Bank PLC
- Fortum is committed to maintaining an investment-grade rating post transaction and to strengthening its financial profile longer term, which will provide appropriate financial stability and support to the enlarged group
Creating a leader in the European energy transition

- The transaction delivers on Fortum’s vision and strategy, investing in a diversified European power generation with attractive hydro, nuclear, and gas assets and a platform for growth.
- Fortum and Uniper have the strategic mix of businesses and expertise required to successfully drive Europe’s transition from conventional to cleaner and more secure energy.
- As a responsible and committed parent company, Fortum looks forward to working with Uniper’s management team and employees on the creation and implementation of a joint vision.
- Fortum is committed to protecting the core interests of Uniper’s employees and to providing attractive prospects.
Nordic water reservoirs at the historical average level

- Dry weather conditions during July and in the beginning of August resulted in a bit lower than normal inflows
- As a consequence, water reservoirs normalised during Q3
- Reservoirs currently somewhat below average level following dry and cold weather in early October

Source: Nord Pool, 2019 by country
Weaker front gas price on oversupply, expiry of Ukraine-Russia transit agreement keeps winter prices at a high level

The coal market traded sideways during Q3: A slowdown in Chinese power demand growth burdens Chinese coal prices. The trend of falling coal prices in H1 halted due to some support from coal supply cutbacks.

- Chinese industrial production growth Y/Y was 1.5% in July and 4.5% in August.
- Chinese domestic coal production also continued to rebound.
- Weak gas price contributed to a decrease in coal-for-power demand in the EU, raising coal inventory to high levels in Europe.

In the European gas market storages continued to build, reaching unprecedented highs, 98% filled end of Q3 suppressing the gas front.

- Weak East Asian demand for LNG dampened global LNG prices.
- Concerns for gas disruptions on the back of the expiry of Ukraine/Russia gas transit agreement in the end of the year kept the winter prices high.
**CO₂ price at year high in Q3 – declined after July due to increased Brexit risks**

The CO₂ market declined after peaking in July as the market grew increasingly worried over a Hard Brexit. Weaker industrial demand and soft crude oil also added weakness.

- The CO₂ price was relatively strong despite continuous weak front gas prices. This has increased the competitiveness of gas in power generation to record-high level during the summer.
- The MSR (Market Stability Reserve) has fundamentally tightened the EUA market.

**Crude oil weakened in Q3** as investor concerns over a global economic slowdown increases.

- Despite an unprecedented attack on Saudi oilfields, oil prices declined from the level in Q2. The attack temporarily reduced production by ~5.7 Mbd creating big price volatility.
- Concerns for lower oil demand and a looser supply-demand balance in 2020 had a negative impact on oil prices.

Source: ICE, Thomson Reuters

Market prices 21 October 2019; 2019-2020 future quotations
Nordic Q3 spot power price clearly lower than a year ago, -31%

- During Q3, the average Nord Pool system spot price was 34.7 EUR/MWh (50.5)
- The average area price was:
  - 47.8 EUR/MWh (53.5) in Finland
  - 35.6 EUR/MWh (52.2) in Sweden (SE3, Stockholm)
- The decline in Nordic spot prices during Q3 2019 was caused by the clearly stronger hydrological situation and very low Continental prices, mainly driven by lower gas prices.
- The Finnish spot price was supported by the scarce water situation in Finland hence it coupled a lot with the Baltic price areas.

Source: Nord Pool, Nasdaq Commodities
German and Nordic forward prices fairly stable

Spot price
- During Q3 2019, the average spread was 2.7 EUR/MWh with the Nordic system average price at 34.7 EUR/MWh and German price at 37.4 EUR/MWh
- Continuously weak gas price and high generation from renewable energy sources contributed to the low German spot price. During September, Nordic prices weakened following the improving hydrological situation.
- During 2012-2018, the average realised German-Nordic spot spread was 4.6 EUR/MWh, fluctuating on an annual level in the range of -1…15 EUR/MWh

Forward price
- During Q3 2019, the spread for 2020 delivery traded in the range 11.8-15.4 EUR/MWh, average at 13.6 EUR/MWh
- The German-Nordic spread is essentially determined by the supply-demand balance in the Nordics and on Continental Europe, in combination with available interconnector capacity. Thus investments in interconnectors, demand growth, expansion of renewable capacity, as well as phasing out of nuclear and coal capacity all play a key role.

Including 21 October 2019
Source: Nord Pool, Bloomberg
Fortum’s achieved power price +3% in Q3 despite lower Nordic power price – Russian achieved price +11%
Generation

Q3 2019
• Higher achieved power price, +1.1 EUR/MWh, +3%
• Good operational performance and load factor
  – Higher hydro and nuclear volumes

Q1-Q3 2019
• Higher achieved power price, +2.7 EUR/MWh, +8%
• Good operational performance and load factor
  – Higher nuclear volumes

<table>
<thead>
<tr>
<th>MEUR</th>
<th>Q3 2019</th>
<th>Q3 2018</th>
<th>Q1-Q3 2019</th>
<th>Q1-Q3 2018</th>
<th>2018</th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>458</td>
<td>360</td>
<td>1,558</td>
<td>1,285</td>
<td>1,842</td>
<td>2,115</td>
</tr>
<tr>
<td>Comparable EBITDA</td>
<td>176</td>
<td>103</td>
<td>660</td>
<td>538</td>
<td>763</td>
<td>885</td>
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<tr>
<td>Comparable operating profit</td>
<td>140</td>
<td>69</td>
<td>555</td>
<td>440</td>
<td>628</td>
<td>743</td>
</tr>
<tr>
<td>Comparable net assets</td>
<td></td>
<td></td>
<td>5,953</td>
<td>6,072</td>
<td>6,485</td>
<td></td>
</tr>
<tr>
<td>Comparable RONA %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.8</td>
<td>13.0</td>
</tr>
<tr>
<td>Gross investments</td>
<td>81</td>
<td>72</td>
<td>184</td>
<td>170</td>
<td>262</td>
<td>276</td>
</tr>
</tbody>
</table>
City Solutions

