FACTS AND FIGURES – BA HEAT

Business Area Heat, covers Vattenfall’s heat operations, including all thermal operations (except lignite), and aims to be the partner of choice for customers and communities.

<table>
<thead>
<tr>
<th></th>
<th>2015*</th>
</tr>
</thead>
<tbody>
<tr>
<td>External net sales (MSEK)</td>
<td>14,356</td>
</tr>
<tr>
<td>EBIT (MSEK)**</td>
<td>-2,555</td>
</tr>
<tr>
<td>Underlying EBIT (MSEK)**</td>
<td>1,759</td>
</tr>
<tr>
<td>Investments (MSEK)</td>
<td>6,532</td>
</tr>
<tr>
<td>Sales of heat (TWh)</td>
<td>22.6</td>
</tr>
<tr>
<td>District heating networks (km)</td>
<td>~5,900</td>
</tr>
<tr>
<td>Number of employees (FTE)</td>
<td>~4,200</td>
</tr>
</tbody>
</table>

* 2015 figures include Nordjylland combined heat and power plant in Denmark, which has been divested.
** The value has been recalculated due to the reclassification of the lignite operations as discontinued operations.

Total installed heat capacity 2015: 13,455 MW
TWO QUITE DIFFERENT BUSINESSES

The heat business offers profitable growth whereas the condensing business is under pressure due to the weak wholesale price development.

**Heat Business**
- Long term heat customer contracts and positive regulation protect from weak wholesale markets
- DH AA-Diemen
- DH WPW
- DH Rotterdam
- DH Arnhem Nijmegen
- Heat Sweden
- DH Hamburg
- Decentral B + HH

**Condensing Business**
- Full exposure towards wholesale markets (except Velsen)
- Epe
- Eemshaven
- Hemweg 8
- Hemweg 9
- Velsen
- Moorburg
HEAT IS AN ATTRACTIVE BUSINESS FOR VATTENFALL

<table>
<thead>
<tr>
<th>• Europe’s largest Heat supplier offering sustainable heat solutions ...</th>
<th>• Serving Europe’s growth powerhouses (Berlin, Amsterdam, Hamburg, Uppsala, ...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Less than 1% p.a. customer churn of our &gt;2 m end customer base ...</td>
<td>• Substantial political support from our partners to grow and expand our presence</td>
</tr>
<tr>
<td>• 9% ROCE ...</td>
<td>• ... combined with a sustainability and CO₂ neutrality target</td>
</tr>
</tbody>
</table>
Building insulation causes decreasing overall heat demand (TWh). District heating is expected to compensate these house-specific losses by connecting new (mostly larger) buildings and increasing sold billing capacity (MW). De-central provides attractive growth as old small oil/gas boilers are replaced.

Residential heat market structure

Sweden – mature DH market
- Good and stable profitability
- Little competition (no gas grid)
- Moderate organic growth potential

Netherlands – young DH market
- Existing regulation represents an obstacle for leveraging large growth potential
- Selected profitable growth opportunities available for waste based DH

Germany – developing DH market
- Favorable support schemes for gas CHP/DH
- Large profitable growth opportunities to displace decentral oil and gas boilers with district heating and decentral solutions

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DISTRICT HEATING - AN ATTRACTIVE BUSINESS WITH GOOD POLITICAL SUPPORT

District heating is a stable and attractive business to Vattenfall...

- Fits well into the future energy system, if based on flexible and low emitting heat generation
  - Wanted by political stakeholders in Germany, Netherlands and Sweden
  - Seen as a key technology to reduce CO₂ and achieve climate neutrality
  - Offers high potential to link electricity and heat markets with PtH, heat storages and flexible CHP
- Large customer growth potential, if the right product is in place
- Heat business is situated in growing metropolis (at least partially compensating for isolation)
- Robust against wholesale electricity markets
  - (Semi-) regulated business
  - Long term customer contracts
  - Revenue share from wholesale markets: Heat Sweden <10%, Heat GE <30%, Heat NL ~40%

