Document 2

Leading the energy transformation

4th Discussion Round, Studying Energy Situation

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General Manager for Ørsted Asia Pacific
Chairman Ørsted Taiwan

Tokyo, 8th of Dec 2017

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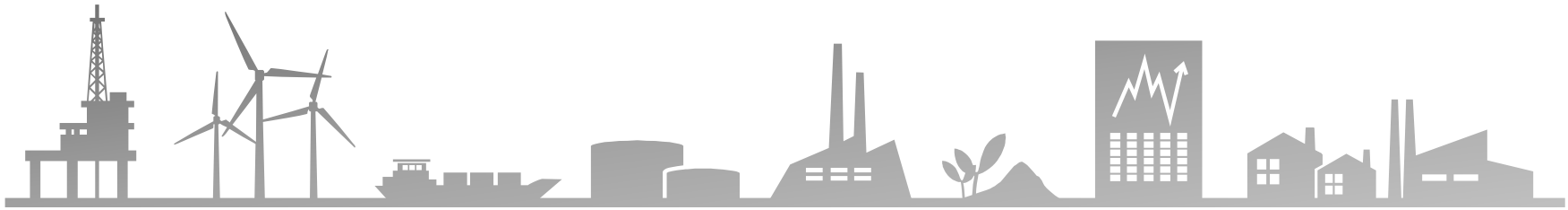
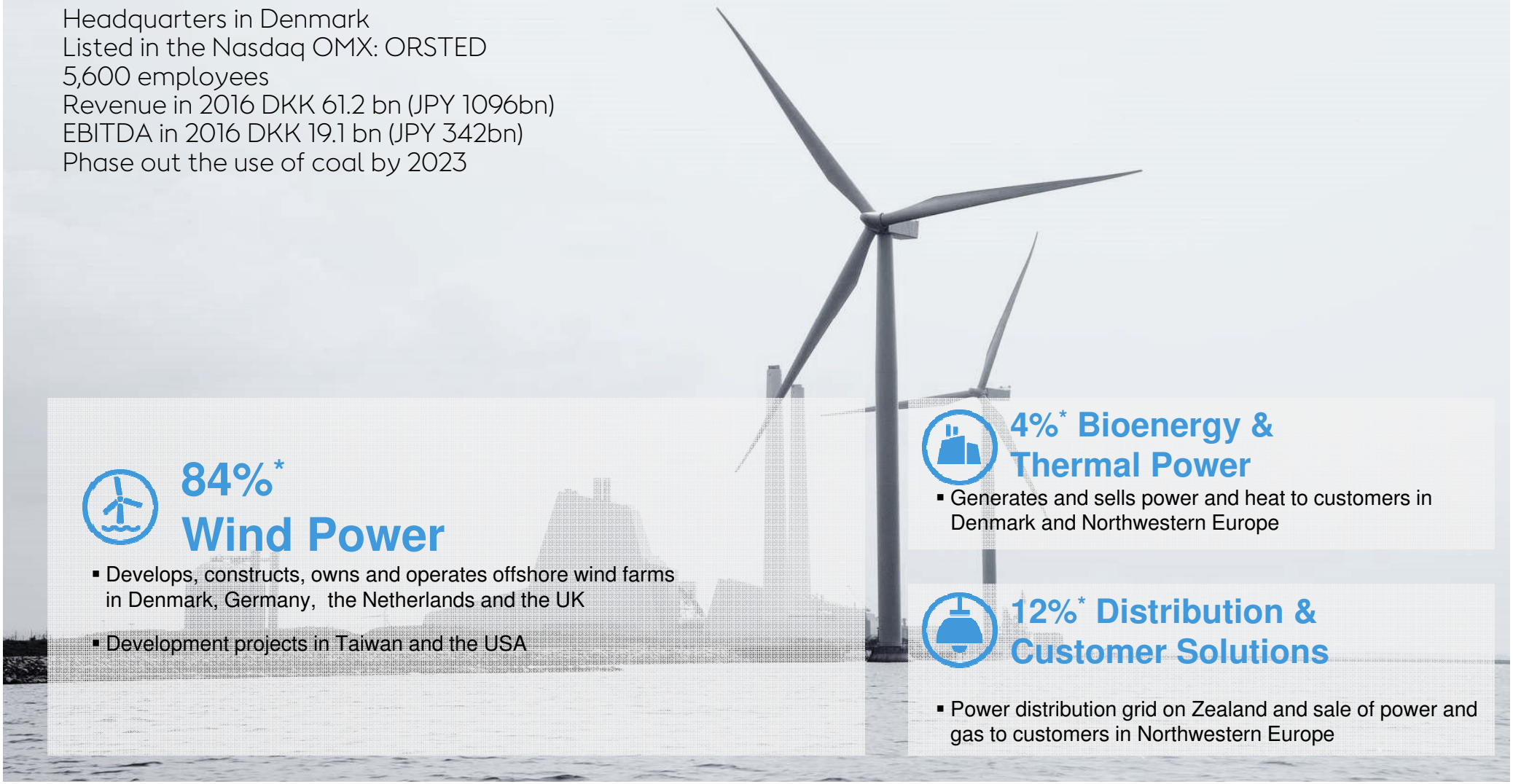



DONG Energy
is becoming
Ørsted
Create a world that runs entirely on green energy
Profound strategic transformation
from black to green energy
and recent divestment of the upstream oil and gas

Ørsted at a glance

Headquarters in Denmark
Listed in the Nasdaq OMX: ORSTED
5,600 employees
Revenue in 2016 DKK 61.2 bn (JPY 1096bn)
EBITDA in 2016 DKK 19.1 bn (JPY 342bn)
Phase out the use of coal by 2023



84%* Wind Power

- Develops, constructs, owns and operates offshore wind farms in Denmark, Germany, the Netherlands and the UK
- Development projects in Taiwan and the USA

4%* Bioenergy & Thermal Power

- Generates and sells power and heat to customers in Denmark and Northwestern Europe

12%* Distribution & Customer Solutions

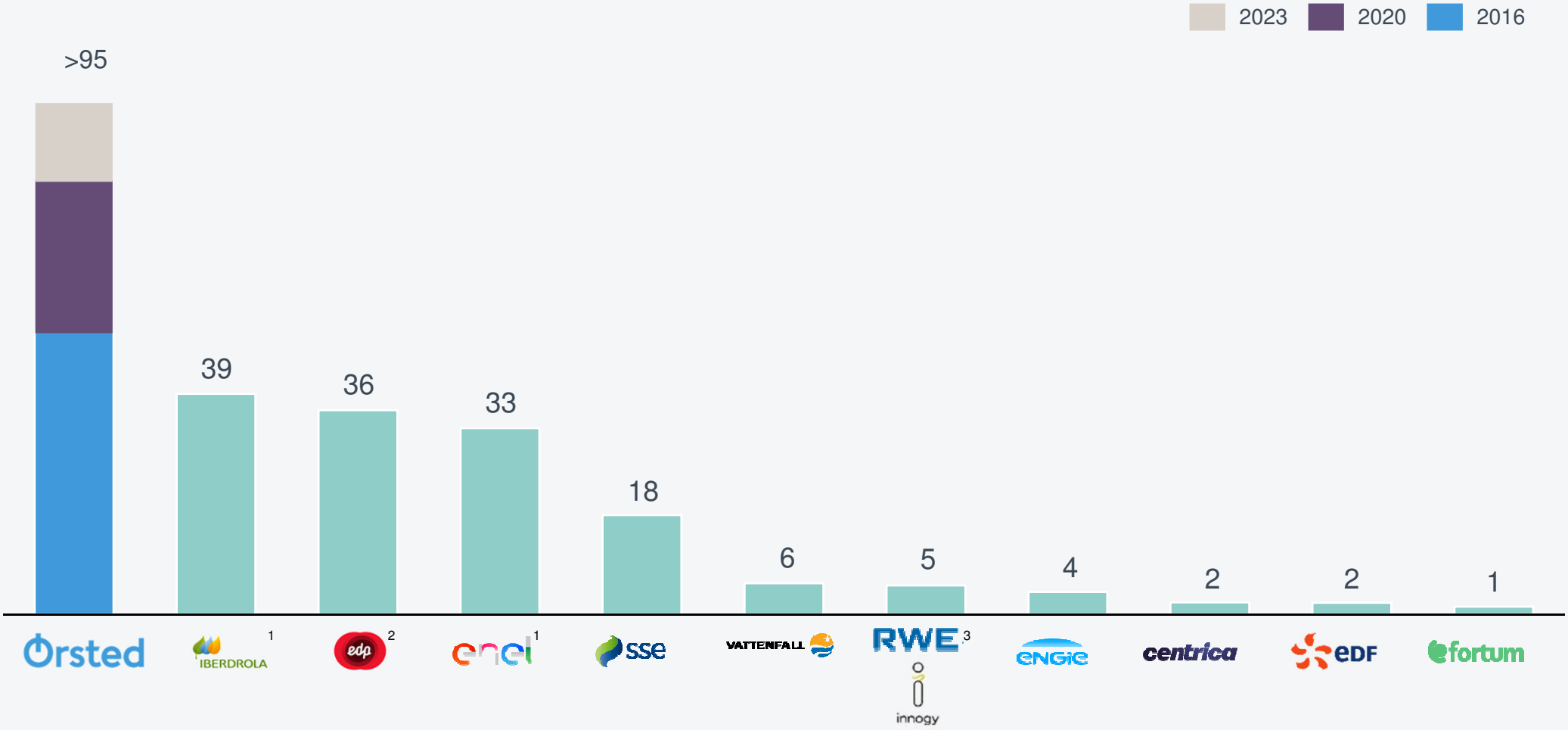
- Power distribution grid on Zealand and sale of power and gas to customers in Northwestern Europe

* Share of the Ørsted Group's capital employed

Ørsted

Greenest European energy company compared with our peers

2016 %-share of power generation from new renewables: Offshore wind, onshore wind, solar PV and bioenergy