Q3 2019
• Longer maintenance breaks at some CHPs
• Weaker performance in recycling and waste business
• Higher fuel and CO₂ costs

Q1-Q3 2019
• EUR 26 million of profit from sale of solar stake (2018)
• H1 profit was partly offset by Q3 loss
  → Corrective measures being reviewed in order to improve the performance

<table>
<thead>
<tr>
<th>MEUR</th>
<th>Q3 2019</th>
<th>Q3 2018</th>
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<th>2018</th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>200</td>
<td>178</td>
<td>834</td>
<td>751</td>
<td>1,110</td>
<td>1,193</td>
</tr>
<tr>
<td>Comparable EBITDA</td>
<td>11</td>
<td>47</td>
<td>179</td>
<td>201</td>
<td>310</td>
<td>288</td>
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<tr>
<td>Comparable operating profit</td>
<td>-36</td>
<td>4</td>
<td>41</td>
<td>71</td>
<td>135</td>
<td>105</td>
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<tr>
<td>Comparable net assets</td>
<td>3,790</td>
<td>3,726</td>
<td>3,794</td>
<td>1,193</td>
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<td></td>
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<tr>
<td>Comparable RONA %</td>
<td></td>
<td></td>
<td></td>
<td>5.5</td>
<td>4.5</td>
<td></td>
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<tr>
<td>Gross investments</td>
<td>53</td>
<td>73</td>
<td>262</td>
<td>157</td>
<td>242</td>
<td>347</td>
</tr>
</tbody>
</table>
**Consumer Solutions**

**Q3 2019**
- Higher sales margin
  - Active development of product and service offering
- Improved performance in Poland
- Continued competition with high customer churn in the Nordics

**Q1-Q3 2019**
- Higher sales margin
  - Favourable market conditions continued in H1, part of impact temporary
  - Active development of product and service offering

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>311</td>
<td>332</td>
<td>1,326</td>
<td>1,204</td>
<td>1,759</td>
<td>1,881</td>
</tr>
<tr>
<td>Comparable EBITDA</td>
<td>31</td>
<td>22</td>
<td>106</td>
<td>79</td>
<td>110</td>
<td>137</td>
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<tr>
<td>Comparable operating profit</td>
<td>16</td>
<td>7</td>
<td>60</td>
<td>36</td>
<td>53</td>
<td>77</td>
</tr>
<tr>
<td>Comparable net assets</td>
<td>564</td>
<td>631</td>
<td>648</td>
<td>648</td>
<td>648</td>
<td></td>
</tr>
<tr>
<td>Customer base, million</td>
<td>2.40</td>
<td>2.47</td>
<td>2.47</td>
<td>2.47</td>
<td>2.47</td>
<td></td>
</tr>
<tr>
<td>Gross investments</td>
<td>13</td>
<td>12</td>
<td>39</td>
<td>33</td>
<td>47</td>
<td>53</td>
</tr>
</tbody>
</table>
Russia

Q3 2019

• Improved result in heat business
• Higher electricity margins
• FX impact EUR 5 million

Q1-Q3 2019

• Higher electricity margins and CSA payments
• Lower bad-debt provisions
• Heat distribution business transferred to Yustek JV
• FX impact EUR -2 million

In 2019, no new units will receive higher CSA payments

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>229</td>
<td>200</td>
<td>765</td>
<td>764</td>
<td>1,069</td>
<td>1,070</td>
</tr>
<tr>
<td>Comparable EBITDA</td>
<td>91</td>
<td>76</td>
<td>333</td>
<td>291</td>
<td>417</td>
<td>459</td>
</tr>
<tr>
<td>Comparable operating profit</td>
<td>53</td>
<td>40</td>
<td>222</td>
<td>182</td>
<td>271</td>
<td>311</td>
</tr>
<tr>
<td>Comparable net assets</td>
<td></td>
<td></td>
<td>3,098</td>
<td>2,853</td>
<td>2,789</td>
<td></td>
</tr>
<tr>
<td>Comparable RONA %</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.3</td>
<td>12.4</td>
</tr>
<tr>
<td>Gross investments</td>
<td>16</td>
<td>11</td>
<td>35</td>
<td>51</td>
<td>117</td>
<td>101</td>
</tr>
</tbody>
</table>

CSA=Capacity Supply Agreement
# Key financials

<table>
<thead>
<tr>
<th>MEUR</th>
<th>Q3 2019</th>
<th>Q3 2018</th>
<th>Q1-Q3 2019</th>
<th>Q1-Q3 2018</th>
<th>2018</th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1,060</td>
<td>971</td>
<td>3,894</td>
<td>3,643</td>
<td>5,242</td>
<td>5,493</td>
</tr>
<tr>
<td>Comparable EBITDA</td>
<td>295</td>
<td>230</td>
<td>1,213</td>
<td>1,051</td>
<td>1,523</td>
<td>1,685</td>
</tr>
<tr>
<td>Comparable operating profit</td>
<td>153</td>
<td>96</td>
<td>793</td>
<td>654</td>
<td>987</td>
<td>1,126</td>
</tr>
<tr>
<td>Operating profit</td>
<td>124</td>
<td>91</td>
<td>666</td>
<td>829</td>
<td>1,138</td>
<td>975</td>
</tr>
<tr>
<td>Share of profits of associates and joint ventures</td>
<td>106</td>
<td>12</td>
<td>678</td>
<td>82</td>
<td>38</td>
<td>634</td>
</tr>
<tr>
<td>Profit before income taxes</td>
<td>198</td>
<td>45</td>
<td>1,274</td>
<td>779</td>
<td>1,040</td>
<td>1,535</td>
</tr>
<tr>
<td>Earnings per share, EUR</td>
<td>0.20</td>
<td>0.05</td>
<td>1.27</td>
<td>0.73</td>
<td>0.95</td>
<td>1.48</td>
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<tr>
<td>Net cash from operating activities</td>
<td>262</td>
<td>133</td>
<td>1,753</td>
<td>767</td>
<td>804</td>
<td>1,790</td>
</tr>
</tbody>
</table>

