DONG ENERGY – LEADING THE ENERGY TRANSFORMATION

INTRODUCTION

January, 2017
DONG Energy today

- Global leader in attractive offshore wind market
- Solid track-record in delivering large scale projects
- Cost-of-electricity being systematically reduced
- Robust and highly visible build-out plan
- Differentiated partnership model
- Attractive pipeline options post-2020

- #1 power distribution network in Denmark
- #1 residential and industrial energy sales position in Denmark
- #1 in Danish heat and power generation with a strong and increasing biomass position
- REnescience: Innovative bioenergy technology for waste treatment

Wind Power 75%

Danish utility 16%

Oil & Gas 9%

Key figures 2015:
- DKK 70.8 Bn revenue
- DKK 18.5 Bn EBITDA
- ~6,700 employees

% share of capital employed as of 31 December 2015

Focused position with activities in Denmark, Norway and UK
- Low-cost, low-risk core assets
- Managed for cash to support renewable growth
- Strong hedging position
Significant transformation of DONG Energy over the past decade

**CO₂ emissions halved**
- g/kWh
  - 2007: 613
  - 2015: 334
  - Reduction: 46%

**Operating profit (EBITDA) doubled**
- DKK Bn
  - 2007: 9.3
  - 2015: 18.5
  - Increase: 2.0x

**Business transformed**
- Share of capital employed¹
  - 2007: 24%
  - 2015: 9%
  - Increase: 16%

- Share of operating profit (EBITDA)
  - 2007: 24%
  - 2015: 9%
  - Increase: 16%

**International expansion**
- Share of operating profit (EBITDA)
  - 2007: 60%
  - 2015: 75%
  - Increase: 15%
- International share >5x
  - 2007: 16%
  - 2015: 37%
  - Increase: 21%

1. Excluding unallocated capital employed on DONG Energy group level
Investment strategy drives growth and returns

<table>
<thead>
<tr>
<th>Wind Power</th>
<th>Danish utility</th>
<th>Oil &amp; Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Growth engine</strong></td>
<td><strong>Stable earnings and green conversion</strong></td>
<td><strong>Cash generator</strong></td>
</tr>
<tr>
<td>– Invest in competitive advantage and accelerated, profitable growth</td>
<td>– Optimise regulated returns and develop growth options</td>
<td>– Manage quality producing assets for cash and reinvest in renewables</td>
</tr>
</tbody>
</table>

- Investments in bioenergy, distribution grid and remote power meters

| | | | |
| --- | --- | --- | |
| ~80% | ~10-15% | ~5-10% |

Gross CAPEX target 2016-2020

- ~80%
- ~10-15%
- ~5-10%

Gross capex target 2016: DKK 18-21 Bn; Gross capex target 2017-2020: DKK 60-70 Bn
Offshore wind power is a large scale renewable technology with growth rates exceeding other renewables

**Fastest growing renewable technology in OECD**

<table>
<thead>
<tr>
<th>Technology</th>
<th>Capacity Factor (CAGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offshore wind</td>
<td>25%</td>
</tr>
<tr>
<td>Solar PV¹</td>
<td>14%</td>
</tr>
<tr>
<td>Onshore wind</td>
<td>7%</td>
</tr>
<tr>
<td>Hydro</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: Bloomberg New Energy Finance (BNEF)

1. Sum of utility-scale PV and small-scale PV
2. Capacity factor is a performance indicator measuring to what degree a wind farm has produced according to the farms capacity (actual production / (capacity * hours in period))
3. According to BNEF, long-term offtake price required to achieve a required equity hurdle rate for the project

**Offshore wind power offers multiple advantages**

- Utility size power generation
  - 659 MW Walney Extension will power more than 460,000 UK homes

- Offers +45% capacity factors²
  - Significantly higher than onshore wind and solar PV

- Rapidly declining cost
  - Industry maturity, volume and technological development reduce LCoE³

- Limited visual impact on landscape
  - Wind farms are built far from shore
DONG Energy Wind Power geographical footprint

Unparalleled experience and track record

1991 - 2017
26 years of experience and track record in the offshore wind sector

21 offshore wind farms in operation
7 offshore wind farms under construction

3.6 GW Constructed capacity
2,000 Dedicated employees
3.8 GW under construction

7.5 million Europeans with clean electricity
3.6 GW World's leading operator
14 Partnerships
DONG Energy Wind Power has built a strong integrated end-to-end business model