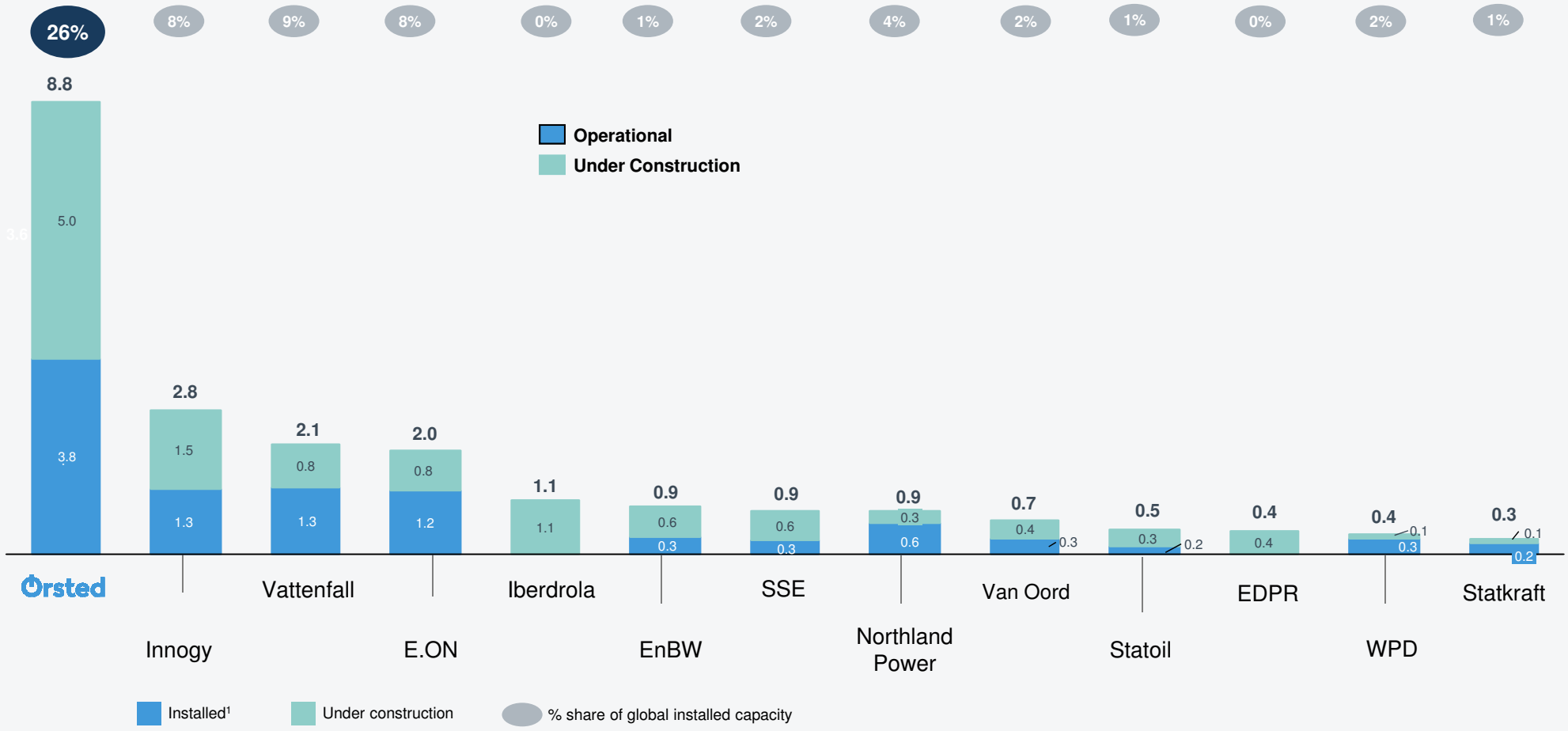
Source: Annual reports, corporate websites
Note: Not all peers disclosed detailed generation breakdown in 2016. These include E.On, Statkraft, Uniper
1. Includes hydro due to lack of disclosure granularity 2. EDPR majority owner is EDP with 82% so this is treated as a combined group. 3. RWE spun off renewables, grids and retail operations into separate company innogy in 2016, but RWE remains a majority owner with 75%. Percentage is calculated for the combined group

We are the Global Leader in Offshore Wind, with more than 25 years of experience

Largest offshore wind player globally today

Global offshore wind capacity

GW



Source: Bloomberg New Energy Finance, September 2017, Orsted analysis

1. 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

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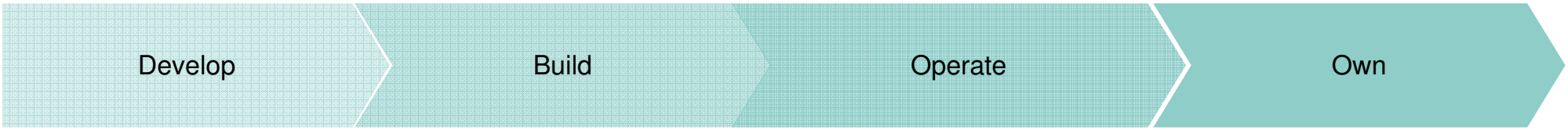
We are not just a developer, but an integrated Energy Company

Strong integrated end-to-end business model



25+ years in offshore wind sector

Always built on time, on budget!

Long-term commitment, entering a market to stay

Proven track record in developing local, long-term partnerships

A trusted partner & advisor

We have partnered up with

SSE
IBERDROLA RENEWABLES
e·on
Masdar
VATTENFALL
PGGM
Caisse de dépôt et placement du Québec
pka
LEGO
Green Investment Group
PFA
PensionDanmark
GLOBAL INFRASTRUCTURE PARTNERS
STADTWERKE LÜBECK
LÆRERNES pension
Industriens Pension
talanx. Insurance. Investments.
LÆRERNES PENSIONSKASSE
Marubeni
William Demant
Sumitomo Corporation
MACQUARIE

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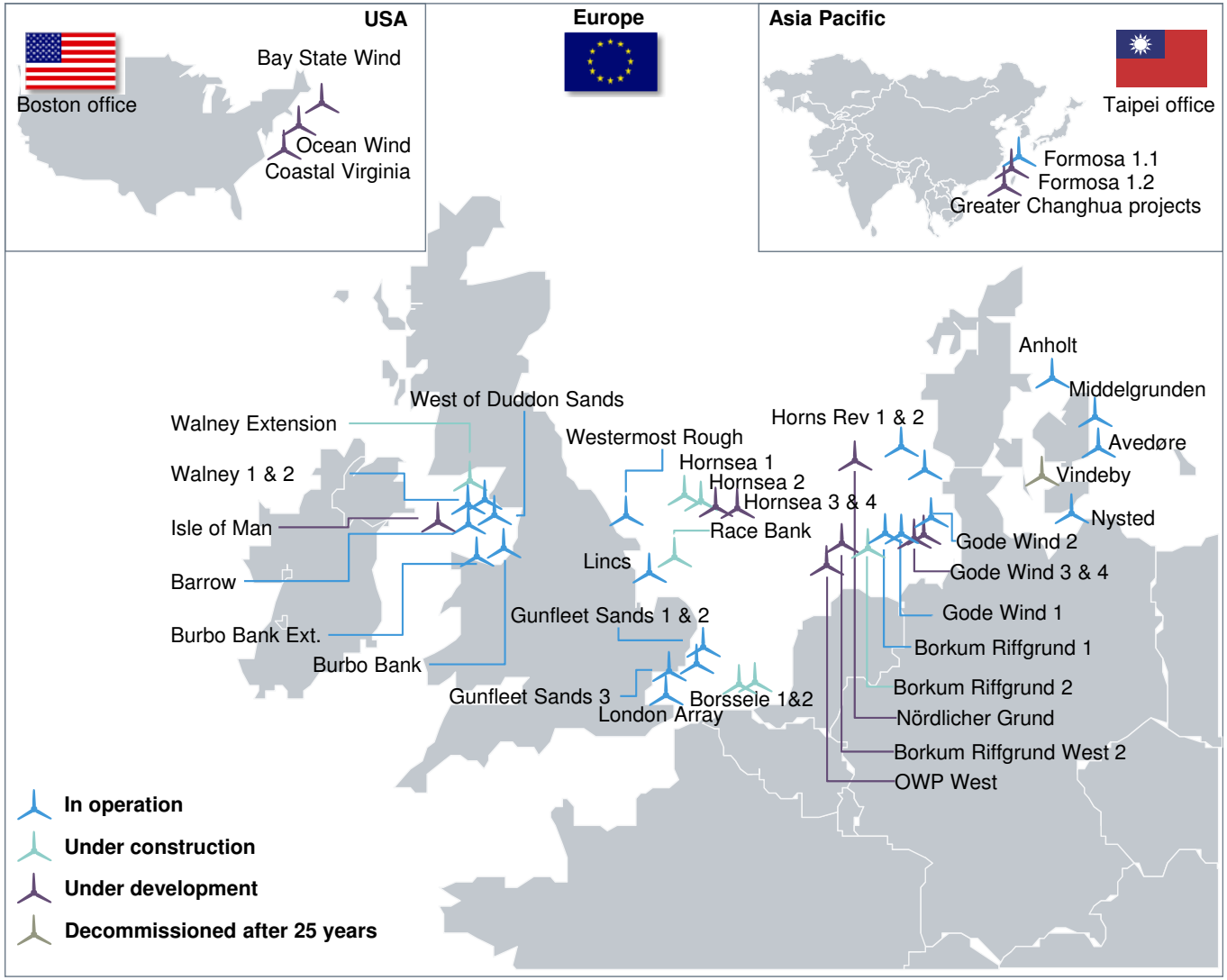
Ørsted Wind Power overview – internationalization

Global footprint



Unparalleled experience and track record

1991 — 25+ years of experience and track record in the offshore wind sector — 2017

