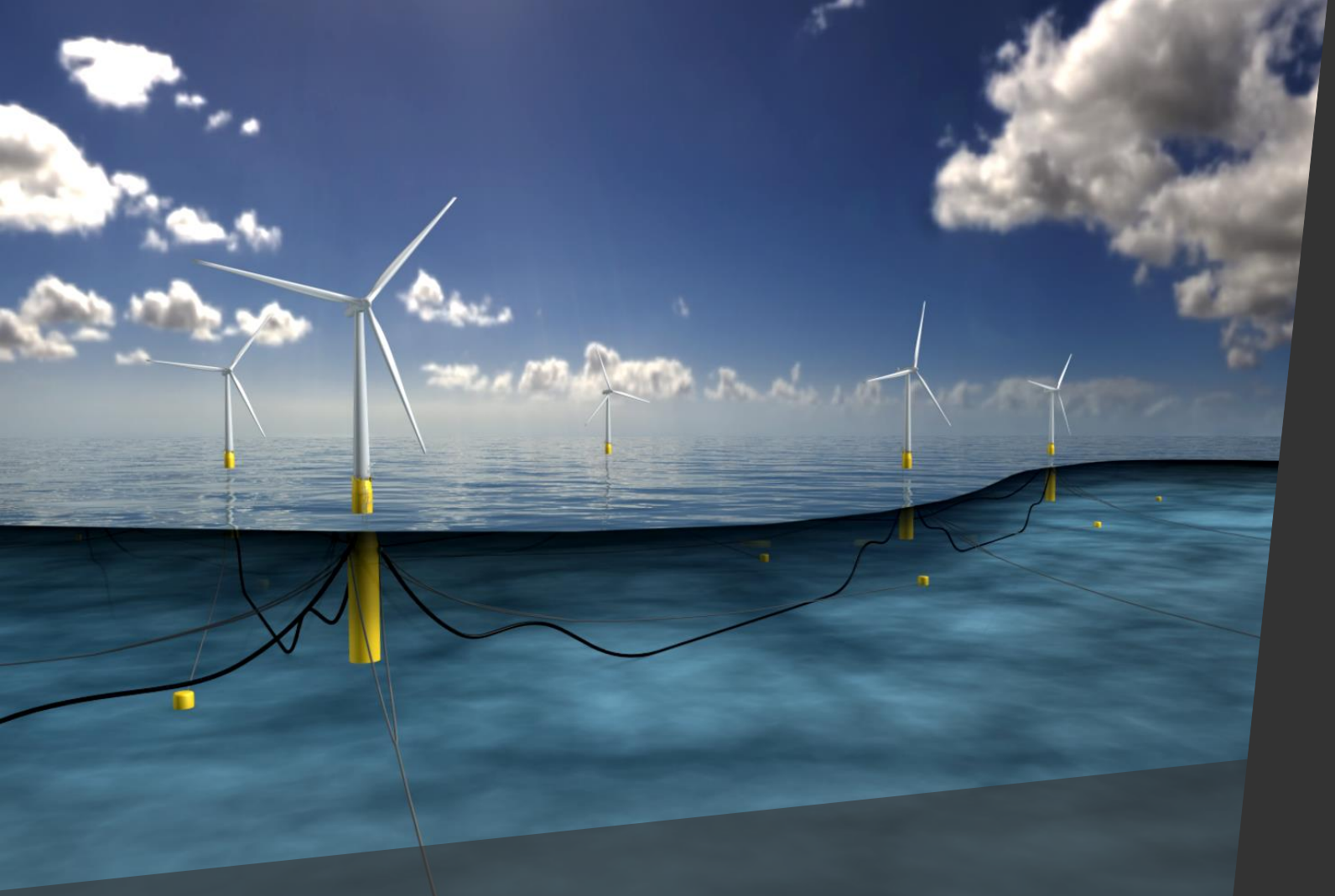


Hywind Scotland

Trondheim, January 18th 2017

Our strategy

SHORT TERM

Faster and deeper cost reductions

- Strict financial discipline
- Capturing the upturn in oil and gas prices

MEDIUM TERM

Build the next generation portfolio

- Maximizing value and seek opportunities
- Build renewables portfolio consistently towards a material scale