Q1-Q3 2019

- Comparable operating profit mainly supported by Generation and Russia
- Share of profits from associates of EUR 678 million
  - Uniper EUR 534 million:
    - EUR 218 million underlying result
    - EUR 293 million non-operating result
    - EUR 23 million reversal of fair value adjustment
- EPS EUR 1.27
  - Items affecting comparability -0.11 (0.17)
  - Uniper impact 0.60 (-)
## Income statement

<table>
<thead>
<tr>
<th>MEUR</th>
<th>Q3 2019</th>
<th>Q3 2018</th>
<th>Q1-Q3 2019</th>
<th>Q1-Q3 2018</th>
<th>2018</th>
<th>2018 LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>1,060</td>
<td>971</td>
<td>3,894</td>
<td>3,643</td>
<td>5,242</td>
<td>5,493</td>
</tr>
<tr>
<td>Other income</td>
<td>20</td>
<td>47</td>
<td>65</td>
<td>89</td>
<td>130</td>
<td>106</td>
</tr>
<tr>
<td>Materials and services</td>
<td>-533</td>
<td>-545</td>
<td>-1,976</td>
<td>-1,925</td>
<td>-2,795</td>
<td>-2,846</td>
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<tr>
<td>Employee benefits</td>
<td>-110</td>
<td>-105</td>
<td>-355</td>
<td>-340</td>
<td>-459</td>
<td>-474</td>
</tr>
<tr>
<td>Depreciations and amortisation</td>
<td>-143</td>
<td>-134</td>
<td>-421</td>
<td>-397</td>
<td>-536</td>
<td>-560</td>
</tr>
<tr>
<td>Other expenses</td>
<td>-142</td>
<td>-138</td>
<td>-415</td>
<td>-417</td>
<td>-594</td>
<td>-592</td>
</tr>
<tr>
<td><strong>Comparable operating profit</strong></td>
<td>153</td>
<td>96</td>
<td>793</td>
<td>654</td>
<td>987</td>
<td>1,126</td>
</tr>
<tr>
<td>Items affecting comparability</td>
<td>-29</td>
<td>-5</td>
<td>-127</td>
<td>175</td>
<td>151</td>
<td>-151</td>
</tr>
<tr>
<td><strong>Operating profit</strong></td>
<td>124</td>
<td>91</td>
<td>666</td>
<td>829</td>
<td>1,138</td>
<td>975</td>
</tr>
<tr>
<td>Share of profits/loss of associates and joint ventures</td>
<td>106</td>
<td>12</td>
<td>678</td>
<td>82</td>
<td>38</td>
<td>634</td>
</tr>
<tr>
<td><strong>Profit before income tax</strong></td>
<td>198</td>
<td>45</td>
<td>1,274</td>
<td>779</td>
<td>1,040</td>
<td>1,535</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>-25</td>
<td>1</td>
<td>-134</td>
<td>-118</td>
<td>-181</td>
<td>-197</td>
</tr>
<tr>
<td><strong>Profit for the period</strong></td>
<td>173</td>
<td>46</td>
<td>1,140</td>
<td>661</td>
<td>858</td>
<td>1,337</td>
</tr>
</tbody>
</table>

### Q1-Q3 2019

- Share of profits from associates include Uniper share of EUR 534 million
- Finance costs – net
  - Net financial expenses include EUR +40 million from nuclear technical update in Q2
  - EUR 13 million cost related to repayment of bridge financing for Uniper investment in Q1
# Cash flow statement

<table>
<thead>
<tr>
<th>MEUR</th>
<th>Q3 2019</th>
<th>Q3 2018</th>
<th>Q1-Q3 2019</th>
<th>Q1-Q3 2018</th>
<th>2018</th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparable EBITDA</td>
<td>295</td>
<td>230</td>
<td>1,213</td>
<td>1,051</td>
<td>1,523</td>
<td>1,685</td>
</tr>
<tr>
<td>Realised FX gains/losses</td>
<td>1</td>
<td>72</td>
<td>11</td>
<td>205</td>
<td>231</td>
<td>37</td>
</tr>
<tr>
<td>Paid net financial costs, income taxes and other</td>
<td>-85</td>
<td>-81</td>
<td>-255</td>
<td>-280</td>
<td>-341</td>
<td>-316</td>
</tr>
<tr>
<td>Dividends received</td>
<td>10</td>
<td>0</td>
<td>239</td>
<td>53</td>
<td>61</td>
<td>247</td>
</tr>
<tr>
<td>Change in working capital</td>
<td>15</td>
<td>-81</td>
<td>201</td>
<td>35</td>
<td>-146</td>
<td>20</td>
</tr>
<tr>
<td>Change in settlements for futures</td>
<td>26</td>
<td>-8</td>
<td>342</td>
<td>-298</td>
<td>-524</td>
<td>116</td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td><strong>262</strong></td>
<td><strong>133</strong></td>
<td><strong>1,753</strong></td>
<td><strong>767</strong></td>
<td><strong>804</strong></td>
<td><strong>1,790</strong></td>
</tr>
<tr>
<td>Capital expenditures</td>
<td>-160</td>
<td>-142</td>
<td>-529</td>
<td>-394</td>
<td>-579</td>
<td>-714</td>
</tr>
<tr>
<td>Acquisitions of shares</td>
<td>-21</td>
<td>-163</td>
<td>-37</td>
<td>-3,913</td>
<td>-4,088</td>
<td>-212</td>
</tr>
<tr>
<td>Divestments of shares and capital returns</td>
<td>20</td>
<td>88</td>
<td>51</td>
<td>258</td>
<td>259</td>
<td>52</td>
</tr>
<tr>
<td>Change in cash collaterals and restricted cash</td>
<td>-2</td>
<td>89</td>
<td>320</td>
<td>-87</td>
<td>-36</td>
<td>371</td>
</tr>
<tr>
<td>Other investing activities</td>
<td>47</td>
<td>-19</td>
<td>33</td>
<td>31</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td><strong>Cash flow from investing activities</strong></td>
<td><strong>-116</strong></td>
<td><strong>-147</strong></td>
<td><strong>-162</strong></td>
<td><strong>-4,107</strong></td>
<td><strong>-4,398</strong></td>
<td><strong>-453</strong></td>
</tr>
<tr>
<td><strong>Cash flow before financing activities</strong></td>
<td><strong>146</strong></td>
<td><strong>-14</strong></td>
<td><strong>1,591</strong></td>
<td><strong>-3,340</strong></td>
<td><strong>-3,594</strong></td>
<td><strong>1,337</strong></td>
</tr>
<tr>
<td>Paid dividends to the owners of the parent</td>
<td>0</td>
<td>0</td>
<td>-977</td>
<td>-977</td>
<td>-977</td>
<td>-977</td>
</tr>
<tr>
<td>Paid dividends to non-controlling interests</td>
<td>0</td>
<td>-2</td>
<td>-23</td>
<td>-5</td>
<td>-5</td>
<td>-23</td>
</tr>
</tbody>
</table>

