Vattenfall Capital Markets Day 2009

Presentation by:

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Head of Business Unit Trading

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  – Shape of the new, integrated Trading Unit
  – Key strategies for value creation

• Commodity price development

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- Chief Executive Officer
- Group Shared Service
- Group Functions
- Business Group Nordic
- Generation
- Nuclear
- Distribution
- Wind
- Engineering
- Sales
- Heat
- Services
- Business Group Central Europe
- Mining & Generation
- Transmission
- Sales Poland
- Distribution Germany
- Heat Poland
- Heat Germany
- Business Group Benelux
- Exploration & Production
- Power, Heat & Services
- Sales
- Shared Service Centres
- Trading
Overview Business Unit Trading

• Business Unit Trading is governed directly from Group level. The CEO has delegated responsibility to the CFO.

• BU Trading is the set-up of a complete trading infrastructure, cross-regional responsible for Market Access to energy wholesale markets for the entire Vattenfall Group

• Electricity price risk is the risk that has the single greatest bearing on Vattenfall’s earnings and is thus the most important factor for value creation

• BU Trading’s main task is to mitigate and transfer commodity-related risks to the market.
  – Risks between portfolios and commodities are netted as far as possible

  ➔ Improved hedge efficiency and extracting higher value out of the value chain
Trading’s role in Vattenfall’s value chain

Commodity (fuel) markets international
Electricity markets Region x
CO₂-Market EU
Green Certificates

Central Market Access

Trading

Generation & Heat
Including sourcing of fuels

Portfolio Mgmt. for 3rd parties
Sales

Market Place Portfolio(s)
Cables

Netting of positions at market

Sales Customer
Since July 1, 2009 Vattenfall Trading Services (VTS) and Nuon ET&W form the new Trading Unit:

Vattenfall Energy Trading
# Trading integration: complementary and expanded portfolio

## Deeper market knowledge through expanded geographical presence

<table>
<thead>
<tr>
<th>Country</th>
<th>Vattenfall</th>
<th>Nuon</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sweden</td>
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<td></td>
<td></td>
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<tr>
<td>Belgium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Higher asset flexibility through more diverse asset base

### Installed capacity (GW)

<table>
<thead>
<tr>
<th>Source</th>
<th>Vattenfall</th>
<th>Nuon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuclear</td>
<td>7.6</td>
<td>-</td>
</tr>
<tr>
<td>Hydro</td>
<td>11.3</td>
<td>0.02</td>
</tr>
<tr>
<td>Coal</td>
<td></td>
<td>0.9</td>
</tr>
<tr>
<td>Gas</td>
<td>14.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Oil</td>
<td></td>
<td>0.6*</td>
</tr>
<tr>
<td>Other renewables</td>
<td>1.0</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>34.6</td>
<td>4</td>
</tr>
</tbody>
</table>

### Gas sourcing, bcm

<table>
<thead>
<tr>
<th>Source</th>
<th>Vattenfall</th>
<th>Nuon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>7</td>
</tr>
</tbody>
</table>

### Coal sourcing, mtn

<table>
<thead>
<tr>
<th>Source</th>
<th>Vattenfall</th>
<th>Nuon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>2</td>
</tr>
</tbody>
</table>

### Emissions, mtn

<table>
<thead>
<tr>
<th>Source</th>
<th>Vattenfall</th>
<th>Nuon</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>82</td>
<td>8</td>
</tr>
</tbody>
</table>

*Combi Unit (Gas/Oil)*

## Increased customer base – portfolio effect for sales, origination and trading books

### Number of customers

<table>
<thead>
<tr>
<th>Source</th>
<th>Vattenfall</th>
<th>Nuon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>4.8</td>
<td>2.6</td>
</tr>
<tr>
<td>Gas</td>
<td>–</td>
<td>2.1</td>
</tr>
</tbody>
</table>

## Broader commodity coverage – deeper understanding of markets and correlations

- Providing the basis for profitability and value creation
### Key strategies for profitability and value creation

<table>
<thead>
<tr>
<th>Portfolio optimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Exploit full potential/flexibility of the expanded portfolio</td>
</tr>
<tr>
<td>- <strong>Aggregation and management of all commodity exposures</strong> (risks)</td>
</tr>
<tr>
<td>and <strong>unique market access</strong> in BU Trading</td>
</tr>
<tr>
<td>- <strong>Harmonized generation management</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Origination, Sourcing and Structuring</th>
</tr>
</thead>
<tbody>
<tr>
<td>- <strong>Grow and diversify fuel sourcing</strong> (e.g. LNG, coal, biomass, freight and primary CDM)</td>
</tr>
<tr>
<td>- Add selectively market <strong>flexibility by investing in midstream assets</strong> (e.g. gas storage, transport capacity)</td>
</tr>
<tr>
<td>- Expand merchant business through <strong>non-standard contracts</strong> to monetize the full portfolio effects/flexibility and outsource natural risk exposure</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Proprietary Trading</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Expand and <strong>deepen activities across commodities</strong> (power, coal, gas, bio-mass, emissions, etc.) utilizing the combined market knowledge and understanding</td>
</tr>
<tr>
<td>- <strong>Expand geographical presence</strong> in adjacent markets which are important for Vattenfall and Nuon</td>
</tr>
</tbody>
</table>
Electricity Prices: Looking back on turbulent 2 years