LONG TERM

Provide energy for a low-carbon future

- A resilient upstream portfolio
- A material renewable energy portfolio

NES Strategy

Build a profitable renewables business

OFFSHORE WIND

Fixed

Floating

SOLAR

ENERGY STORAGE

Develop new lower-carbon business opportunities for Statoil's core products

NCS – CO2 STORAGE

CO2 use /IOR

CO_2

HYDROGEN

Statoil and offshore wind

Playing to our strengths

- Complex projects
- Marine operations
- O&M & HSE ability
- Leading floating tech.

Attractive market

- Attractive risk/return
- Predictable revenue
- OECD countries
- High entry barriers

Offshore wind projects currently in progress delivering >1100 MW

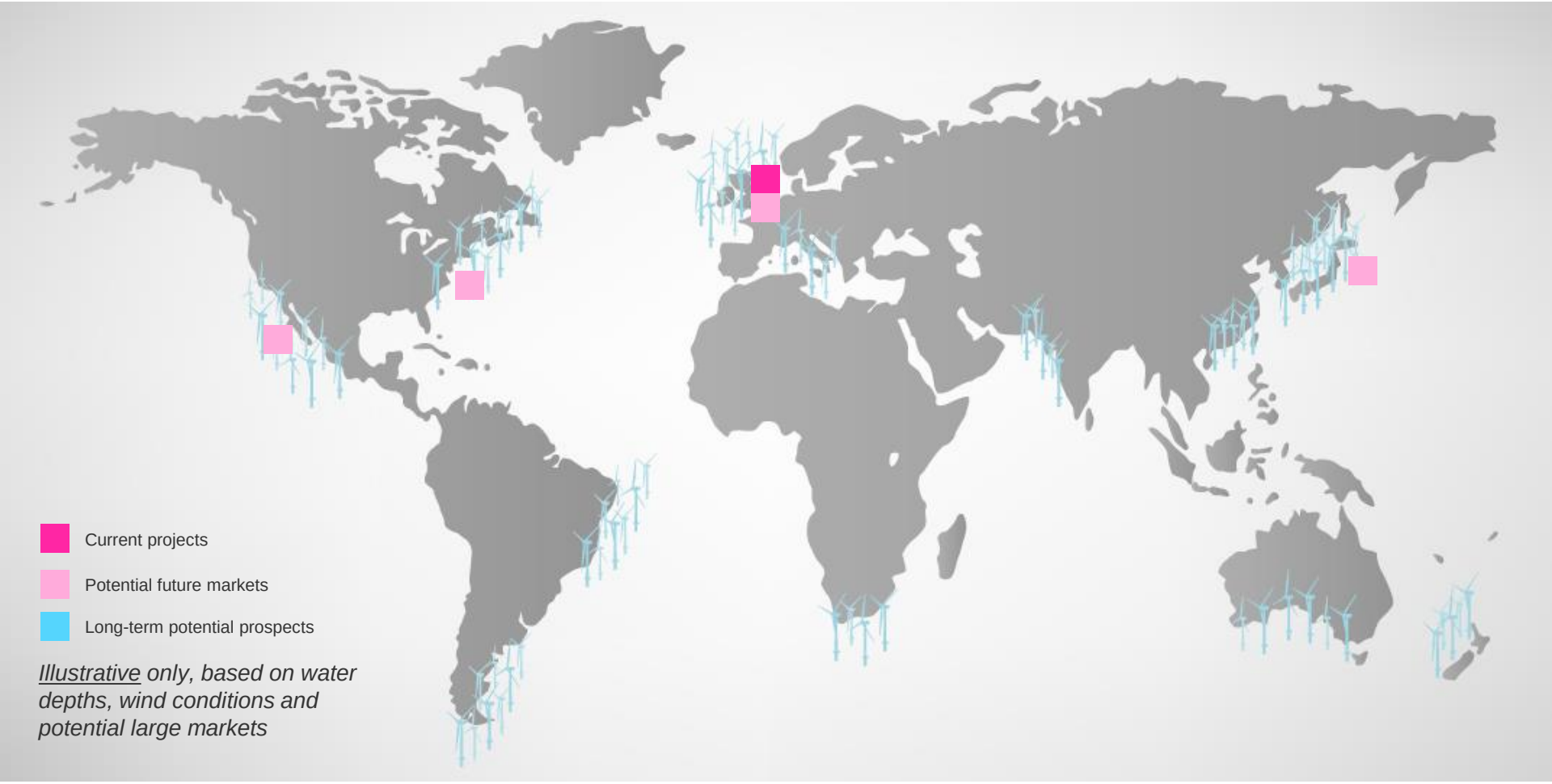
Additional 4800 MW consented / ~5 mill. homes