Q1-Q3 2019

- Cash flow strengthened due to
  - improvement of EUR 162 million in comparable EBITDA
  - change in settlements for futures EUR 342 million
  - working capital EUR 201 million and
  - dividends received from associates EUR 239 million

- Acquisition of shares in 2018 mainly related to investment in Uniper shares
Ongoing actions to deleverage aim to optimise cash flow and maintain financial flexibility

<table>
<thead>
<tr>
<th></th>
<th>LTM</th>
<th>2018</th>
<th>TARGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparable EBITDA, MEUR</td>
<td>1,685</td>
<td>1,523</td>
<td></td>
</tr>
<tr>
<td>Interest-bearing net debt, MEUR</td>
<td>5,367</td>
<td>5,509</td>
<td></td>
</tr>
<tr>
<td>Comparable net debt/EBITDA ratio**</td>
<td>3.2x</td>
<td>3.6x</td>
<td>Around 2.5x</td>
</tr>
<tr>
<td>Return on capital employed (ROCE), %</td>
<td>9.0</td>
<td>6.7</td>
<td>At least 10%</td>
</tr>
</tbody>
</table>

- Liquid funds of EUR 1.4 billion
- Undrawn committed credit lines of EUR 1.8 billion, of which EUR 1.75 billion is maturing in June 2023
- Total loans and borrowings of EUR 6,700 million
  - Average interest rate of 2.2% (2018: 2.4%)
  - Portfolio mainly in EUR and SEK with average interest cost 1.4% (2018: 1.7%)
  - EUR 779 million (2018: 686) swapped to RUB, average interest cost including cost for hedging 8.4% (2018: 8.3%)
  - Other short-term debt includes new non-cash collaterals and settlement

*) Uniper’s EBITDA or debt are not consolidated as Uniper is accounted for as an associated company.
**) In addition, Fortum received EUR 67 million based on Credit Support Annex agreements with several counterparties. This amount has been booked as short-term liability.
### Outlook

#### Demand growth
Electricity demand in the Nordics is expected to grow by ~0.5% on average.

#### Hedging
- **Rest 2019:** ~80% at EUR 33 per MWh
- **2020:** ~70% at EUR 33 per MWh (Q2: 60% at EUR 31)
- **2021:** ~35% at EUR 33 per MWh

#### 2019 Estimated annual capital expenditure, including maintenance and excluding acquisitions
- **EUR 600-650 million**

#### In 2020, capital expenditure is expected to decline

#### Targeted cost synergies of Hafslund transaction
- **EUR 15-20 million**
  - Gradually materialising 2019-2020
  - **City Solutions:** EUR 5-10 million
  - **Consumer Solutions:** ~EUR 10 million

#### Taxation
- **Effective tax rate for 2019 for the Group:** 19-21%
- In Sweden hydro assets’ real estate tax rate to decrease over a four-year period (2017-2020)
Appendices
Still a highly fragmented Nordic power market
Fortum has the largest electricity customer base in the Nordics

**Power generation in 2018**
- 400 TWh
- >350 companies

**Electricity retail**
- 15.5 million customers
- ~350 companies

Source: Fortum, company data, shares of the largest actors, pro forma 2018 figures
Norlys was formed through the merger of the companies SE and Eniig in Denmark
Väre was formed through the merger of the retail businesses of Savon Voima, Jyväskylän Energia, Kuopion Energia and Lappeenrannan Energia in Finland
Fortum mid-sized European power generation player – major producer in global heat

Power generation
Largest producers in Europe and Russia, 2017
TWh

Heat production
Largest global producers, 2017
TWh

Customers
Electricity customers in Europe, 2017
Millions

Source: Company information, Fortum analyses, 2017 figures pro forma.
EPH incl. LEAG. Chinese data incomplete.
Nordic year forwards

Source: Nasdaq Commodities, Bloomberg
Wholesale power prices

EUR/MWh

Spot prices

Forward prices

German

Nordic

Russian*

* Including weighted average capacity price

Source: Nord Pool, Bloomberg Finance LP, ATS, NP "Market Council", Fortum
Nordic, Baltic, Continental and UK markets are integrating – Interconnection capacity growing to over 13 GW by end-2023

The Northern Seas Offshore Grid and the Baltic Energy Market Integration Plan are included as priority electricity corridors in EU’s Infrastructure Guidelines, approved in April 2013

1. 700 MW COBRAcable from DK to NL has been taken into operation in September 2019
2. New 400 MW Zealand – DE connection via Kriegers Flak offshore wind area by end-2019
3. EU’s Connecting Europe Facility co-financing 3rd EE-LV transmission line, due to be ready in 2020
4. Jutland – DE capacity will grow by 860 MW by end-2020, with further 1,000 MW increase by end-2023
5. 1,400 MW NordLink as first direct NO-DE link is due to start commercial operation in March 2021
6. Two 1,400 MW NO-UK links as EU Projects of Common Interest: NSL to England due to be ready in 2021, NorthConnect to Scotland under debate in Norway and not yet permitted
7. New internal Nordic grid investments provide for increased available capacity for export to the Continent and Baltics
8. 1,400 MW DK-UK Viking Link has been contracted to be built by end-2023
9. 700 MW LT-PL Harmony Link to be built by 2025 as a part of the Baltic synchronisation project

