RENEWABLE ENERGY SOURCES IN THE BALTICS

Tallinn – 29 September 2017
Martin Neubert, Chief strategy officer
For questions and comments: Øyvind Vessia, yvess@dongenergy.dk
Global #1 in offshore wind

Biomass - No coal from 2023

Smart Grid & Flexibility

... We have said farewell to oil and gas
It is all about scale

Boeing 747-8
Length: 76m


160m 8MW

200m 13-15MW
An Offshore wind farm is a reliable, large scale power plant

Offshore wind, duration curve, Denmark, 2015

Offshore wind produces in 98% of all hours

Load factor

Hours (total 8,760)

Solar PV  Onshore wind  Offshore wind
Offshore wind shows rapidly declining costs for society

Levelised costs for society of electricity, incl. transmission costs EUR/MWh\(^1\), 2016-prices, bid announcement year.

Sources: DECC; Danish Energy Agency; Energinet.dk; NEV.

1. Levelised revenue (price) of electricity over the lifetime of the project used as proxy for the levelised costs to society. It consists of a subsidy element for the first years and a market income for the whole lifetime. Discount rate of 3.5% used to reflect society’s discount rate. Market income based on country specific public wholesale market price projections at the time of contracting where available else an average of 5 analytics is used. For comparability across projects a generic scope adjustment (incl. transmission and extra project development costs) have been applied. Due to the specific transmission set up in Germany cost estimates from the Offshore Netzentwikkungsplan 2017 have been applied.
Large economic offshore wind potential in the Baltic sea

*LCOE OF LESS THAN 65 €/MWh IN 2030, INCLUDING TRANSMISSION. SOURCE: “UPSIDE” SCENARIO OF BVG ASSOCIATES REPORT FOR WIND EUROPE: “UNLEASHING THE POTENTIAL OF EUROPE’S OFFSHORE WIND POTENTIAL”

**EUROSTAT 2015: DENMARK, ESTONIA, LATVIA, LITHUANIA, POLAND, FINLAND AND SWEDEN
An offshore turbine a day turns subsidies away