North West Europe | Japan | United States

Hywind demo	Sheringham Shoal	Dudgeon	Hywind pilot	Arkona	Dogger Bank	Hywind large scale
						
In operation	In operation	In development	In development		Consented	
2.3 MW	**317 MW**	**402 MW**	**30 MW**	**385 MW**	**4 x 1200 MW**	
2009-	2012-	2017	2017	2019	2020-	

** All capacity figures on 100% basis*

Expanding the potential floating wind market



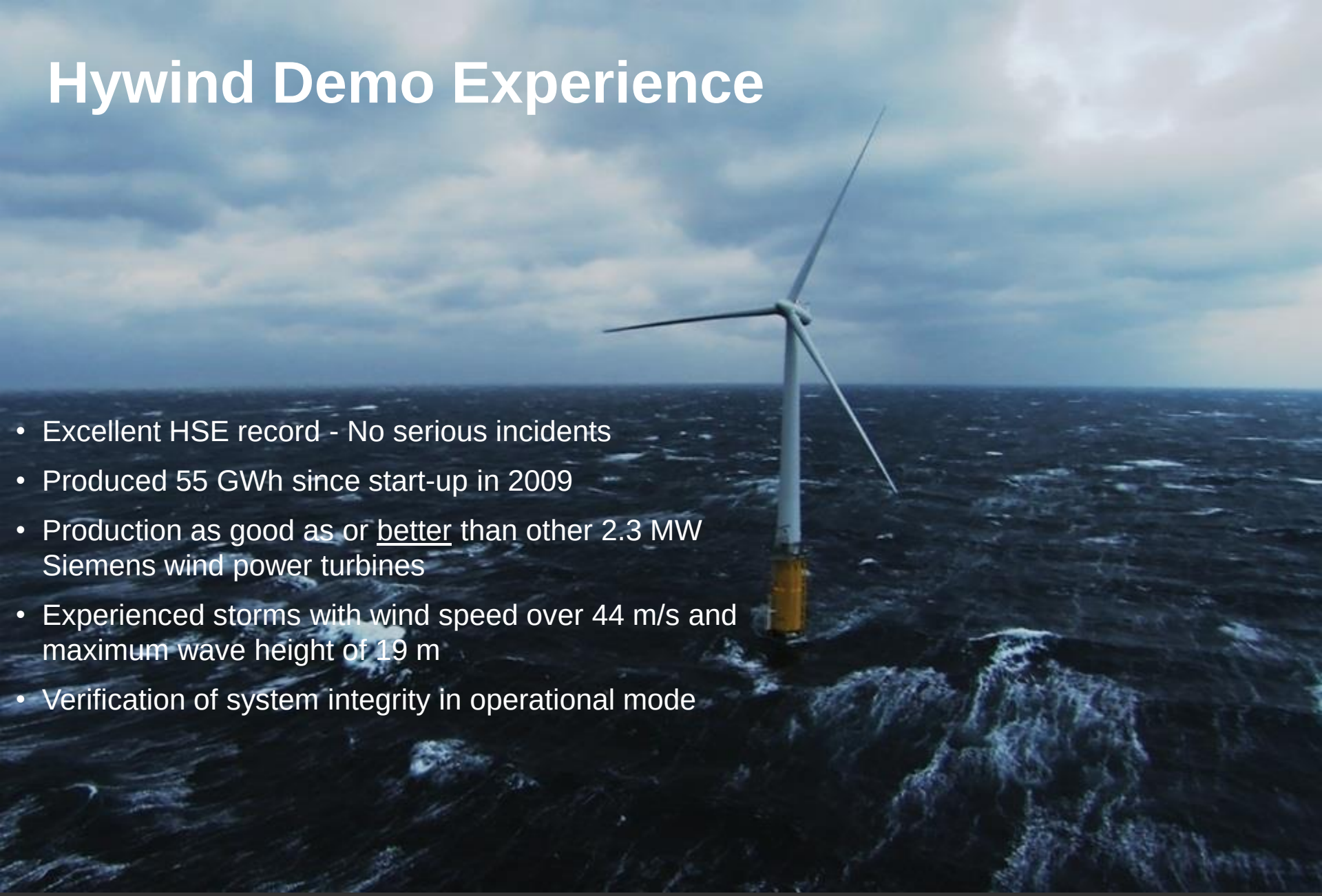
The Hywind Concept

Proven technology in a new setting

- Simple spar-type substructure
- Standard offshore wind turbine
- Conventional 3-line mooring system
- Blade pitch control system for motion damping
- Suitable for harsh conditions

Demo → Pilot Park → Large parks

Hywind Demo Experience



- Excellent HSE record - No serious incidents
- Produced 55 GWh since start-up in 2009
- Production as good as or better than other 2.3 MW Siemens wind power turbines
- Experienced storms with wind speed over 44 m/s and maximum wave height of 19 m
- Verification of system integrity in operational mode

Realising the Hywind Scotland pilot park

- **Investing around NOK 2 billion**
- **60-70% cost reduction** from the Hywind Demo project in Norway
- **Powering ~20,000 UK homes**

- **Installed capacity**: 30 MW
- **Water depth**: 95-120 m
- **Avg. wind speed**: 10.1 m/s
- **Area**: ~4 km^2

- **Average wave height**: 1.8 m
- **Export cable length**: ~30 km
- **Operational base**: Peterhead
- **Start power production**: 2017