Svenska Kraftnät and 50Hertz signed 1/2017 a cooperation agreement on building the 700 MW Hansa PowerBridge DC link between Sweden and Germany by 2026

### Table: Power Generation in NORDICS and BALTICS

<table>
<thead>
<tr>
<th></th>
<th>NORDICS</th>
<th>BALTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 TWh</td>
<td>%</td>
<td>TWh</td>
</tr>
<tr>
<td>Hydro</td>
<td>212</td>
<td>3</td>
</tr>
<tr>
<td>Nuclear</td>
<td>88</td>
<td>-</td>
</tr>
<tr>
<td>Fossil fuel</td>
<td>28</td>
<td>13</td>
</tr>
<tr>
<td>Biomass</td>
<td>26</td>
<td>2</td>
</tr>
<tr>
<td>Waste</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Wind</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>Solar</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total generation</strong></td>
<td><strong>400</strong></td>
<td><strong>20</strong></td>
</tr>
</tbody>
</table>

### Net export and import

- **Net export**: 2 TWh
- **Net import**: 9 TWh

*) Normal annual Nordic hydro generation 200 TWh, variation +/- 40 TWh.

Source: ENTSO-E Statistical Factsheet

Graph sizes are illustrative.
Fortum's power generation in 2018

- Natural gas: 38%
- Solar: 0.5%
- Waste: 0.5%
- Wind: 1%
- Biomass: 1%
- Coal: 3%

Hydropower: 26%

Total generation: 74.6 TWh

Nuclear power: 30%

Fortum's heat production in 2018

- Natural gas: 64%
- Others: 1%
- Peat: 1%
- Heat pumps, electricity: 3%
- Waste: 7%
- Biomass: 8%
- Coal: 16%

Total production: 29.8 TWh

Note: Fortum’s power generation capacity 13,724 MW and heat production capacity 15,009 MW
Fortum's European power and heat production by source

Fortum's European power generation in 2018

- Nuclear power: 50%
- Natural gas: 1%
- Wind: 1%
- Waste: 1%
- Biomass: 2%
- Coal: 2%
- Hydropower: 43%

 European generation: 44.7 TWh

Fortum's heat European production in 2018

- Coal: 28%
- Biomass: 24%
- Others: 2%
- Peat: 4%
- Natural gas: 10%
- Heat pumps, electricity: 10%
- Waste: 22%

European production: 9.4 TWh

Note: Fortum's European power generation capacity 8,811 MW and heat production capacity 4,780 MW
Fortum’s Nordic, Baltic and Polish generation capacity

GENERATION CAPACITY MW
- Hydro 4,672
- Nuclear 2,819
- CHP 785
- Other thermal 376
- Wind 159

Nordic, Baltic and Polish generation capacity 8,811

Figures 31 December 2018

NORWAY MW
- Price areas
  - NO4, Wind 82
  - NO1, CHP 20
- Generation capacity 102

FINLAND MW
- Hydro 1,548
- Nuclear 1,485
- CHP 451
- Other thermal 376
- Generation capacity 3,860

SWEDEN MW
- Price areas
  - SE2, Hydro 1,550
  - SE2, Wind 75
  - SE3, Hydro 1,574
  - SE3, Nuclear 1,334
  - SE3, CHP 9
- Generation capacity 4,542

BALTICS AND POLAND MW
- Generation capacity, CHP
  - in Estonia 49
  - in Latvia 34
  - in Lithuania 20
  - in Poland 186
- in Latvia, Wind 2

DENMARK, DK1 MW
- Generation capacity, CHP 16
Fortum is growing towards gigawatt scale target in solar and wind power production

<table>
<thead>
<tr>
<th>PORTFOLIO</th>
<th>TECHNOLOGY</th>
<th>STATUS</th>
<th>CAPACITY</th>
<th>FORTUM SHARE, MW</th>
<th>SUPPLY STARTS/ STARTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINLAND</td>
<td>Wind</td>
<td>Under construction</td>
<td>90 90</td>
<td>Q1 2021</td>
<td></td>
</tr>
<tr>
<td>NORWAY</td>
<td>Wind</td>
<td>Operational</td>
<td>179 179</td>
<td>2006 and 2011</td>
<td></td>
</tr>
<tr>
<td>SWEDEN</td>
<td>Wind</td>
<td>Operational</td>
<td>323 75</td>
<td>2017*</td>
<td></td>
</tr>
<tr>
<td>BLAIKEN</td>
<td>Wind</td>
<td>Under construction</td>
<td>248 37 (15%)</td>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>SOBERG</td>
<td>Wind</td>
<td>Operational</td>
<td>76 38 (50%)</td>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>BLAIKEN</td>
<td>Solar</td>
<td>Operational</td>
<td>15 15</td>
<td>2016-2017</td>
<td></td>
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<tr>
<td>PLESHEMOV</td>
<td>Solar</td>
<td>Operational</td>
<td>10 10</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>CRACHEVSK</td>
<td>Solar</td>
<td>Operational</td>
<td>10 10</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>RUSSIA</td>
<td>Solar</td>
<td>Under development</td>
<td>110+6 110+6</td>
<td>2021-2022</td>
<td></td>
</tr>
<tr>
<td>ULANOVSK</td>
<td>Wind</td>
<td>Operational</td>
<td>35 35</td>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>RUSNANO JV</td>
<td>Wind</td>
<td>Under construction</td>
<td>50 25 (50%)</td>
<td>1.1.2019</td>
<td></td>
</tr>
<tr>
<td>RUSNANO JV</td>
<td>Wind</td>
<td>Under development</td>
<td>1,473 737 (50%)</td>
<td>H1 2020</td>
<td></td>
</tr>
<tr>
<td>INDIA</td>
<td>Solar</td>
<td>Operational</td>
<td>5 2 (44%)</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>KAPELI</td>
<td>Solar</td>
<td>Operational</td>
<td>4 10 (44%)</td>
<td>2014</td>
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</tr>
<tr>
<td>BHADLA</td>
<td>Solar</td>
<td>Operational</td>
<td>70 31 (44%)</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>PAVAGADA</td>
<td>Solar</td>
<td>Operational</td>
<td>100 44 (44%)</td>
<td>2017</td>
<td></td>
</tr>
<tr>
<td>PAVAGADA</td>
<td>Solar</td>
<td>Under construction</td>
<td>250 250</td>
<td>Q3 2019</td>
<td></td>
</tr>
<tr>
<td>RAJASTHAN</td>
<td>Solar</td>
<td>Under construction</td>
<td>250 250</td>
<td>Q4 2020</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>3,287 2,023</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*) Blaiken last stage IV inaugurated in 2017. NOTE: Table numbers not accounting; tells the size of renewables projects. All not consolidated to Fortum capacities. All figures in MW and rounded to nearest megawatt. Additionally, target to invest 200 – 400 million euros in India solar and create partnership for operating assets. Under construction includes investment decisions made.
## Fortum’s nuclear fleet