22 offshore wind farms in operation

7 offshore wind farms under construction

3.8 GW Constructed capacity

2,000 Dedicated employees

5.0 GW under construction

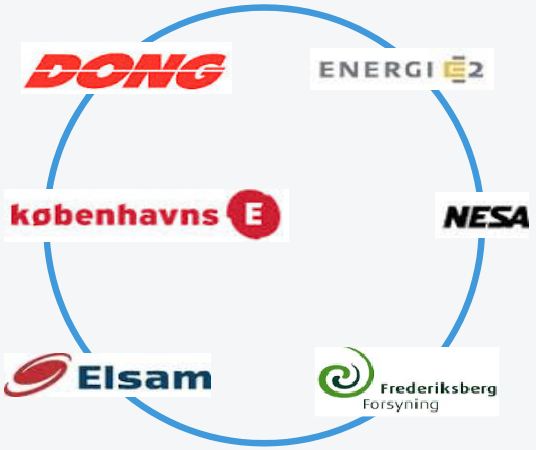
7.7 million Europeans with clean electricity

3.5 GW World's leading operator

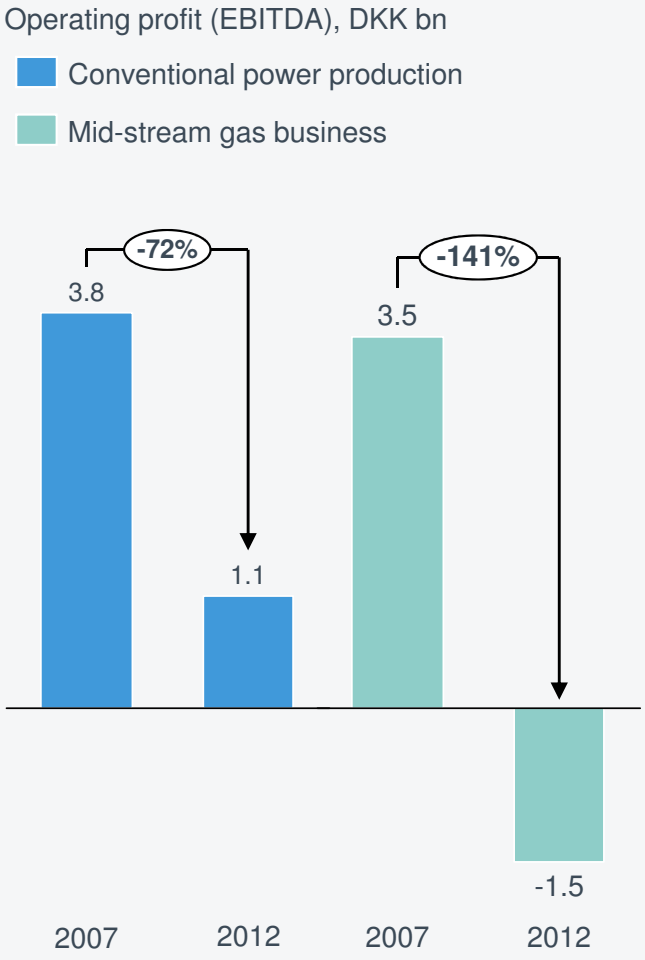
16 Partnerships

Ørsted's transition – faced strategic challenges from the outset in early 2000s

DONG Energy established through merger in 2006



Legacy business eroding



Invested broadly to identify new growth

- Onshore wind
- Offshore wind
- Hydro
- Conventional Power Plants
- Waste Fired Power Plants
- Virtual Power Plants
- Distribution Grids
- Electric Vehicles
- Gas Storage
- LNG
- Oil & Gas

Ørsted

Ten major levers pulled to transform the company

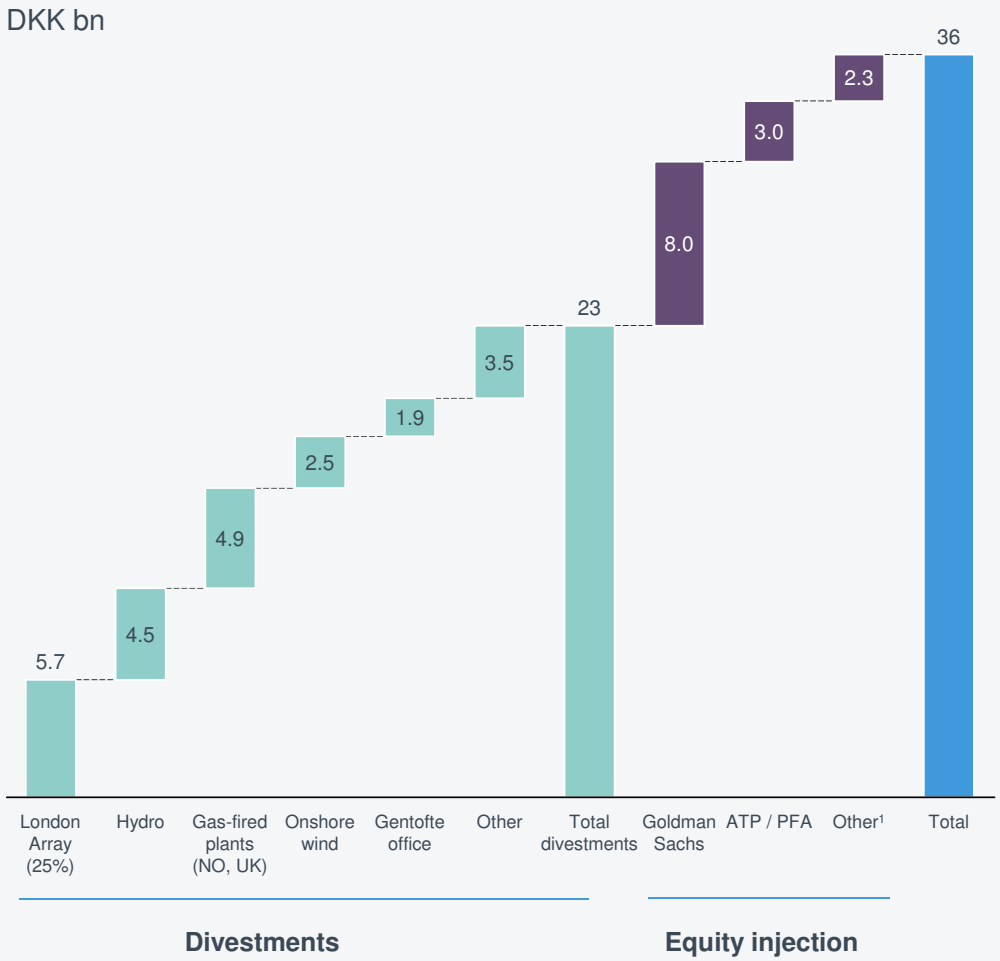
- Divested non-core assets of DKK 17 bn.[1]
- Invested DKK 81 bn. to expand offshore wind to 3.8GW today with secured pipeline to reach 8.8GW by 2022
- Farmed down 12 wind farms to recycle DKK 65 bn. of capital
- Reduced offshore wind cost-of-electricity by 50%
- Converted 5 of 7 heat and power plants to biomass to secure profitability and announced "coal-free by 2023"
- Turned around loss-making long-term gas contract portfolio, gaining DKK 6.4 bn. from compensation payments
- Initiated strategic shift in retail business from commodity sales to integrated, green energy solutions
- Lowered net interest-bearing debt and stabilized credit ratings
- Restructured and divested legacy, upstream Oil & Gas division
- Changed the company name and visual identity to reflect new green platform

1. Includes onshore wind, hydro power plant, gas-fired power plants (UK, NO), GTF office, Danish gas storage, and 'other'

Financial action plan to support continued strategic transformation

1	Re-focus portfolio	12 → 4 business areas ✓
2	Divestments	DKK 23 bn (JPY 412 bn) ✓
3	Cost reductions	DKK 1.2 bn (JPY 21 bn) ✓
4	Equity injection	DKK 13 bn (JPY 233 bn) ✓

Cash generated from mid-2013 to end-2014



1. Seas NVE, Syd Energi, Insero, Nyfors, and employees

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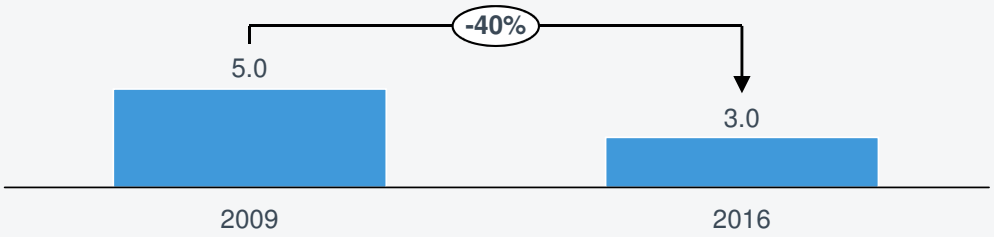
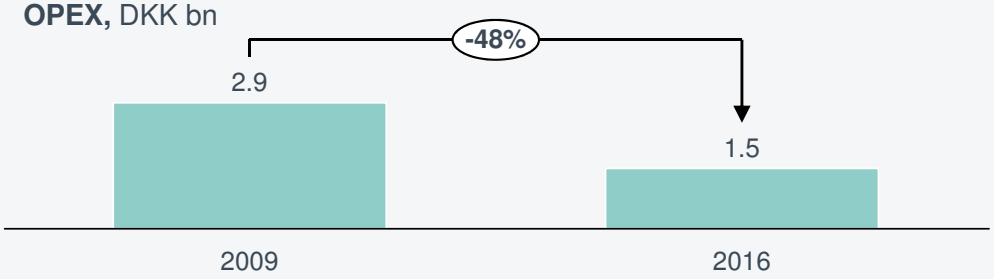
Transformation of conventional power business