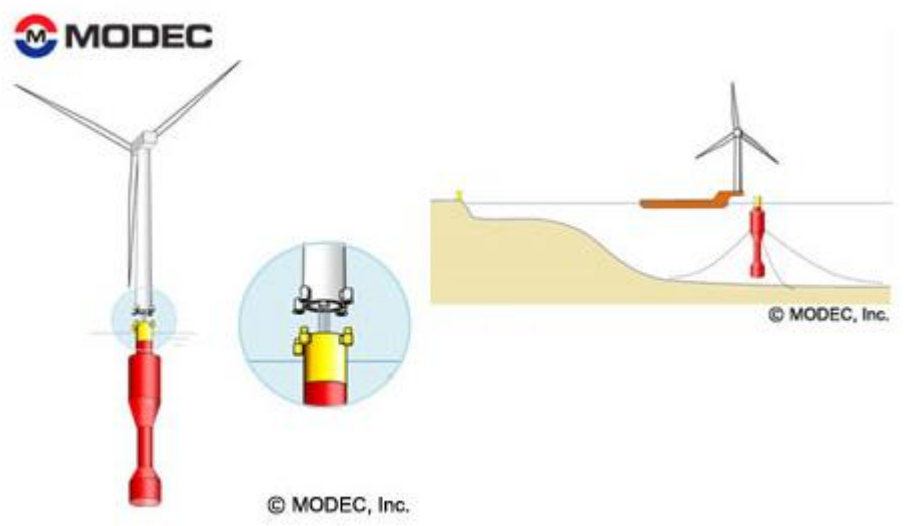
Hywind Scotland - Status

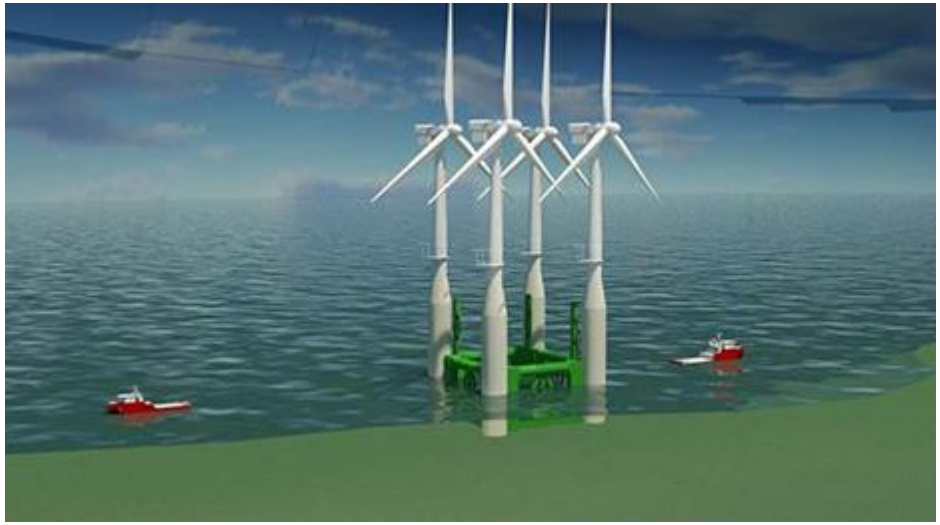
Statoil

Hywind – Assembly methodology

Challenges – Technical