... with an attractive support scheme in Germany until 2022

- Stimulation of investments towards low carbon, high efficiency and flexibility
- Upcoming CHP law (draft): CHP-subsidies for the first 30.000h of operation if project installed/finished by end of 2022, e.g.:
  - CCGT Lichterfelde: ~270 MEUR total subsidies (78% of Capex)
  - CCGT Marzahn: ~250 MEUR total subsidies (78% of Capex)
  - Several other profitable investment opportunities in Berlin and Hamburg
- Heat grid investments receive up to 40% (max. 20 MEUR/project)
- Heat storage investments receive up to 30% (max. 10 MEUR/project)
- These investments help achieving a district heating product quality (PEF, CO₂) that ensures customer/market success – non compliance will result in a competitive disadvantage

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Good fit of district heating into energy system
- District heating is an attractive technology to regulators – key attribute for business success
- Support schemes for gas CHP, heat storages and grids offer large business opportunities; But: risk that non-compliance will result in (cost) burden

Profitable heat customer growth opportunities
- Attractive existing heat product proposition to customers
- Emerging product/service opportunities (e.g. digitalization)

Poor wholesale electricity market outlook sets condensing portfolio in a weak position

Connect with stakeholders and customers
Create profitable growth with customers
Shape a sustainable portfolio
Improve operational & financial performance
Develop our team and culture

9% ROCE; healthy Cash Flow
- Heat portfolio very well positioned to deliver on financial targets
- Condensing portfolio with challenged profitability

Balance Group Capex reduction targets with:
- Profitable Heat growth opportunities
- Needed system availability for profitable and safe operation

Shape sustainable business:
- environmentally friendly
- accepted by society
- sound financial performance
- Right people, competences and culture

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### BA HEAT’S LARGEST POWER PLANTS

<table>
<thead>
<tr>
<th>CHP and heat plants</th>
<th>Country</th>
<th>Type</th>
<th>Installed capacity (MWth)</th>
<th>Installed capacity (MWel)</th>
<th>Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reuter West (Berlin)</td>
<td>GER</td>
<td>CHP</td>
<td>758</td>
<td>564</td>
<td>Hard coal</td>
</tr>
<tr>
<td>Diemen 33+34</td>
<td>NL</td>
<td>CHP</td>
<td>440</td>
<td>689</td>
<td>Gas</td>
</tr>
<tr>
<td>Mitte (Berlin)</td>
<td>GER</td>
<td>CHP</td>
<td>670</td>
<td>444</td>
<td>Gas</td>
</tr>
<tr>
<td>Lichterfelde¹ (Berlin)</td>
<td>GER</td>
<td>CHP</td>
<td>843</td>
<td>432</td>
<td>Gas</td>
</tr>
<tr>
<td>Uppsala</td>
<td>SWE</td>
<td>CHP</td>
<td>856</td>
<td>130</td>
<td>Biomass, waste, peat</td>
</tr>
</tbody>
</table>

1) A new gas-fired CHP plant is under construction, which will replace the older facility. See below ongoing investment project. Thermal capacity includes already new built HOB’s.

<table>
<thead>
<tr>
<th>Other plants</th>
<th>Country</th>
<th>Type</th>
<th>Installed capacity (MWth)</th>
<th>Installed capacity (MWel)</th>
<th>Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moorburg (Hamburg)</td>
<td>GER</td>
<td>Electricity</td>
<td>-</td>
<td>1,548</td>
<td>Hard coal</td>
</tr>
<tr>
<td>Magnum</td>
<td>NL</td>
<td>Electricity</td>
<td>-</td>
<td>1,311</td>
<td>Gas</td>
</tr>
<tr>
<td>Hemweg 8+9</td>
<td>NL</td>
<td>Electricity</td>
<td>-</td>
<td>1,070</td>
<td>Hard coal + gas</td>
</tr>
<tr>
<td>Velsen</td>
<td>NL</td>
<td>Electricity</td>
<td>-</td>
<td>978</td>
<td>Gas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ongoing investment projects</th>
<th>Country</th>
<th>Type</th>
<th>Installed capacity (MWth)</th>
<th>Installed capacity (MWel)</th>
<th>Fuel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lichterfelde (Berlin), under constr.</td>
<td>GER</td>
<td>CHP</td>
<td>222</td>
<td>300</td>
<td>Gas</td>
</tr>
</tbody>
</table>