Transformation of Danish power plant business

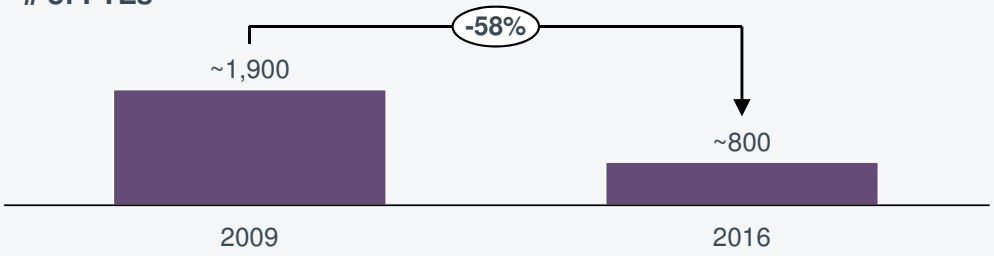
Danish portfolio of central plants, GWe



OPEX, DKK bn

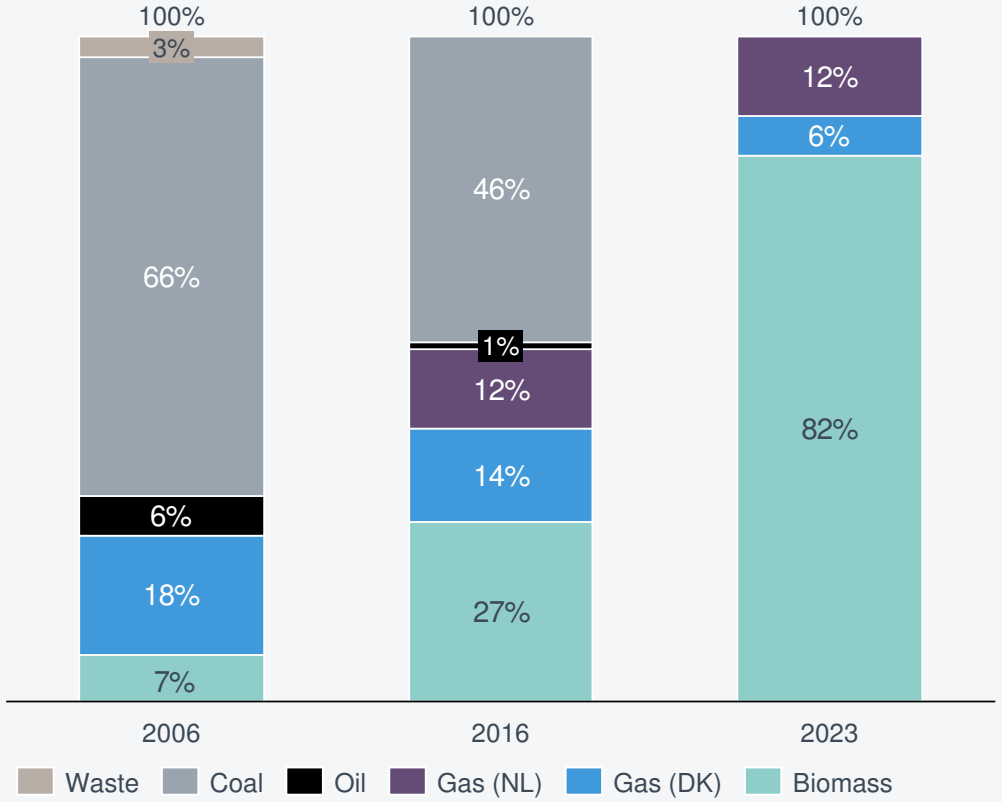


# of FTEs[1]



Biomass conversions well underway – coal will be fully phased out by 2023

Ørsted fuel composition, %[2]

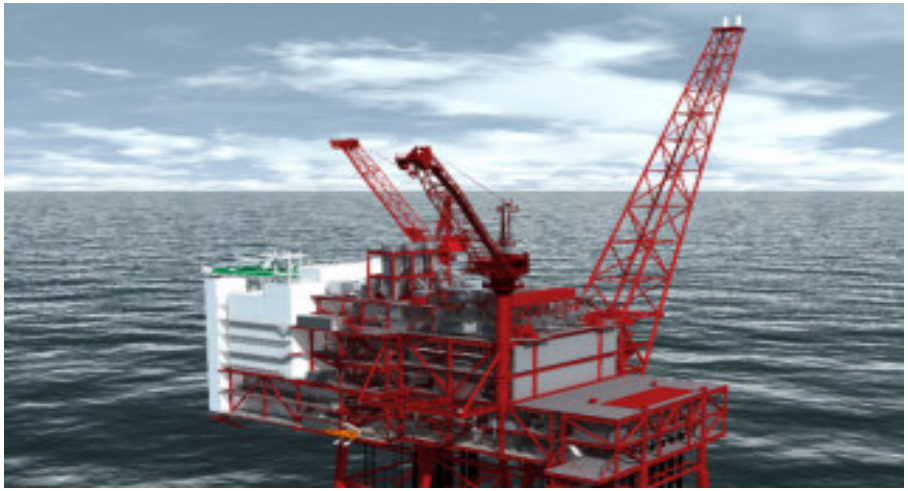


1. Adjusted for divested activities
2. Ability to use coal retained in case of force majeure

Divestment of Ørsted's Oil & Gas business to INEOS in 2017

History:

- ✓ Comprehensive portfolio restructuring focusing on risk-profile and cash flow
- ✓ Significant reduction in exploration efforts
- ✓ Reduced investments
- ✓ Divestments of ownership shares in fields
- ✓ Contain risk of Hejre field
- ✓ Significant reduction of cost base and organisation