<table>
<thead>
<tr>
<th>LOVIISA</th>
<th>OLKILUOTO</th>
<th>OSKARSHAMN</th>
<th>FORSMARK</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Commercial operation started</strong></td>
<td>Unit 1: 1977</td>
<td>Unit 1: 1978</td>
<td>Unit 1: 1972*</td>
</tr>
<tr>
<td></td>
<td>Unit 2: 1981</td>
<td>Unit 2: 1980</td>
<td>Unit 2: 1974*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unit 3: (Under construction)</td>
<td>Unit 3: 1985</td>
</tr>
<tr>
<td><strong>Generation Capacity</strong></td>
<td>Unit 1: 507 MW</td>
<td>Unit 1: 890 MW</td>
<td>Unit 1: 473 MW*</td>
</tr>
<tr>
<td></td>
<td>Unit 2: 507 MW</td>
<td>Unit 2: 890 MW</td>
<td>Unit 2: 638 MW*</td>
</tr>
<tr>
<td></td>
<td><strong>Total: 1,014 MW</strong></td>
<td>(Unit 3: 1,600 MW)</td>
<td>Unit 3: 1,400 MW</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total: 1,780 MW (3,380 MW)</strong></td>
<td><strong>Total: 1,400 MW</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>27% 473 MW</strong></td>
<td><strong>43% 602 MW</strong></td>
</tr>
<tr>
<td>Fortum’s share</td>
<td>100% 1,014 MW</td>
<td>14 TWh</td>
<td>11 TWh</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 TWh</td>
<td>5 TWh</td>
</tr>
<tr>
<td><strong>Yearly production</strong></td>
<td>8 TWh</td>
<td>14 TWh</td>
<td>25 TWh</td>
</tr>
<tr>
<td>Fortum’s share of production</td>
<td>8 TWh</td>
<td>4 TWh</td>
<td>6 TWh</td>
</tr>
<tr>
<td><strong>Share of Fortum’s Nordic production</strong></td>
<td>19%</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>13%</td>
</tr>
<tr>
<td><strong>Majority owner</strong></td>
<td>Fortum</td>
<td>Pohjolan Voima</td>
<td>Uniper</td>
</tr>
<tr>
<td>Fortum’s share</td>
<td>26.6%</td>
<td>43.4%</td>
<td>43.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vattenfall</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>22.2%</td>
</tr>
<tr>
<td><strong>Operated by</strong></td>
<td>Fortum</td>
<td>Teollisuuden Voima (TVO)</td>
<td>OKG Aktiebolag</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Forsmarks Kraftgrupp</td>
</tr>
</tbody>
</table>

*Out of operation; on decommissioning phase

### RESPONSIBILITIES
- **Lovisa**: Fortum is the owner, licensee and operator with all the responsibilities specified in the Nuclear Energy Act, Nuclear Liability Act, and other relevant nuclear legislation.
- **Other units**: Fortum is solely an owner with none of the responsibilities assigned to the licensee in the nuclear legislation. Other responsibilities are specified in the Companies Act and the Articles of Association and are mostly financial.
## Fortum's nuclear power in the Nordics