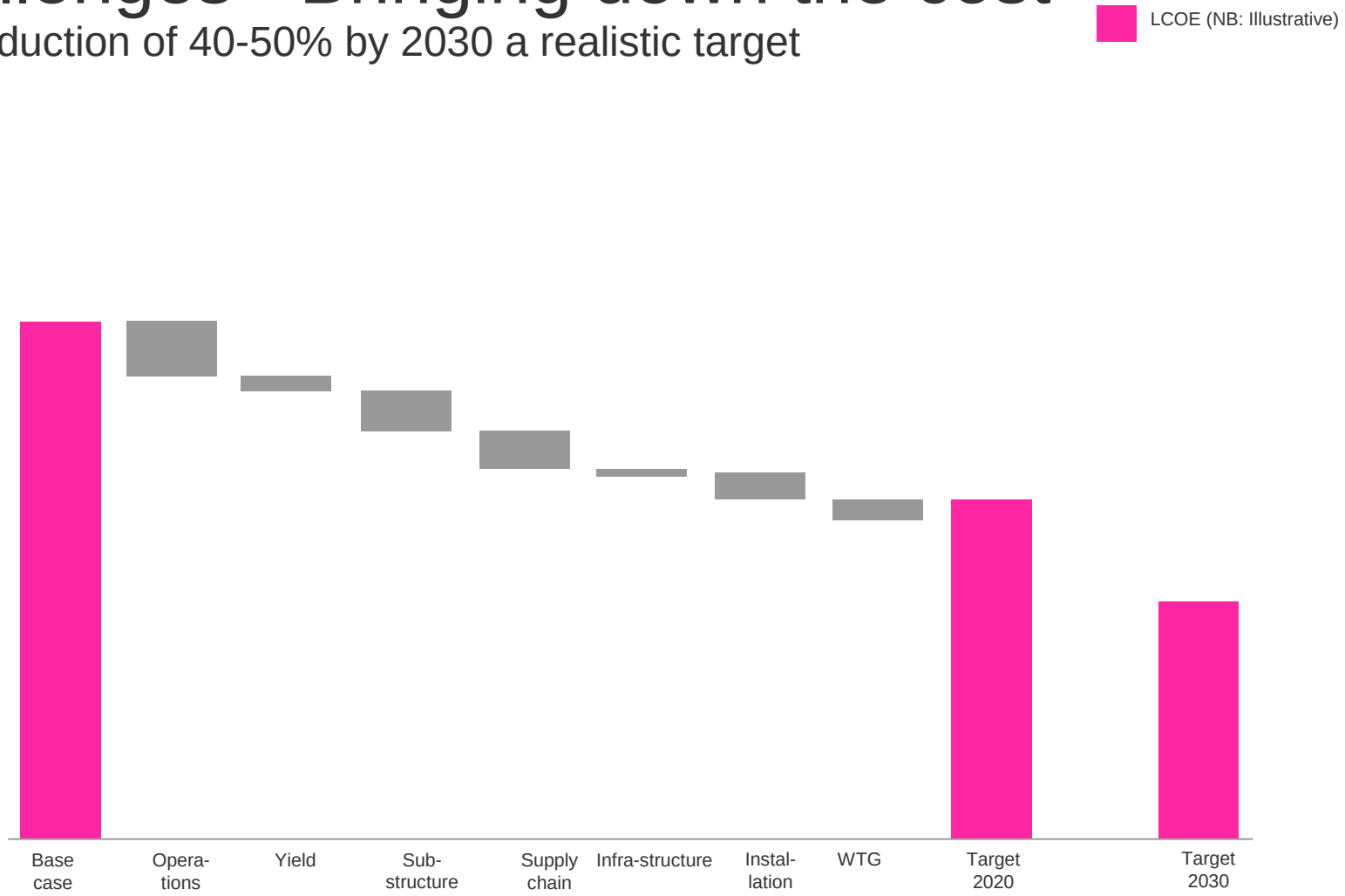
- Main challenges for Hywind installation
  - Water depth
  - Waves and swell during assembly
- Alternative installation methods under consideration