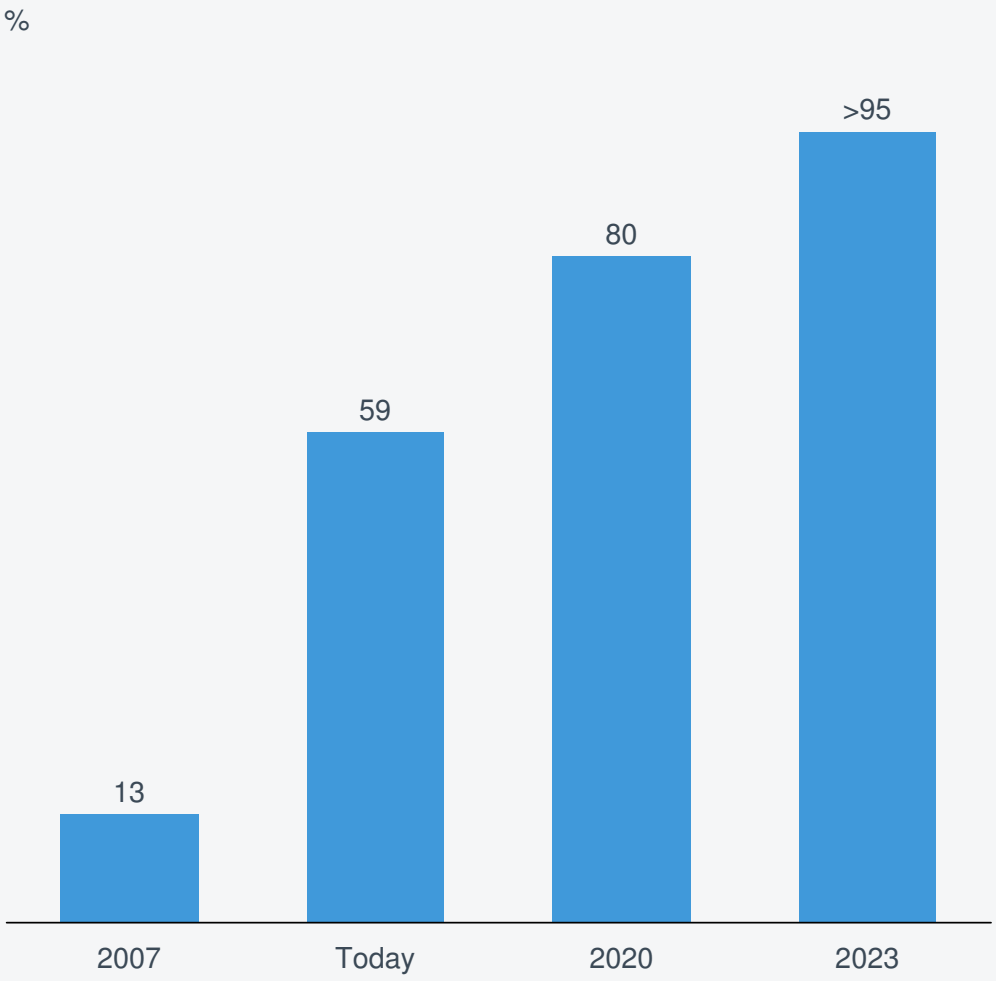


Ørsted → INEOS

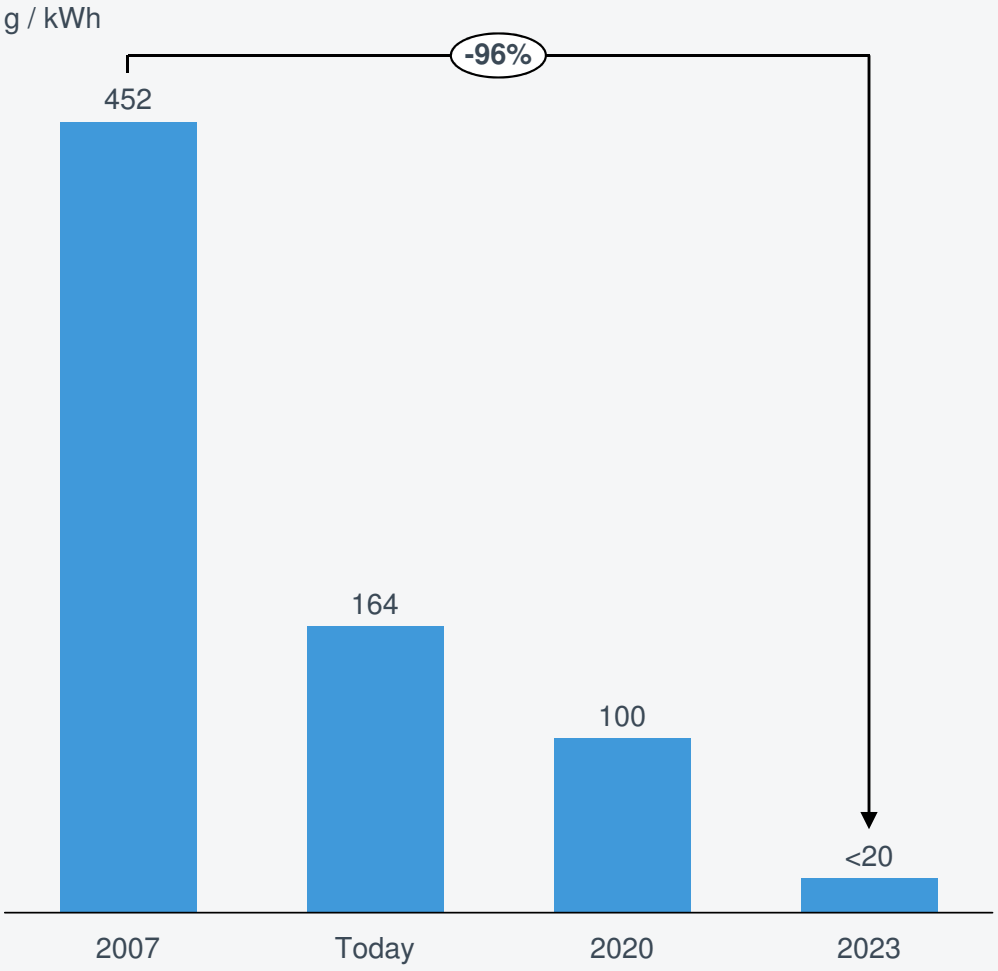
- ✓ Good and fair price : DKK 7.0 bn (JPY125.2 bn)[1]
- ✓ Sell the business as a whole
- ✓ Good strategic and cultural match – good future home for the O&G business
- ✓ Significant step to complete strategic transformation of Ørsted

Transformation of the company from black to green energy well under way - Key milestone 2023

Share of green power



CO2-emissions



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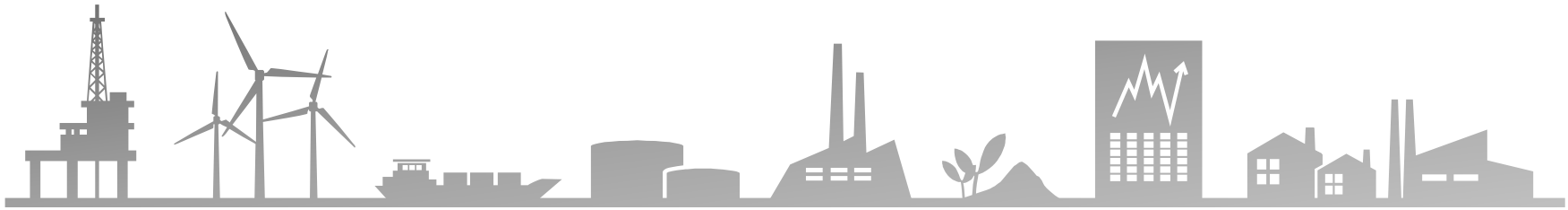
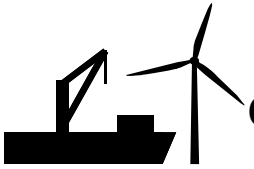


Clear and stable regulatory frameworks needed for offshore wind in Japan

Project Development and preparation



Construction

Operational Phase

7- 10 years

Building permit

Grid capacity allocation

Final investment decision

1 - 2 years

Grid connection

20-25 years

Investment

Revenue

Key takeaways:

Offshore wind development is a long term process, clear targets, a long term stable regulatory framework (e.g. FIT, relaxation of EIA, regulation for use of general sea areas) are needed

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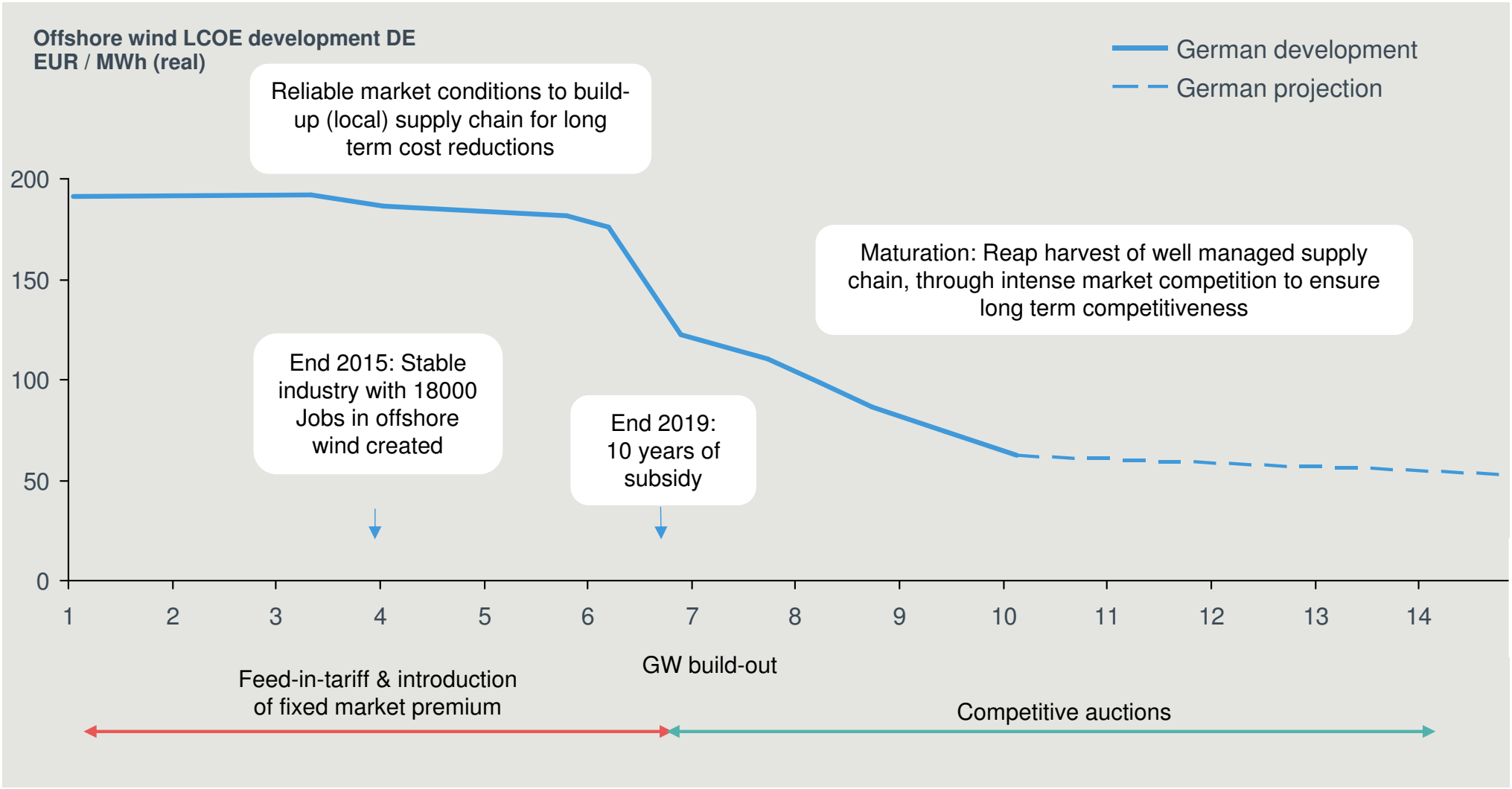
Long term cost reduction can be achieved via stable remuneration in establishment phase (German FiT: 10 years)



