Vattenfall Capital Markets Day 2009

Presentation by:

Helene Biström
Senior Executive Vice President
Head of Business Group Pan Europe

Amsterdam, 23 September 2009
Contents

• Overview Business Group Pan Europe

• Key issues and challenges
  – Making electricity clean
    • Nuclear update
    • Wind investments
  – E-mobility

• Summary and conclusions
Overview Business Group Pan Europe

Board of Directors
Chief Executive Officer

Group Shared Service
Group Functions

Business Group Pan Europe
- Wind
- Nuclear
- Engineering

Business Group Nordic
- Generation
- Distribution
- Sales
- Heat
- Services

Business Group Central Europe
- Mining & Generation
- Transmission
- Distribution Germany
- Heat Germany
- Sales Germany

Business Group Benelux
- Exploration & Production
- Power, Heat & Services
- Sales

Trading

Shared Service Centres
Business Group Pan Europe comprises three Group-wide business units: Wind, Nuclear and Engineering. The Business Group is also responsible for Vattenfall’s European Business development unit, focusing on efficient use of energy and biomass.

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating profit (EBIT), MSEK</td>
<td>3,567</td>
</tr>
<tr>
<td>Electricity generation, TWh</td>
<td>47.7</td>
</tr>
<tr>
<td>- of which, nuclear power</td>
<td>46.2</td>
</tr>
<tr>
<td>- of which, wind power</td>
<td>1.6</td>
</tr>
<tr>
<td>Employees</td>
<td>5,007</td>
</tr>
<tr>
<td>Customers</td>
<td>0</td>
</tr>
</tbody>
</table>

Wind power Benelux is not included in 2008 figures
Making Electricity Clean – BG Pan Europe

Vattenfall Group Electr. Generation Road Map

BG Pan Europe is responsible for two important energy sources – nuclear and wind.
Recent key events nuclear power

Nuclear power plants (NPPs):

- Restart of German Krümmel NPP on 21 June. Reactor scram due to short circuit in a transformer 4 July
- Extensive modernization projects at Swedish Ringhals NPP
- Swedish Radiation Safety Authority (SSM) is subjecting Ringhals NPP to special conditions for operation
- The SSM lifted the special supervision at Forsmark NPP
World-class safety and operations

Priority 1:
Strong safety management

Priority 2:
Maximize Availability, Reliability and Lifetime

Priority 3:
Cost Optimization
Making electricity clean – Wind power

- Vattenfall is the number one wind operator in Nordic, the sixth largest in Europe and the largest wind operator of offshore wind in the world.

- Vattenfall is active within wind power in Sweden, Denmark, United Kingdom, Germany, Poland and Benelux.

- The generation capacity will be doubled within two years due to ongoing projects under construction.

- UK is currently seen as the most profitable market due to the huge market potential and its subsidy system, as well as good wind conditions.
• Over 600 MW of wind power capacity is currently under construction (in operation H2 2009 – H2 2012). Major projects are Stor-Rotliden and Thanet.
• The expected electricity generation from these projects is more than 2 TWh.
• Close to 80% of the total capacity under construction is located in the UK.
• Approximately 74% of the capacity is offshore.
The future is electric

Electrification of road transport…

• provides a new demand sector
  – increased sales volumes and electricity revenues
• offers an additional role for electricity within today’s electricity system
• reduces the overall usage of fossil fuel and thus oil dependency
Vattenfall can influence demand increase

```
<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Electric Cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>0</td>
</tr>
<tr>
<td>2015</td>
<td>250,000</td>
</tr>
<tr>
<td>2020</td>
<td>1,000,000</td>
</tr>
<tr>
<td>2025</td>
<td>1,750,000</td>
</tr>
<tr>
<td>2030</td>
<td>2,000,000</td>
</tr>
</tbody>
</table>
```

**“Extra” energy consumption from market development activities**

- Demo project in Gothenburg with Volvo PHEV
- Mini-E project in Berlin

Based on rough estimates for the Swedish market
The future is electric - E-mobility

E-mobility provides positive effects for Vattenfall:

- Improves public perception of electricity
- Promotes electricity demand
- Provides new business opportunities

Plug-in Electric Hybrid Vehicles

60–85 TWh el.*

* Potential in core markets by 2030
Summary and conclusions

- Making electricity clean
  - Nuclear – world class safety and operations
  - Wind – 600 MW under construction