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oskarshamn 1*</td>
<td>80</td>
<td>51</td>
<td>63</td>
<td>85</td>
<td>68</td>
<td>77</td>
<td>72</td>
<td>1</td>
<td>12</td>
<td>74</td>
<td>60</td>
<td>81</td>
<td>82</td>
<td>0</td>
</tr>
<tr>
<td>Oskarshamn 2*</td>
<td>90</td>
<td>78</td>
<td>76</td>
<td>86</td>
<td>75</td>
<td>90</td>
<td>77</td>
<td>81</td>
<td>33</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oskarshamn 3</td>
<td>85</td>
<td>95</td>
<td>88</td>
<td>70</td>
<td>17</td>
<td>31</td>
<td>68</td>
<td>69</td>
<td>77</td>
<td>75</td>
<td>79</td>
<td>83</td>
<td>77</td>
<td>87</td>
</tr>
<tr>
<td>Forsmark 1</td>
<td>85</td>
<td>76</td>
<td>81</td>
<td>88</td>
<td>38</td>
<td>94</td>
<td>82</td>
<td>89</td>
<td>89</td>
<td>91</td>
<td>75</td>
<td>82</td>
<td>87</td>
<td>91</td>
</tr>
<tr>
<td>Forsmark 2</td>
<td>94</td>
<td>72</td>
<td>85</td>
<td>79</td>
<td>64</td>
<td>38</td>
<td>94</td>
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<td>91</td>
<td>75</td>
<td>82</td>
<td>87</td>
<td>91</td>
</tr>
<tr>
<td>Forsmark 3</td>
<td>95</td>
<td>92</td>
<td>88</td>
<td>69</td>
<td>86</td>
<td>81</td>
<td>85</td>
<td>93</td>
<td>88</td>
<td>83</td>
<td>58</td>
<td>82</td>
<td>86</td>
<td>81</td>
</tr>
<tr>
<td>Loviisa 1</td>
<td>95</td>
<td>93</td>
<td>94</td>
<td>86</td>
<td>96</td>
<td>93</td>
<td>94</td>
<td>84</td>
<td>92</td>
<td>92</td>
<td>93</td>
<td>88</td>
<td>93</td>
<td>91</td>
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<tr>
<td>Loviisa 2</td>
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<td>88</td>
<td>96</td>
<td>93</td>
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<td>89</td>
<td>94</td>
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<td>93</td>
<td>89</td>
<td>92</td>
<td>93</td>
<td>93</td>
<td>85</td>
</tr>
<tr>
<td>Olkiluoto 1</td>
<td>98</td>
<td>94</td>
<td>97</td>
<td>94</td>
<td>97</td>
<td>92</td>
<td>95</td>
<td>90</td>
<td>97</td>
<td>94</td>
<td>96</td>
<td>91</td>
<td>93</td>
<td>87</td>
</tr>
<tr>
<td>Olkiluoto 2</td>
<td>94</td>
<td>97</td>
<td>94</td>
<td>97</td>
<td>95</td>
<td>95</td>
<td>91</td>
<td>96</td>
<td>93</td>
<td>97</td>
<td>89</td>
<td>94</td>
<td>81</td>
<td>94</td>
</tr>
</tbody>
</table>

Source: Fortum
*) Out of operation; on decommissioning phase

Finnish units world class in availability

Overview of production and consumption: [www.fortum.com/investors](http://www.fortum.com/investors) - energy related links
## Thermal power generation capacity in Russia on 31 Dec 2018

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SUPPLY STARTS</th>
<th>POWER PLANT</th>
<th>FUEL TYPE</th>
<th>CCS CAPACITY</th>
<th>CSA CAPACITY</th>
<th>PRODUCTION TYPE</th>
<th>TOTAL CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 2011</td>
<td></td>
<td>Tyumen CHP-2</td>
<td>Gas</td>
<td>755</td>
<td></td>
<td>CHP/Condensing</td>
<td>755</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chelyabinsk CHP-2</td>
<td>Gas, coal</td>
<td>320</td>
<td></td>
<td>CHP/Condensing</td>
<td>320</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Argayash CHP</td>
<td>Coal</td>
<td>256</td>
<td></td>
<td>CHP/Condensing</td>
<td>256</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chelyabinsk CHP-1</td>
<td>Gas</td>
<td>134</td>
<td></td>
<td>CHP/Condensing</td>
<td>134</td>
</tr>
<tr>
<td>2011</td>
<td>Feb/2011</td>
<td>Tyumen CHP-1</td>
<td>Gas</td>
<td>472</td>
<td>210</td>
<td>CHP/Condensing</td>
<td>682</td>
</tr>
<tr>
<td></td>
<td>Jun/2011</td>
<td>Chelyabinsk CHP-3</td>
<td>Gas</td>
<td>360</td>
<td>233</td>
<td>CHP/Condensing</td>
<td>593</td>
</tr>
<tr>
<td>2013</td>
<td>Apr/2013</td>
<td>Nyagan 1 GRES</td>
<td>Gas</td>
<td>453</td>
<td></td>
<td>Condensing</td>
<td>453</td>
</tr>
<tr>
<td></td>
<td>Dec/2013</td>
<td>Nyagan 2 GRES</td>
<td>Gas</td>
<td>453</td>
<td></td>
<td>Condensing</td>
<td>453</td>
</tr>
<tr>
<td>2015</td>
<td>Jan/2015</td>
<td>Nyagan 3 GRES</td>
<td>Gas</td>
<td>455</td>
<td></td>
<td>Condensing</td>
<td>455</td>
</tr>
<tr>
<td></td>
<td>Dec/2015</td>
<td>Chelyabinsk GRES</td>
<td>Gas</td>
<td>247</td>
<td></td>
<td>CHP/Condensing</td>
<td>247</td>
</tr>
<tr>
<td>2016</td>
<td>Mar/2016</td>
<td>Chelyabinsk GRES</td>
<td>Gas</td>
<td>248</td>
<td></td>
<td>CHP/Condensing</td>
<td>248</td>
</tr>
<tr>
<td>2017</td>
<td>Dec/2017</td>
<td>Chelyabinsk GRES</td>
<td>Gas</td>
<td>248</td>
<td></td>
<td>CHP/CCGT</td>
<td>248</td>
</tr>
</tbody>
</table>

Total: 2,544 MW (CCS), 2,299 MW (CSA), 4,843 MW (TOTAL)
## Key electricity, capacity and gas prices in the PAO Fortum area

<table>
<thead>
<tr>
<th></th>
<th>III/19</th>
<th>III/18</th>
<th>I-III/19</th>
<th>I-III/18</th>
<th>2018</th>
<th>LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity spot price (market price), Urals hub, RUB/MWh</td>
<td>1,107</td>
<td>1,059</td>
<td>1,129</td>
<td>1,025</td>
<td>1,043</td>
<td>1,121</td>
</tr>
<tr>
<td>Average regulated gas price, Urals region, RUB 1000 m³</td>
<td>3,937</td>
<td>3,812</td>
<td>3,883</td>
<td>3,774</td>
<td>3,801</td>
<td>3,896</td>
</tr>
<tr>
<td>Average capacity price for CCS, tRUB/MW/month</td>
<td>145</td>
<td>138</td>
<td>150</td>
<td>144</td>
<td>148</td>
<td>152</td>
</tr>
<tr>
<td>Average capacity price for CSA, tRUB/MW/month</td>
<td>1,004</td>
<td>993</td>
<td>1,066</td>
<td>1,033</td>
<td>1,075</td>
<td>1,099</td>
</tr>
<tr>
<td>Average capacity price, tRUB/MW/month</td>
<td>571</td>
<td>556</td>
<td>604</td>
<td>585</td>
<td>609</td>
<td>624</td>
</tr>
<tr>
<td>Achieved power price for Fortum in Russia, RUB/MWh</td>
<td>1,974</td>
<td>1,884</td>
<td>1,985</td>
<td>1,854</td>
<td>1,888</td>
<td>1,984</td>
</tr>
<tr>
<td>Achieved power price for Fortum in Russia, EUR/MWh</td>
<td>27.5</td>
<td>24.8</td>
<td>27.0</td>
<td>25.4</td>
<td>25.6</td>
<td>26.8</td>
</tr>
</tbody>
</table>