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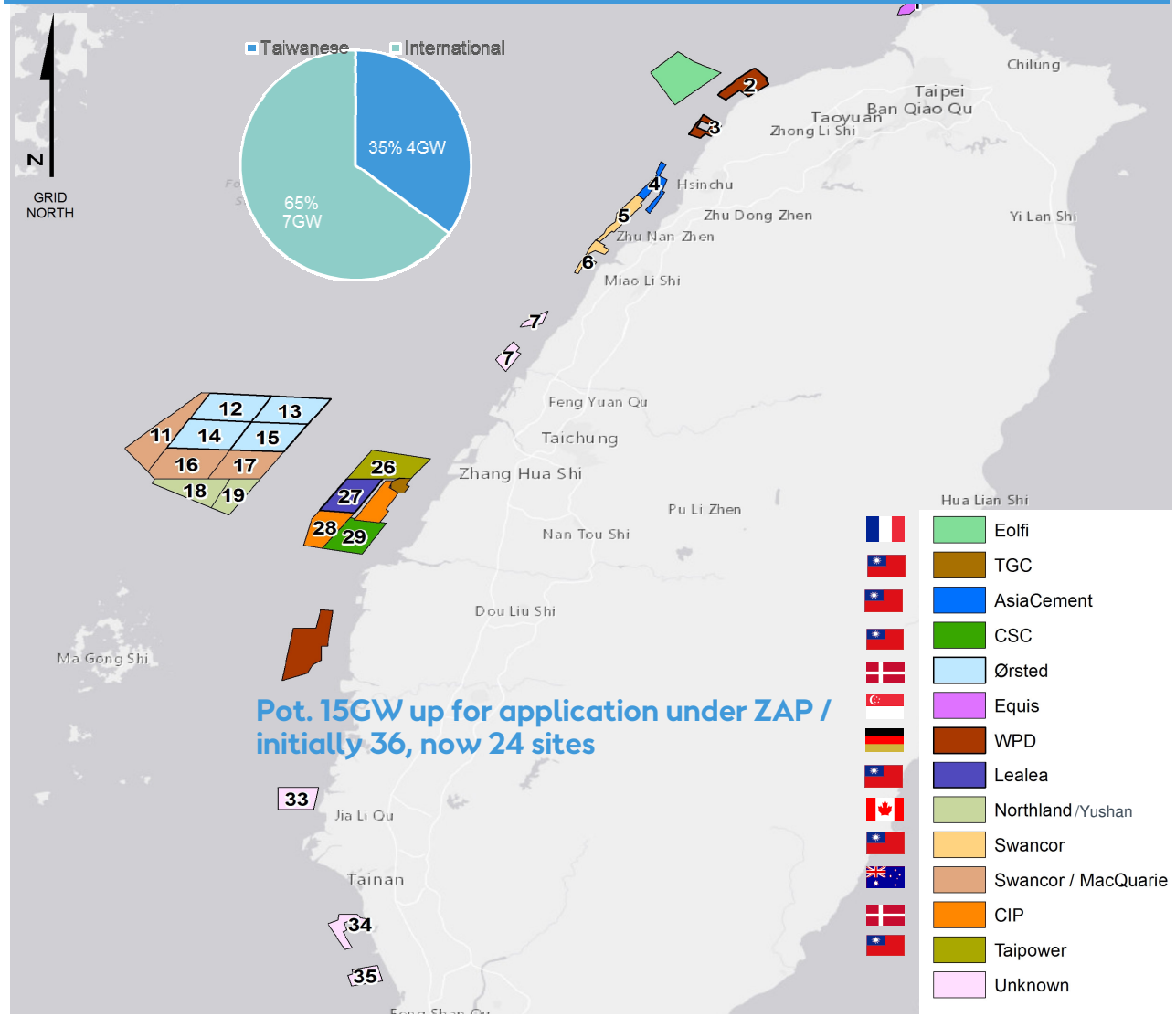
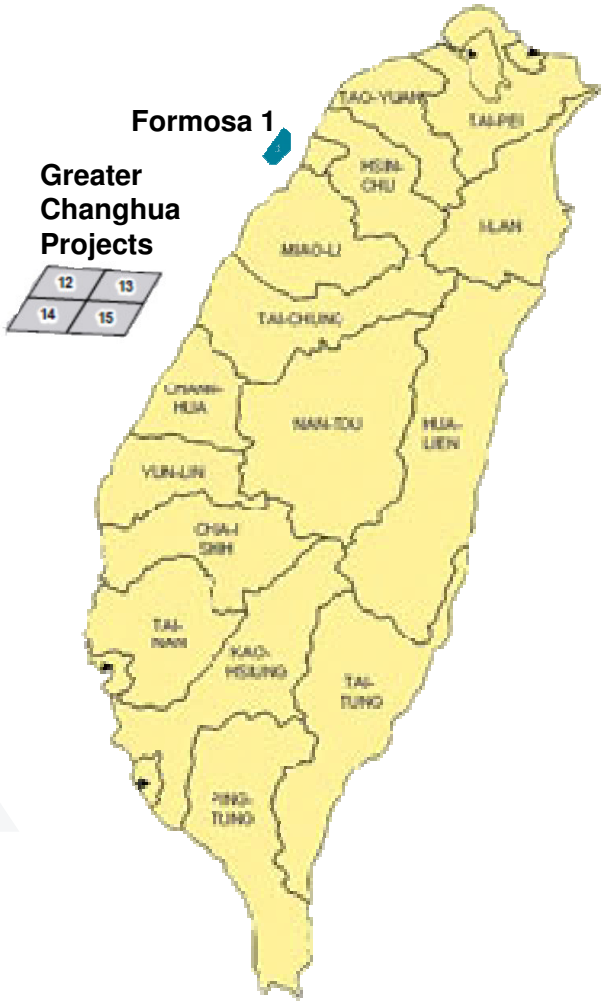
Taiwan case: Zonal application program (ZAP) as game changer leading to 11GW under development (Local/Foreigners)

Zonal Application Program Overview



Ørsted is engaged in 5 projects in Taiwan



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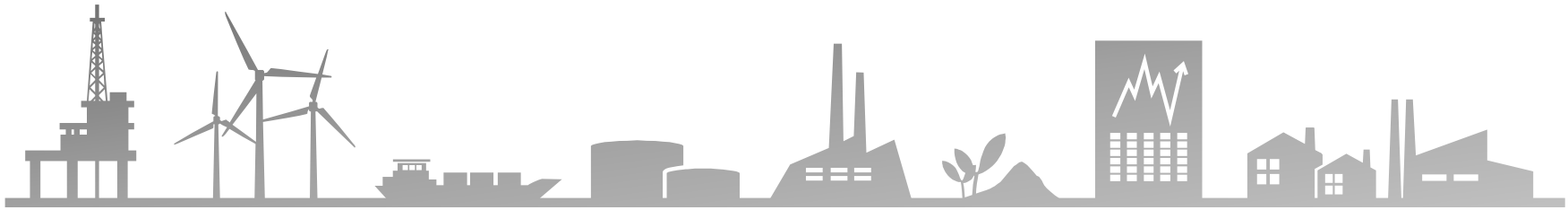
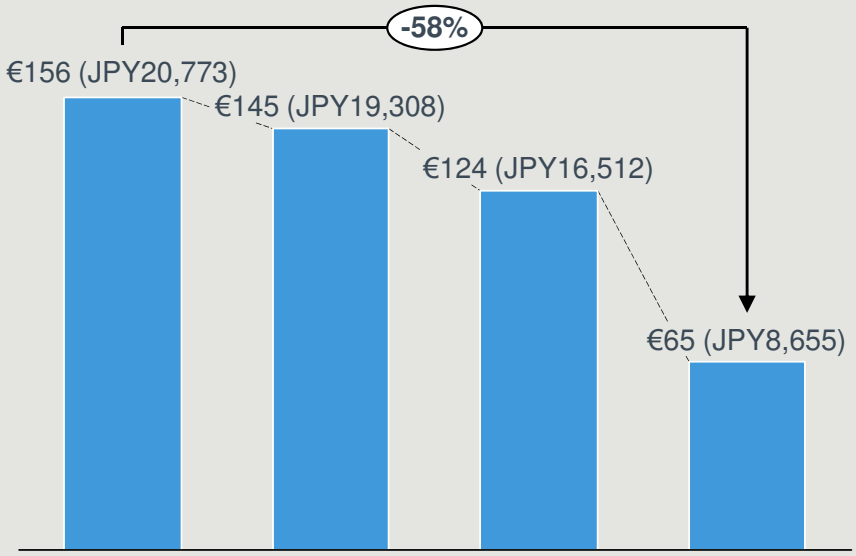


The offshore wind industry has cut the cost in half across the North Sea

United Kingdom

Levelised cost of electricity, for society, incl. transmission costs

EUR/MWh[1], 2016-prices, bid announcement year.

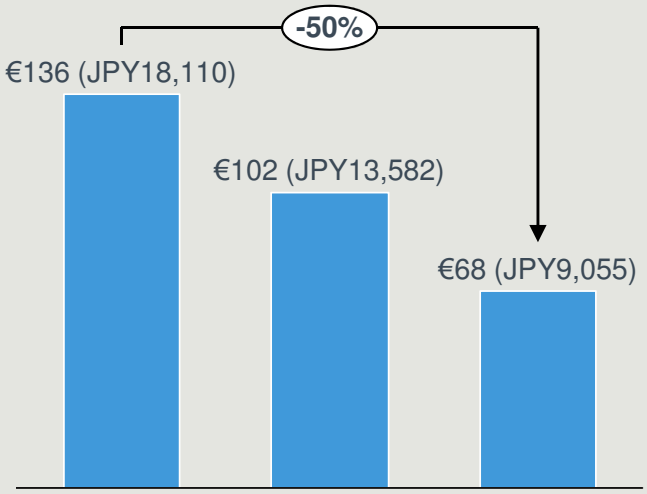


	Walney Ext.	Race Bank	East Anglia	Hornsea II
Year of subsidy agreement	2014	2015	2015	2017
Expected COD	2017	2017	2020	2022

Denmark

Levelised cost of electricity, for society, incl. transmission costs

EUR/MWh[1], 2016-prices, bid announcement year.



	Anholt	Horns Rev III	Kriegers Flak
Year of subsidy agreement	2010	2015	2016
Expected COD	2013	2019	2021

Sources: DECC

1. Levelised revenue (price) of electricity over the lifetime of the project used as proxy for the levelised cost 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.