Challenges - Bringing down the cost

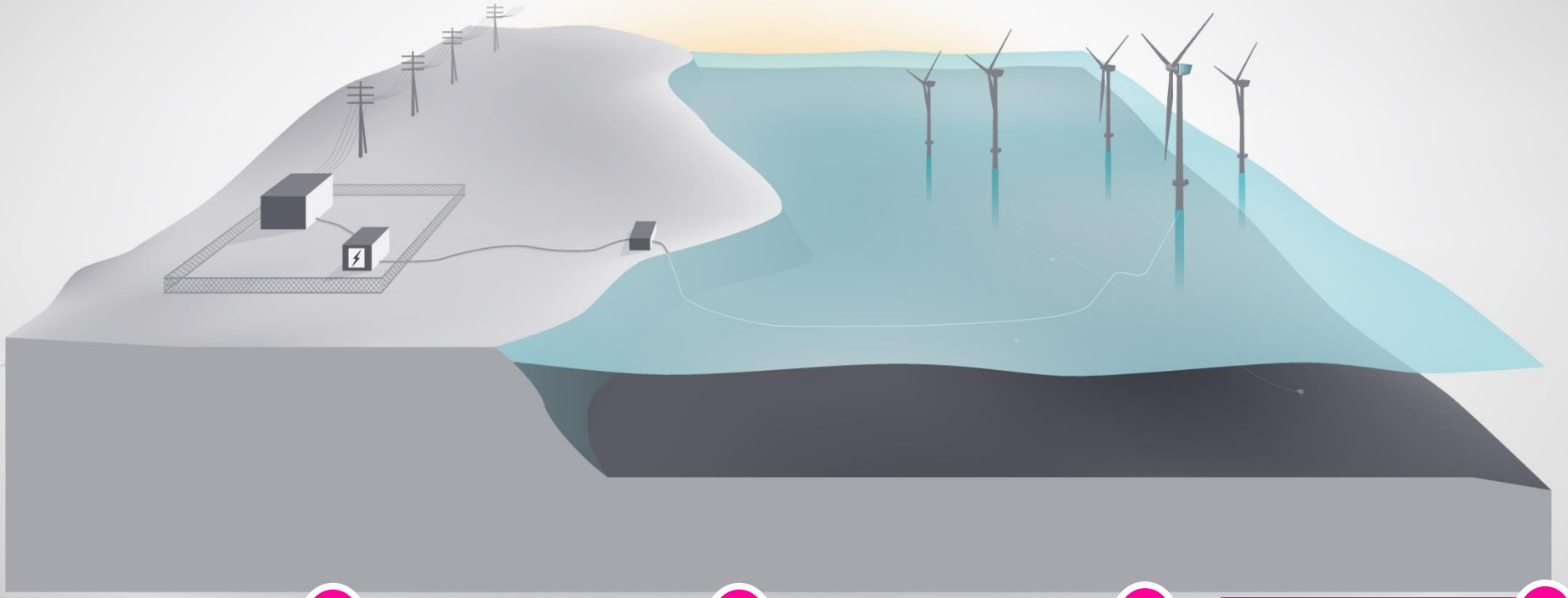
Cost reduction of 40-50% by 2030 a realistic target