### Day ahead power market prices for Urals

Source: ATS

In addition to the power price generators receive a capacity payment.
Hedging improves stability and predictability – principles based on risk mitigation

Realised prices quarterly since 2000

- Achieved power price
- Spot price, SE&FI avg.

2009 onwards thermal and import from Russia excluded
Q3 2019 – strong performance in Generation, disappointing performance in City Solutions

Comparable operating profit
EUR million

96  71  -40  9  13  3  153

Q3/2018  Generation  City Solutions  Consumer Solutions  Russia  Other  Q3/2019

96
• 1.4 TWh higher hydro volumes
• 0.3 TWh higher nuclear volumes
• 1.1 EUR/MWh higher achieved price

71
• EUR 26 million profit from sold solar stake
• Longer maintenance breaks in CHPs
• Weaker performance in recycling and waste business
• Higher fuel and CO2 prices

-40
• Improved sales margins
• Improved performance in Poland

9
• Improved result in heat business
• Higher power margins
• FX effect EUR 5 million

13

3

153

Interim report Jan-Sep 2019
Q1-Q3 2019 – solid performance in Generation and Russia

Comparable operating profit
EUR million

654

115

-30

24

40

-11

793

- 2.7 EUR/MWh higher achieved price
- 1.6 TWh lower hydro volumes
- 0.8 TWh higher nuclear volume

- EUR 26 million profit from sold solar stake
- Result improvement in H1 more than offset by weak performance in Q3

- Higher sales margin, part of improvement temporary
- Active development of product and service offering

- Higher electricity margin
- Lower bad-debt provisions
- Higher CSA payments
- Heat distribution business transferred to Yustek JV
- FX effect EUR -2 million

- Increased spend on Business Technology including internal and external ventures
## Illustrative combined key financials


<table>
<thead>
<tr>
<th>EUR million</th>
<th>Fortum LTM Q2 2019</th>
<th>Uniper LTM Q2 2019</th>
<th>Impact from transaction (4)</th>
<th>Combined LTM Q2 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>5,404</td>
<td>78,928</td>
<td></td>
<td>84,332</td>
</tr>
<tr>
<td>Comparable EBITDA (1)</td>
<td>1,621</td>
<td>1,260</td>
<td></td>
<td>2,881</td>
</tr>
<tr>
<td>Capex (2)</td>
<td>715</td>
<td>638</td>
<td></td>
<td>1,353</td>
</tr>
<tr>
<td>Interest-bearing liabilities, 30 June 2019 (3)</td>
<td>6,719</td>
<td>1,570</td>
<td>2,253</td>
<td>10,542</td>
</tr>
<tr>
<td>Liquid funds, 30 June 2019 (3)</td>
<td>1,297</td>
<td>717</td>
<td></td>
<td>2,014</td>
</tr>
<tr>
<td>Net interest-bearing liabilities, 30 June 2019 (3)</td>
<td>5,422</td>
<td>853</td>
<td>2,253</td>
<td>8,528</td>
</tr>
<tr>
<td>Number of employees, 30 June 2019</td>
<td>8,383</td>
<td>11,962</td>
<td></td>
<td>20,345</td>
</tr>
</tbody>
</table>

Combined key financials are presented for illustrative purposes only and they do not include possible impacts from aligning differences in accounting principles, effects from co-owned power companies or eliminations of sales, purchases, receivables and payables between the Groups.

(1) Comparable EBITDA is based on the Fortum’s Comparable EBITDA and Uniper’s Adjusted EBITDA as defined in Fortum’s and Uniper’s financial statements. No impacts from the assumed transaction has been included.

(2) Capex is based on Fortum’s reported Capex and Uniper’s reported Investments.

(3) Fortum’s interest-bearing liabilities and liquid funds as defined in Fortum’s financial statements. Uniper’s Interest-bearing liabilities includes ‘Financial liabilities and liabilities from leases’ as defined in Uniper’s financial statements (but excludes ‘Margining liabilities’ amounting to EUR 1,002 million). Liquid funds as defined in Uniper’s financial statements. Please see further information regarding Fortum’s Net debt and Uniper’s Net financial position and Economic net debt in their respective financial statements.

(4) ‘Impact from transaction’ is based on the acquisition of approximately 20.5% of Uniper’s outstanding share capital at a price of EUR 29.93 per share.
Capital returns: 2018 EUR 1.10 per share ~ EUR 1 billion

Fortum’s dividend policy is based on the following preconditions:

- The dividend policy ensures that shareholders receive a fair remuneration for their entrusted capital, supported by the company’s long-term strategy that aims at increasing earnings per share and thereby the dividend.
- When proposing the dividend, the Board of Directors looks at a range of factors, including the macro environment, balance sheet strength as well as future investment plans.

Since 1998 Fortum has paid dividends totaling EUR 15.6 billion

Fortum’s target is to pay a stable, sustainable, and over time increasing dividend of 50-80% of earnings per share excluding one-off items
For more information, please visit www.fortum.com/investors

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The AGM 2020 on 17 March 2020
The ex-dividend date 18 March 2020
Q1/2020 results on 29 April 2020
Q2/2020 results on 17 July 2020
Q3/2020 results on 29 October 2020
The CMD planned for 3 December 2020