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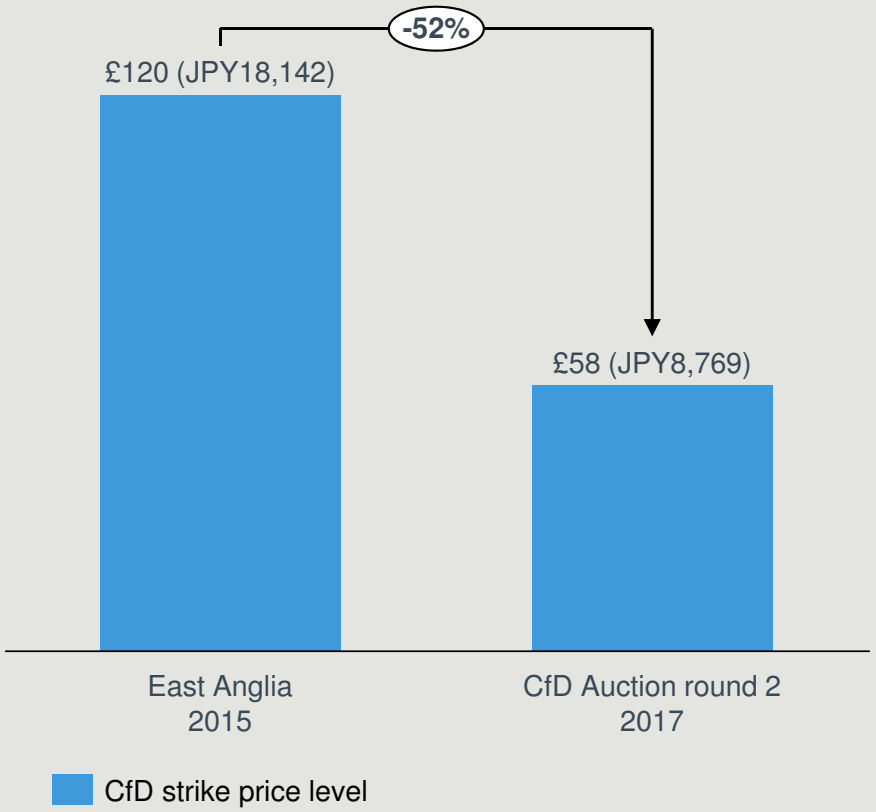
UK offshore wind shows rapidly declining costs, with latest round Orsted winning Hornsea project II at JPY 8769 / MWh

UK offshore wind CfD strike price levels

£/MWh, 2012 prices, bid announcement year



Main factors for reduced costs in UK from 2015-2017:

Scale - Orsted's pipeline of construction projects across the UK creates economies of scale

- With 1,386MW, Hornsea Project Two has the scale required to secure low costs per MW of construction, and low costs per MWh during a lifetime of operations and maintenance
- Larger turbines than previous UK parks expected

Maturing industry and technology - Innovation of offshore wind turbines, new installation equipment and methods, continuous improvements of foundation design, improved cables with higher capacity, and a growing and competitive supply chain

Risk reduction - Orsted already has several years of experience from developing Hornsea Project One in the North Sea, which reduces construction and operation risk of Hornsea Project Two

Synergies - Operations and maintenance on both Hornsea projects will be conducted from Orsted's new hub in Grimsby

Source: DECC & BEIS

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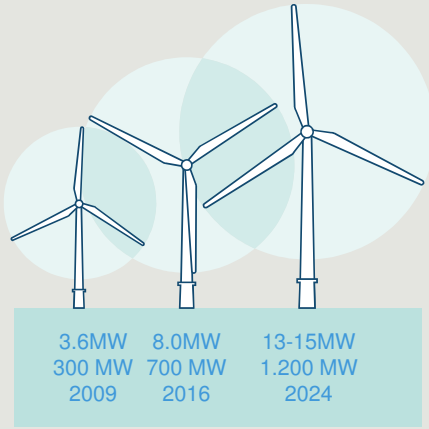
Scale is key to reduce costs – both in terms of markets and through technology

Scale

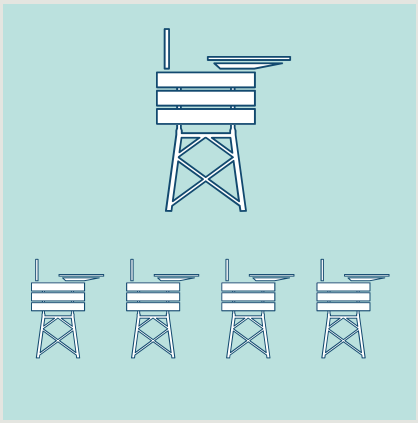


Increased size of windfarms and turbines

Innovation

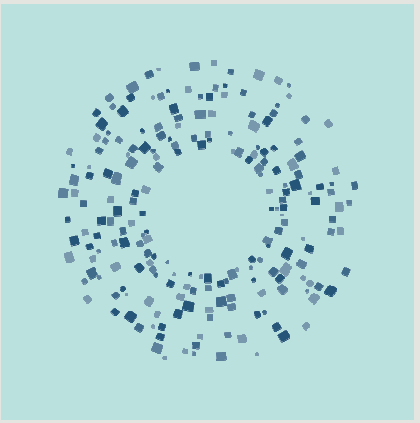
Driving innovative solutions

Industrialisation



Standardisation and procurement for multiple projects

Digitalisation



Fully capturing new technological opportunities

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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

✓

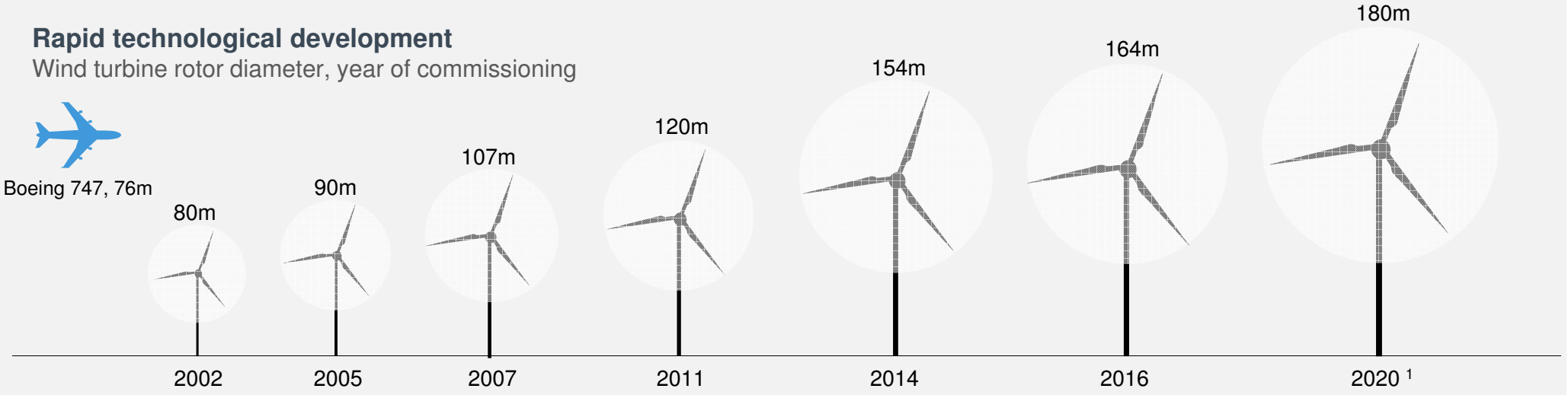
3 Industrialisation

- Transition from single supply to multiple global suppliers

✓

Rapid technological development

Wind turbine rotor diameter, year of commissioning



1. Currently there are no turbines available on the market with a rotor diameter of 180m, however some suppliers have announced that they expect to bring such a turbine to market in 2020.

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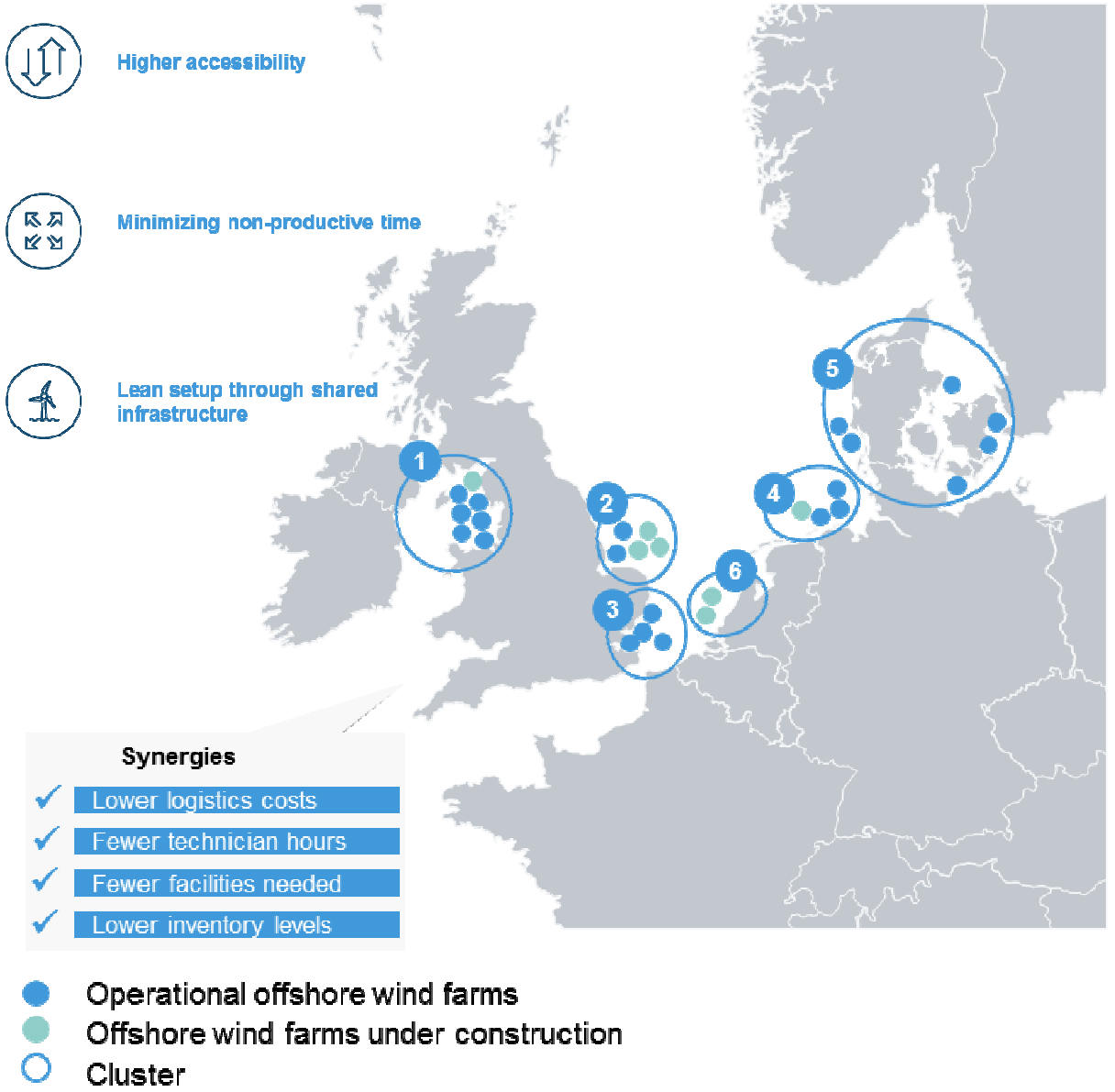
Ørsted's scale enables cluster synergies