Piloting Batwind concept for Hywind

Floating Wind + Storage + Grid

- ✓ *Increase the value of floating wind*
- ✓ *Start developing new business models around storage in Statoil*



1 Capture wind overshoots
Ability to store excess electricity for sale when capacity is free

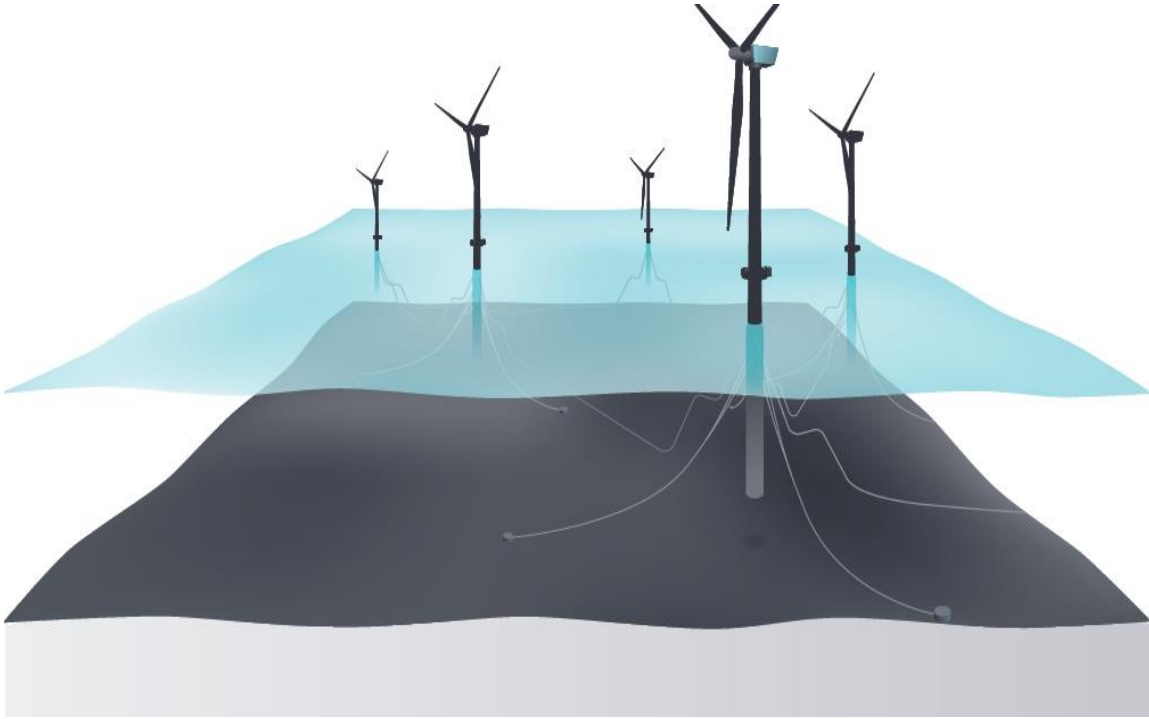
2 Reduce balancing cost
Counter impact of wind forecasting errors

