Positioning Fortum for the decade of electricity

Pekka Lundmark, President and CEO
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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

Profitability

Increasing uncertainty

Competitive benchmark portfolio

Time

Today 2020’s 2030’s

Illustrative
This is what Fortum launched in 2016...

**Vision**
For a cleaner world

**Megatrends**
- Climate change and resource efficiency
- Urbanisation
- Active customers
- Digitalisation, new technologies

**Mission**
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.

**Strategy**
- Drive productivity and industry transformation
- Grow in solar and wind
- Create solutions for sustainable cities
- Build new energy ventures
... and has successfully delivered

Drive productivity and industry transformation
- Largest shareholder in Uniper
- Top benchmark performance in hydro, nuclear, trading and Russia
- Active fleet development and capacity upgrades
- EUR 100 million fixed cost reduction
- Successful lobbying
- Russian EBIT target reached

Grow in solar and wind
- >140 MW of operational wind and 220 MW of operational solar
- >1 GW solar and wind pipeline
- Russia’s first industrial scale windfarm
- Largest roof-top solar B2B contract in Nordics

Create solutions for sustainable cities
- Restructuring of Hafslund and Fortum Oslo Varme
- Creating recycling and waste solutions by Ekokem acquisition
- New CHP plants
- Forming Consumer Solutions with 2.5 million customers
- Acquisition of Polish Duon
- Restructuring of heat business in Russia

Build new energy ventures
- Charge&Drive and Plugsurfing, 200 000 e-mobility users today
- Increasing business in Horse Power and Smart Living
- Venture investments
- Demand response with 5 MW flex capacity and ~2 000 households
- Chempolis investments in biotechnology
Fortum has transformed the company in line with its strategy and capital redeployment goals.

~ EUR 10 billion
from largest divestments (in 2013-2015) …

~ EUR 7 billion
… to acquisitions and investments (2016-2018)

Comparable operating profit, MEUR*

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018 LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>1,070</td>
<td>1,085</td>
<td>808</td>
<td>644</td>
<td>811</td>
<td>949</td>
</tr>
</tbody>
</table>

Achieved Nordic power price, EUR/MWh

<table>
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<th>2018 LTM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>46.4</td>
<td>41.4</td>
<td>33.0</td>
<td>31.0</td>
<td>31.8</td>
<td>33.2</td>
</tr>
</tbody>
</table>

* from continued operations, excluding distribution network business
Fortum’s assets are well positioned in prevailing market conditions

Source: Nasdaq Commodities, Bloomberg
Fortum has a long green track record – ranking among the top utilities in Europe for low CO₂ emissions

Increasing CO₂-free power generation

Annual CO₂-free power generation has tripled from 15 TWh in 1990 to 45 TWh in 2017

Fortum’s power generation, TWh

Among the lowest specific emissions

Fortum: 96% of the power generation in the EU and 61% of its total power generation is CO₂-free

Electricity specific emissions for European generators

Growing in solar and wind

Fortum is targeting a multi gigawatt portfolio in solar and wind

Fortum’s wind and solar power generation capacity, MW

* Note: All figures, except "Fortum total", include only European power generation.

Fortum’s specific emissions of the power generation in 2017 in the EU were 28 g/kWh and in total 174 g/kWh, same as in the previous year.

Source: PwC, December 2017, Climate Change and Electricity (including those companies with data for power generation available only). Fortum
Fortum’s vision is even more valid today – *For a cleaner world*

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*Increasing uncertainty*  

*Illustrative*
Fortum’s long-term financial targets and dividend policy remain unchanged

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.
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

- Greenhouse gas emissions

- European emissions (MtCO₂eq.)

- Transportation
- Buildings
- Industry
- Other

- Energy-related emissions

- EU 2050 roadmap target

- (minimum targets from 1990 level)

- 40%
- 60%
- 80%
- 95%

- Source: IEA World Energy Outlook 2017, Eurostat, Eurelectric, Fortum Industrial Intelligence
Decarbonisation will increase electricity demand

Means to decarbonise via electrification

Carbon neutrality could double electricity demand by 2050

Electric vehicles, hydrogen

Heat pumps, hydrogen

Electrified processes, hydrogen

Indirect electrification, e.g. hydrogen production

Transport

Buildings

Industry

Today

By 2050

Electricity demand (TWh)

3,000

6,000

Source: Eurelectric study, May 2018, Scenario 3
Demand for flexibility is increasing because stable and flexible capacity is being replaced by intermittent generation

- Higher share of intermittent solar and wind capacity
- Reduced share of flexible coal and oil - partly compensated by increased gas
- Decline of stable nuclear generation
- Coal and nuclear phase-out in Europe will accelerate the shift
- Stable share of flexible hydro production

- There is a need to increase the share of flexible assets in the European power mix
- All sources of flexibility will be needed
- … and the value of flexible assets will increase

Source: IEA World Energy Outlook 2017
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 CO$_2$ prices
- Weather conditions
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
Fortum’s investment in Uniper supports Europe’s energy transition and secures a valuable cash flow contribution

Fortum is the single largest shareholder in Uniper

- CFO Markus Rauramo appointed Vice Chairman of Uniper’s Supervisory Board
- Supervisory Board mandates extend until 2022
- The Russian regulatory decision limits Fortum’s shareholding to a maximum of 50%
- Dividend and new Supervisory Board members are single majority decisions at Uniper’s AGM

The Uniper investment is creating shareholder value

- Based on consensus estimates*, Uniper’s result is expected to contribute by EUR 0.33-0.44 to Fortum’s EPS
- Uniper’s future dividends will contribute to Fortum’s cash flow
- Shareholder value created on higher Uniper share price compared to offer price of EUR 21.31

* = Consensus estimates as of 5 November 2018 for Uniper’s annual underlying net income 2018-2020
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Cross-organisational development initiatives to ensure successful strategy execution

- Strengthen Open Leadership culture to boost empowerment, situation awareness and agility
- Become a Digital Winner through data and analytics leadership
- Shape the Regulatory Agenda through proactive dialogue
- Develop Sales and Commercialisation excellence

Continued development of existing, and step-change in new competences
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