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



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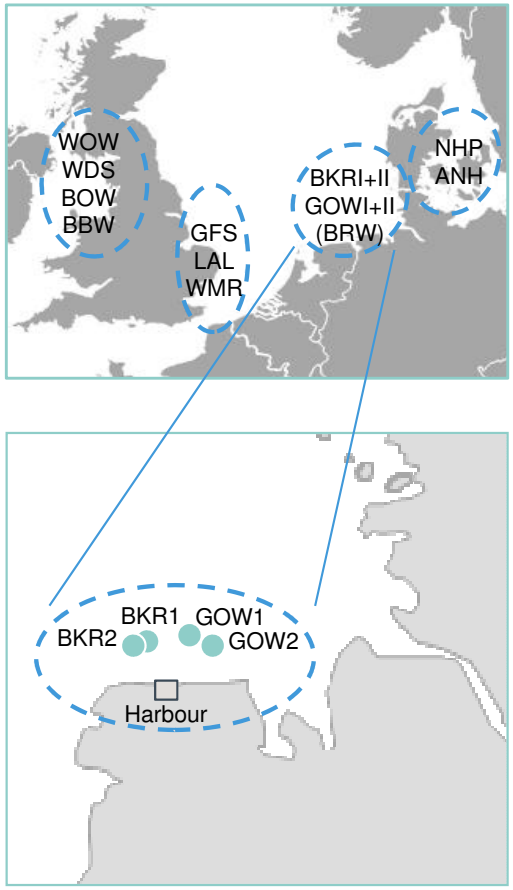
Building of operations of individual wind farms into operation of one cluster brings several O&M cost reduction potentials

Cluster areas



Cluster potentials

Description

Logistics

- Share crew logistics across sites
- Reduce standby capacity for unscheduled service

Technicians

- Share technicians across sites
- Reduce standby capacity for unscheduled service

Facilities

- Share on-site facilities* between asset projects operating at same harbour
- Reduce site administration

Inventories

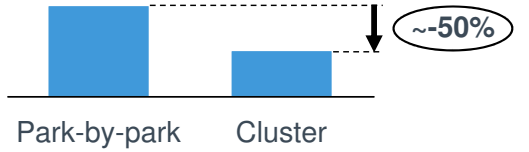
- Share spare part stock across asset projects
- Reduce capital cost due to reduced stock

Potential savings

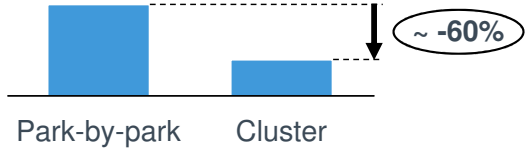
CTV

technicians (total avg. lifetime)

facilities

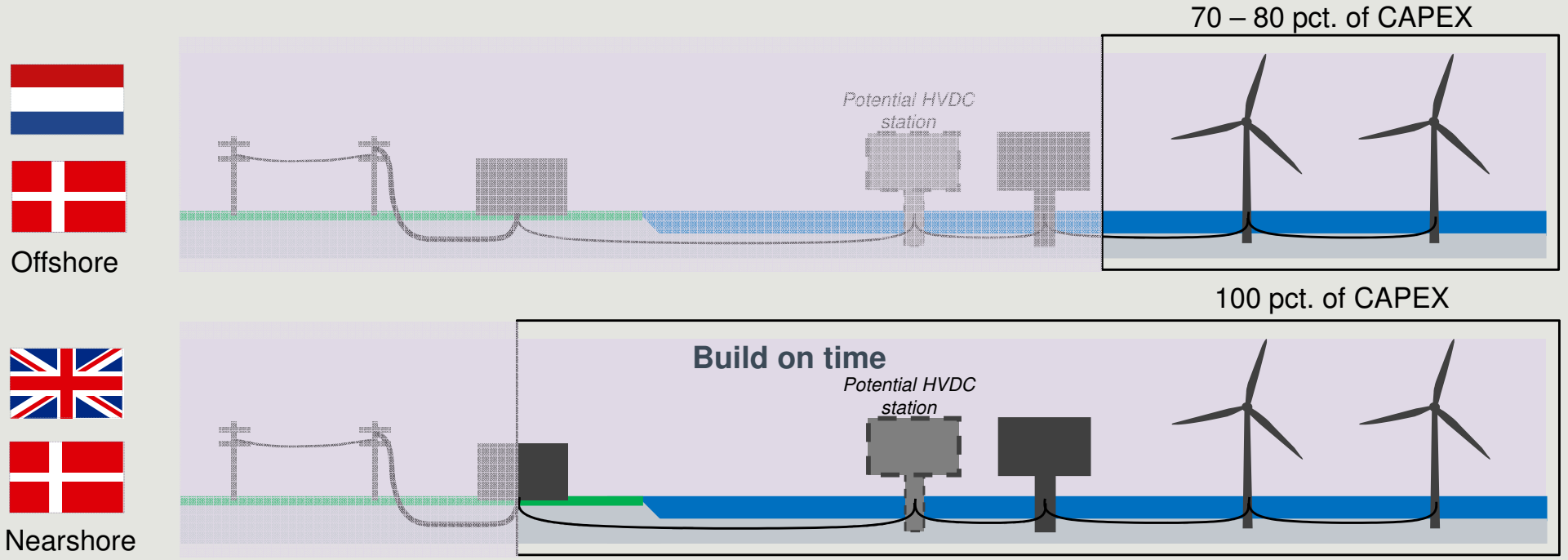


gearboxes on stock**



* Facilities potentially to be enlarged
** Same service level assumed
Source: Orsted, MD&AM BD analysis

Highest possible cost reduction & build-on-time achieved when full value chain competes and has efficiency pressure



Socioeconomic rationale for Japanese offshore wind developers to build, own and operate transmission assets

- Incentivises cost efficiency of transmission deployment and completion on time and budget; it furthermore promotes competent operation and ownership of transmission assets as wind farm developer shoulder risk of grid outage
- Including transmission asset in OSW business case also incentivises selection of socioeconomic rational sites, ensuring competitive pressure on transmission design

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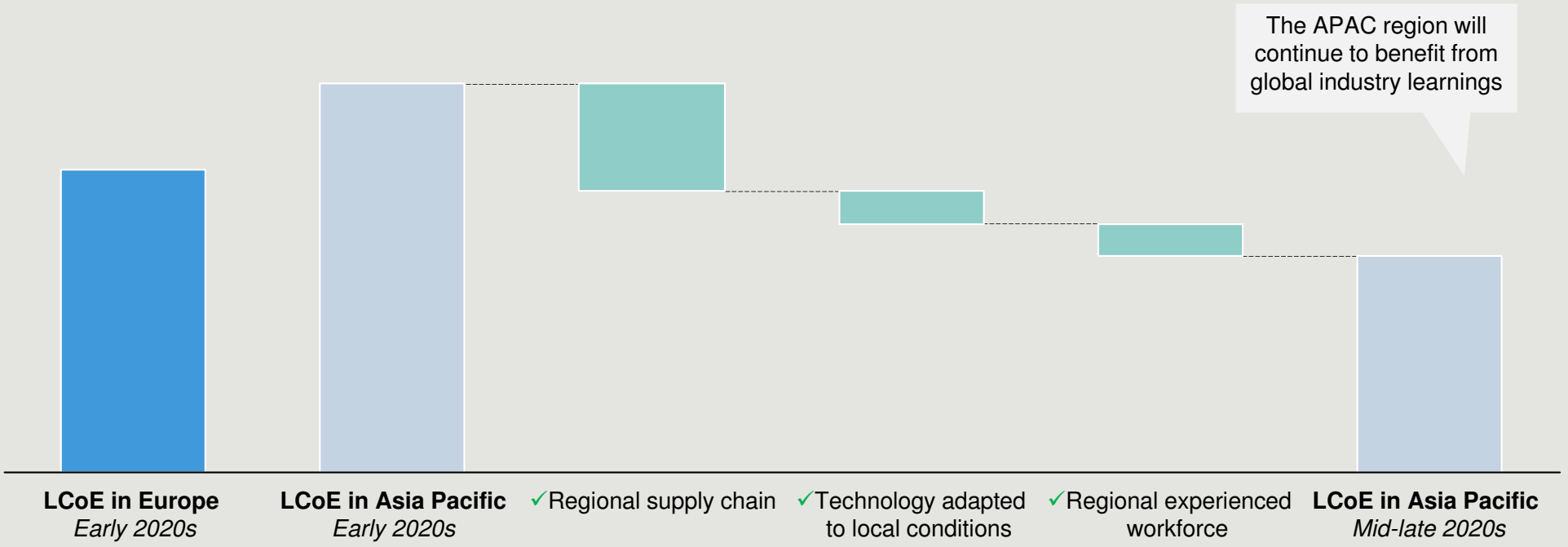
Japan will benefit from the European industry's maturation but will not be fully converged on cost from the outset

Key levers to bring down cost of offshore wind in Asia Pacific to European levels (illustrative)



- **Initial Japanese projects are likely to cost more than European projects as the industry and supply chain needs to develop in the region**
- **The speed of convergence will depend on stability of the regulatory framework and volume ambition**

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Q&A