- The future is electric – E-mobility
Back-up
## Key data – BG Pan Europe

<table>
<thead>
<tr>
<th>Amounts in SEK billion</th>
<th>H1 2009</th>
<th>H1 2008</th>
<th>% Change</th>
<th>LTM 2008</th>
<th>FY 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>11.2</td>
<td>10.3</td>
<td>8.5</td>
<td>21.3</td>
<td>20.4</td>
</tr>
<tr>
<td>External net sales *</td>
<td>3.9</td>
<td>3.5</td>
<td>13.2</td>
<td>8.1</td>
<td>7.6</td>
</tr>
<tr>
<td>EBIT *</td>
<td>2.0</td>
<td>2.6</td>
<td>-23.6</td>
<td>3.0</td>
<td>3.6</td>
</tr>
<tr>
<td>Net assets **</td>
<td>125.9</td>
<td>96.7</td>
<td>30.2</td>
<td>--</td>
<td>119.2</td>
</tr>
<tr>
<td>Electr. generation, TWh</td>
<td>25.1</td>
<td>26.4</td>
<td>-4.9</td>
<td>46.4</td>
<td>47.7</td>
</tr>
<tr>
<td>Heat sales, TWh</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Employees ***</td>
<td>5,469</td>
<td>4,954</td>
<td>10.5</td>
<td>--</td>
<td>5,007</td>
</tr>
</tbody>
</table>

* Excl. intra group transactions
** At the end of the period
*** Full time equivalents (FTE)

Wind power Benelux is not included in 2008 and 2009 figures
Example - Stor-Rotliden, Sweden

Stor-Rotliden - Key Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated power</td>
<td>78MW (29x2MW &amp; 11x1.8MW)</td>
</tr>
<tr>
<td>Expected energy generation</td>
<td>229GWh/year</td>
</tr>
<tr>
<td>Investment</td>
<td>SEK ~1,400 million</td>
</tr>
</tbody>
</table>

Project Background and Progress

- Project developed by o2 Vindkompaniet
- Acquired in Q1 2009 for 60 MSEK (fully consented)
- The first project under construction within the investment programme – Onshore Wind 1 (200MW)
- Civil works (roads) started 10th of June 2009 (TG3 decision taken 3rd of June 2009) and commissioning is expected in late November 2010.
- Key suppliers (multi-contract)
  - Vestas V90 (from framework agreement 100MW): 29 rated 2MW and 11 rated 1.8MW
  - PEAB: civil works
  - Siemens: Transformer and substations
  - Ericsson: Electric and optic cables
  - Grid connection: Vattenfall Eldistribution (130kV substation Tuggen)

Location – Åsele kommun, Västerbottens län

Approximately 100 km west of Umeå
Example – Ormonde, UK

Ormonde - Key Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated power</td>
<td>150MW (30x5MW)</td>
</tr>
<tr>
<td>Expected energy generation</td>
<td>508GWh/year</td>
</tr>
<tr>
<td>Investment</td>
<td>£ ~450 million</td>
</tr>
</tbody>
</table>

Project Background and Progress

- Project developed by Eclipse Energy UK Plc (Acquired by Vattenfall)
- A UK Round 1 site in the Irish Sea
- 95% of all contracts have been signed in July 2009
- Commissioning of the entire farm is expected at end of 2011
- Key suppliers:
  - REpower Systems: 30 x 5MW turbines
  - BiFab: Design and manufacture foundations
  - Areva: Electrical works

The Ormonde project is located offshore Barrow Irish Sea
Example – Thanet, UK

Thanet - Key Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated power</td>
<td>300MW (100x3MW)</td>
</tr>
<tr>
<td>Expected energy generation</td>
<td>1,000GWh/year</td>
</tr>
<tr>
<td>Investment</td>
<td>£ ~900 million</td>
</tr>
</tbody>
</table>

Location – offshore UK

The Thanet project is located approx. 12 km off Foreness Point, the most eastern part of Kent.

Project Background and Progress

- Thanet offshore wind farm will be the largest operational wind farm in the world.
- The project is currently under construction and more than half of the monopile foundations have been installed. The implementation is in accordance with the planned time schedule.
- Turbines are planned for commission in March until September 2010.
- Key supplier
  - Vestas V90: 100 turbines á 3MW
  - Many contracts of different size
Volvo - Vattenfall PHEV Development - a commercially based industrial investment

- Joint development of a Volvo Plug-in hybrid vehicle
  - first model to be launched end of 201
  - further models to be added consecutively

- Technical set up:
  - combination of diesel engine and electric motor
  - battery enables 50km pure electric drive rechargeable from a standard socket

- Additional benefits:
  - joint communication activities
  - investigation of further business opportunities and battery technology

- Both owners invest in form of in-kind and monetary resources
  - in total SEK 2.4 billion
  - investment period up until 2012

- Pay-back based on
  - licence fee paid on each PHEV car sold
  - agreement valid up until 2020, when JV is dissolved

- Investment return
  - 10% IRR
  - based on 175,000 PHEV sold
Phase 1 (Demo phase) from today to ~2010
Focus on demonstrating electric vehicles and charging technologies, increasing awareness and appetite among likely early adopter segments

- Germany: Mini-E project in Berlin
- Sweden: Demo project in Gothenburg with Volvo PHEV

Phase 2 (Mobilization phase) in 2010-2013/2014
Would engage selection of early adopters, especially fleet operators

- Germany: Model region Hamburg & Berlin as development platform for E-mobility roll-out, supported by German ‘Konjunkturpaket II’
- Sweden: Industrial mobilization on national level with the ambition to stimulate demand