Daily Forward Closing Prices

EUR/MWh

Jan 07 Apr 07 Jul 07 Okt 07 Jan 08 Apr 08 Jul 08 Okt 08 Jan 09 Apr 09 Jul 09

ENOY R-10  EEXY R-10  ENOY R-11  EEXY R-11
… with decisive moments in commodity and equity markets

Commodity and Equities indices, Jan 2007 = 100

- **Oil as safe haven?**
- **Rising global GDP**
- **Rising commodity markets**

- Aug 07: Start of sub-prime crisis
- Aug 08: Commodity markets crashed
- Jan 09: markets start to recover

Source: Vattenfall Energy Trading
Stable upward trend

Phase I (1 Jan 2007 – 31 Aug 2007)

Source: Vattenfall Energy Trading
Financial flows moving into commodities

Phase II (1 Sep 2007 – 3 July 2008)

Source: Vattenfall Energy Trading
Heights of the fear with all markets being correlated


Source: Vattenfall Energy Trading
Correlation between Brent and Dax
Correlation between German Power and Dax
Correlation between German Power and Oil

Daily QF1BYc1, QLCOc1

8/31/2006 - 9/18/2009 (AMS)

Price USD

Price EUR

Corr_QF1BYc1,Last Trade(Last); QLCOc1,Last Trade(Last) 94/2008 -0.374
Divergent trends in commodity and equity markets

Phase IV (25 Dec 2008 - today)

Source: Vattenfall Energy Trading
How does the future look like?

"V shape"

"Protracted recession"

"Japan"

Demand & Supply, tempo of GDP recovery and investments in technology: OPEC spare capacity determines oil price

250 – 100 – 70 - 40 US$/bbl?
Conclusions

- **Global commodity markets:**
  Over the last two years trading was driven by fundamentals, global equity trends, dollar hedging, speculation and fundamentals. Since spring, oil is picking up again.

- **German power prices:**
  For a period of nine months German power exposure became a Dax exposure and drop of demand prevailed over bullish sentiments from the oil market.

- **Oil is the major price driver in commodity markets**
  and depending on tempo of global GDP recovery, stronger correlation of power with oil markets is expected.
Back-up
EEX and Nord Pool spot and futures 2001-2014
Business Unit Trading: Roles and Responsibilities

• **Portfolio and Generation Management:** Execution of Vattenfall’s hedging strategy, short-term and online optimisation, trading related services to internal and external customers.

• **Market Access:** Executes orders and transfers risks to the wholesale market in accordance with its mandates.

• **Trading on own behalf:** Risk taking in electricity and other commodity markets, trading on interconnectors and other borders within given mandates

• **Group responsibility:** Activities that for different reasons make sense to be centralised from a group perspective (e.g. IAS 39)
New Organisation effective from July 1, 2009

- Fully fledged Front Office with all commodity exposures under responsibility of CCO
- Clear mandates to drive the further integration

being prepared for increased value creation and synergies:

- more diversified sourcing and increased purchasing power
- portfolio effects (netting, market access, credit and risk)
- aligned processes and consolidated systems
**Vattenfall Energy Trading**  
– key figures of the combined units

### Trading volume (external) 2008

<table>
<thead>
<tr>
<th>Category</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity in TWh</td>
<td>1,500</td>
</tr>
<tr>
<td>Coal (Swaps and FFA) in mt</td>
<td>110</td>
</tr>
<tr>
<td>CO2 (EUA and CER) in mt</td>
<td>280</td>
</tr>
<tr>
<td>Gas in TWh</td>
<td>590</td>
</tr>
<tr>
<td>Counterparts</td>
<td>~ 500</td>
</tr>
<tr>
<td>Transactions per day</td>
<td>&gt;1,100</td>
</tr>
</tbody>
</table>

### Combined company data

<table>
<thead>
<tr>
<th>Category</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age</td>
<td>36</td>
</tr>
<tr>
<td>Employees</td>
<td>~400</td>
</tr>
<tr>
<td>Nationalities</td>
<td>20+</td>
</tr>
</tbody>
</table>