DONG Energy Wind Power core competencies

- **Develop**
  - Identify and mature projects
  - ~110

- **Build**
  - Manage construction, sourcing and supply
  - ~1,150

- **Operate**
  - Conduct life-cycle maintenance
  - ~640

- **Own**
  - Attract capital through partnerships
  - ~100

- **Full-time employees**
  - ~2,000

**Core Competencies**

- Ability to **design and optimise** projects with a 'total life-cycle cost of wind farm' mindset
- Experience and expertise along the entire value chain allow for **better understanding and management of risks**
- End-to-end model reduces LCoE through **fast feedback** and **learning** across the entire organisation

**Full-time employees**

- Northland Power: ~40
- Statoil: ~75
- SSE: ~100
- WPD: ~160
- Innogy: ~250
- EOn: ~250
- Vattenfall: ~650

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1. Front-end engineering design
2. Excluding CT Offshore and A2SEA as of January 2017
DONG Energy pioneered the offshore wind industry and is today the global leader.

Largest offshore wind player globally today
Global offshore wind capacity
MW

<table>
<thead>
<tr>
<th>Player</th>
<th>Installed</th>
<th>Under construction</th>
<th>% share of global installed capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vattenfall</td>
<td>5.591</td>
<td>997</td>
<td>29%</td>
</tr>
<tr>
<td>E.ON</td>
<td>3.840</td>
<td>1.137</td>
<td>8%</td>
</tr>
<tr>
<td>Innonoy</td>
<td>2.134</td>
<td>2.010</td>
<td>10%</td>
</tr>
<tr>
<td>Iberdrola</td>
<td>2.010</td>
<td>1.225</td>
<td>10%</td>
</tr>
<tr>
<td>Northland Power</td>
<td>1.064</td>
<td>1.273</td>
<td>3%</td>
</tr>
<tr>
<td>WPD</td>
<td>1.273</td>
<td>7.431</td>
<td>1%</td>
</tr>
<tr>
<td>Statkraft1</td>
<td>1.273</td>
<td>280</td>
<td>3%</td>
</tr>
</tbody>
</table>

Wind Power’s scale enables cluster synergies

1. **UK West coast (East Irish Sea)**: Barrow, Burbo Bank, Burbo Bank Extension, West of Duddon Sands, Walney Extension, Walney 1 & 2
2. **East UK North**: Westermost Rough, Race Bank, Hornsea 1
3. **East UK South**: Gunfleet Sands 1 & 2, Gunfleet Sands Demo, London Array
4. **Germany**: Borkum Riffgrund 1, Borkum Riffgrund 2, Gode Wind 1 & 2
5. **Danish waters**: Middelgrunden, Nysted, Horns Rev 2, Anholt, Vindsey
6. **Dutch waters**: Borssele 1 & 2

Synergies:
- Lower logistics costs
- Fewer technician hours
- Fewer facilities needed
- Lower inventory levels

1. Statkraft has decided to scale down their activities in offshore wind. Current assets will be built and development projects will be brought forward to allow divestment before FID.
2. If a project is executed on behalf of a lead developer managing the construction, then 100% of capacity is allocated to the lead developer. If construction is executed by an integrated joint venture, capacity is allocated in proportion to the JV share.
## Proven construction track-record and leading operating capabilities

### Strong construction track-record due to full EPC\(^1\) control

<table>
<thead>
<tr>
<th>Country</th>
<th>Asset</th>
<th>FID</th>
<th>Gross capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>🇬🇧</td>
<td>Westermost Rough</td>
<td>2013</td>
<td>210</td>
</tr>
<tr>
<td>🇩🇪</td>
<td>Borkum Riffgrund 1</td>
<td>2011</td>
<td>312</td>
</tr>
<tr>
<td>🇬🇧</td>
<td>West of Duddon Sands</td>
<td>2011</td>
<td>389</td>
</tr>
<tr>
<td>🇩🇰</td>
<td>Anholt</td>
<td>2010</td>
<td>400</td>
</tr>
<tr>
<td>🇬🇧</td>
<td>London Array</td>
<td>2009</td>
<td>630</td>
</tr>
<tr>
<td>🇬🇧</td>
<td>Walney 1&amp;2</td>
<td>2009</td>
<td>367</td>
</tr>
<tr>
<td>🇩🇰</td>
<td>Horns Rev 2</td>
<td>2007</td>
<td>209</td>
</tr>
</tbody>
</table>