3 Increase power market value
Capture price peaks through arbitrage

4 Deliver power system services
Provide frequency reserve response and other ancillary services

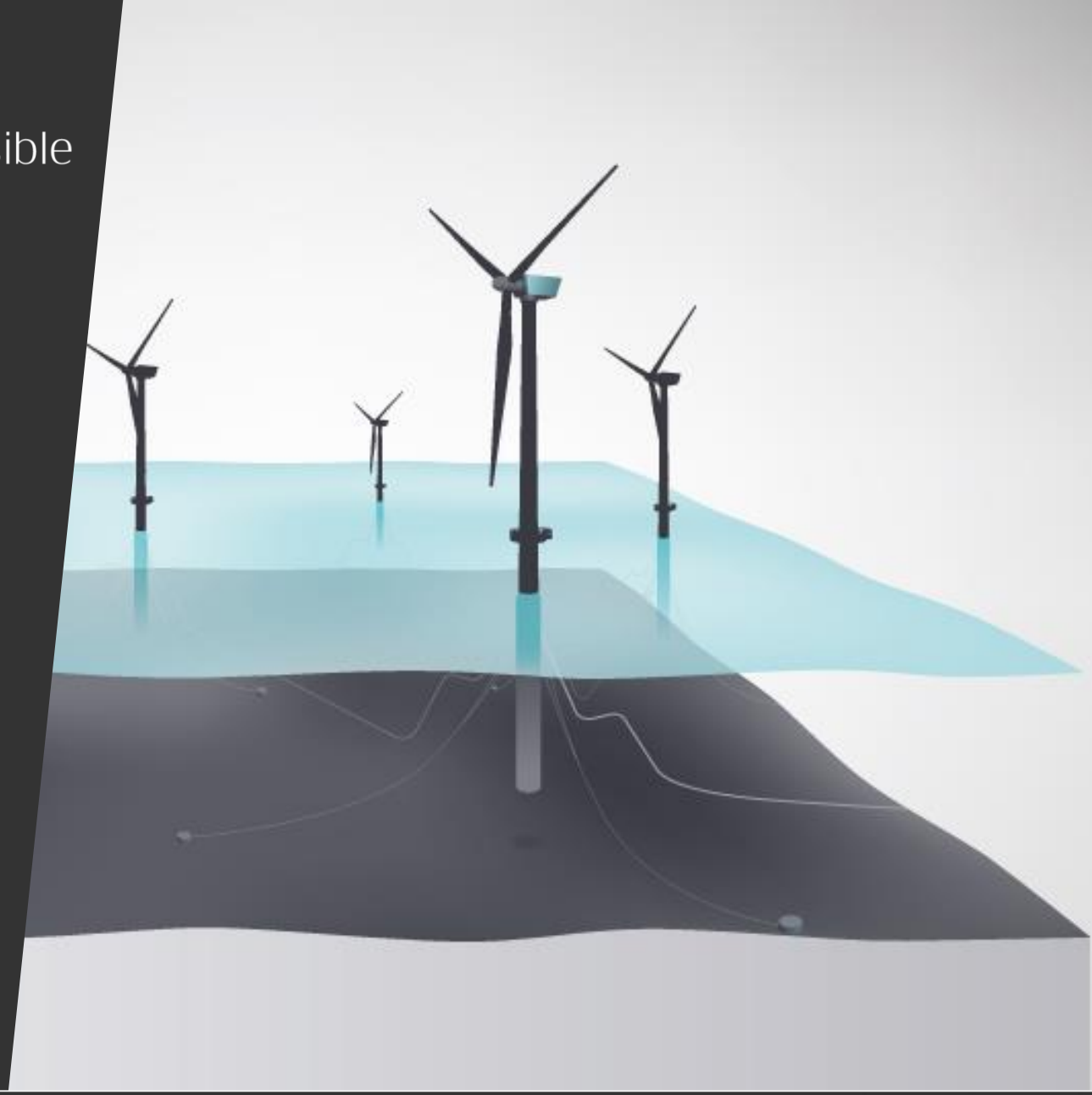
The future for Hywind

- Large resource potential
- Hywind is the most mature concept
- Statoil is an experienced developer with a strong financial position
- Target markets for the next step



The future for Hywind

Statoil. The Power of Possible



www.statoil.com

Statoil