1. Engineering, procurement and construction

### Leader in operating offshore wind farms

# of operated turbines January 2017

- **DONG energy**: ~1000 turbines
- **Vattenfall**: 443 turbines
- **E.On**: 354 turbines
- **Innogy**: 263 turbines
- **SSE**: 143 turbines
- **Centrica**: 129 turbines
- **Statoil**: 90 turbines

Source: Bloomberg New Energy Finance January 2017
Robust and highly visible offshore wind build-out plan until 2020

### 3.8 GW with secured consent and subsidies currently under construction

DONG Energy installed capacity projection towards 2020, GW

<table>
<thead>
<tr>
<th>Country</th>
<th>FID timing</th>
<th>Expected commissioning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>December 2014</td>
<td>Q2 2017</td>
</tr>
<tr>
<td></td>
<td>June 2015</td>
<td>H1 2018</td>
</tr>
<tr>
<td></td>
<td>October 2015</td>
<td>H2 2018</td>
</tr>
<tr>
<td></td>
<td>February 2016</td>
<td>H1 2020</td>
</tr>
<tr>
<td></td>
<td>June 2016</td>
<td>H1 2019</td>
</tr>
</tbody>
</table>

1. DONG Energy will, in accordance with the Dutch tender regulation, build Borssele 1 and 2 within four years from July 2016 with a flexibility of 1 year.
2. The export capacity of Hornsea 1 is 1,200 MW determined by the boundary of the facility (offshore substations), while the aggregated installed generator capacity is 1,218 MW.
At the forefront of making the industry cost competitive

Multiple levers to drive down cost in offshore wind

1. **Scale**
   - Turbines and rotor size
   - Sites
   - Vessel size
   - Cable capacity

2. **Innovation**
   - Foundation design (e.g. monopiles)
   - Electrical

3. **Industrialisation**
   - Transition from single supply to multiple global suppliers

Rapid technological development
Wind turbine rotor diameter, year of commissioning

- Boeing 747, 76m
- 80m: 2002
- 90m: 2005
- 107m: 2007
- 120m: 2011
- 154m: 2014
- 164m: 2016
- 180m: 2020

1. Final investment decision (FID). All LCoE estimates assume a WACC of 10%.
2. For UK project with FID taken in 2020, corresponding to CoD in 2023
Major institutional investors are partners in DONG Energy's offshore wind projects

- **Walney I & II (50.1%)**

- **West of Duddon Sands (50%)**
  - 389 MW (2010)

- **Burbo Bank Extension (50%)**
  - 258 MW (2016)

- **Linco (25%)**
  - 270 MW (2017)*

- **Gunfleet Sands (50.1%)**
  - 173 MW (2011)

- **London Array (25%)**
  - 630 MW (2009 / 2014)

- **Westermost Rough (50%)**
  - 210 MW (2014)

- **Race Bank (50%)**
  - 573 MW (2016)

- **Anholt (50%)**
  - 400 MW (2011)

- **Horns Rev 1 (40%)**
  - 160 MW (2006)

- **Nysted (42.7%)**
  - 166 MW (2010)

- **Gode Wind 2 (50%)**
  - 252 MW (2014)

- **Gode Wind 1 (50%)**
  - 330 MW (2015)

- **Westermost Rough (50%)**
  - 303 MW (2014)

- **Westermost Rough (50%)**
  - 210 MW (2014)

- **Race Bank (50%)**
  - 573 MW (2016)

(*) represents DONG Energy ownership interest

* The transaction is subject to approval by the competition authorities. The transaction is expected to be completed in February 2017.
By 2025 offshore wind power will be truly global...

Strong growth in established and new offshore wind markets
Installed Capacity, GW

Source: Bloomberg New Energy Finance (BNEF), H2 2016 offshore wind market outlook
Thank You