



Proud ownership

Aker Horizons

Company presentations of Aker Carbon Capture and Aker Offshore Wind

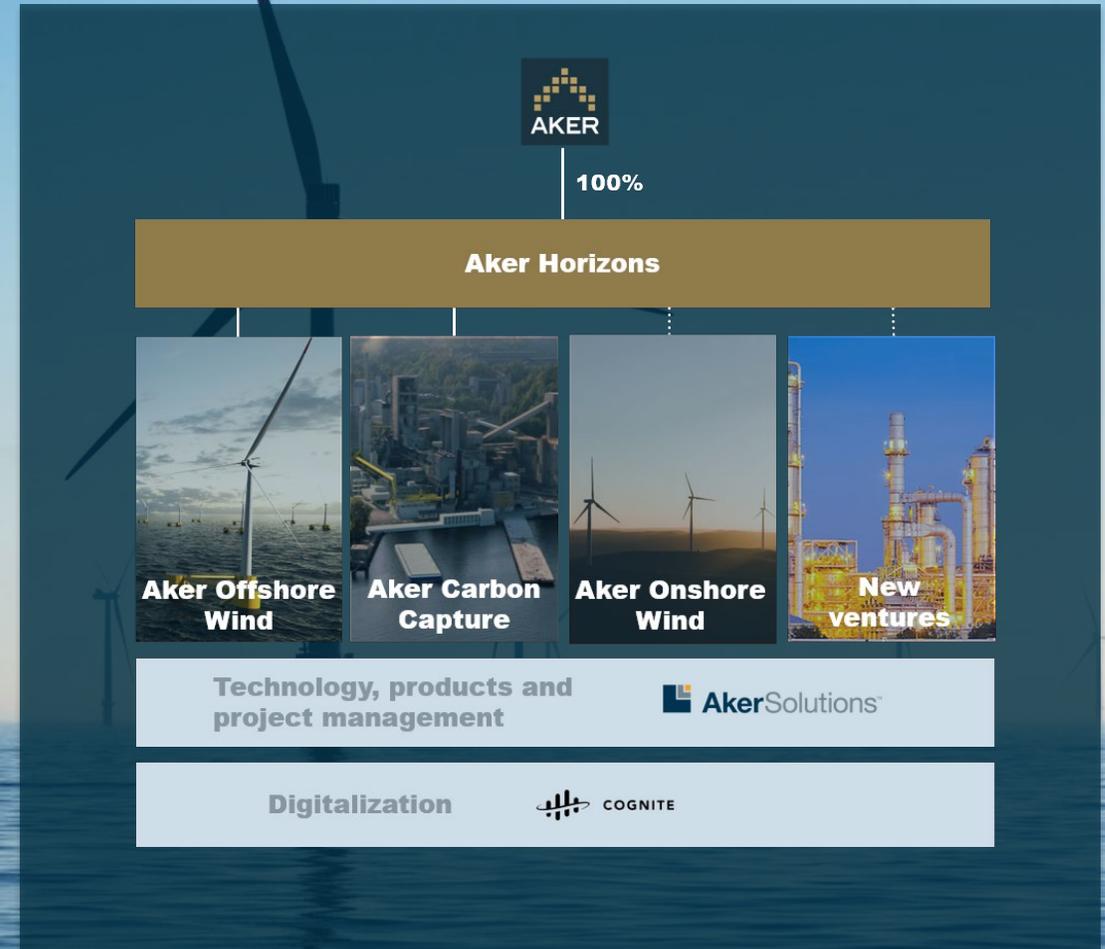
25. august 2020





Aker Horizons forms a long-term growth platform

- Platform where technology, industrial and software capabilities of Aker group can add most value
- Building companies that can meaningfully reduce GHG emissions while providing substantial value creation over time





Aker Offshore Wind

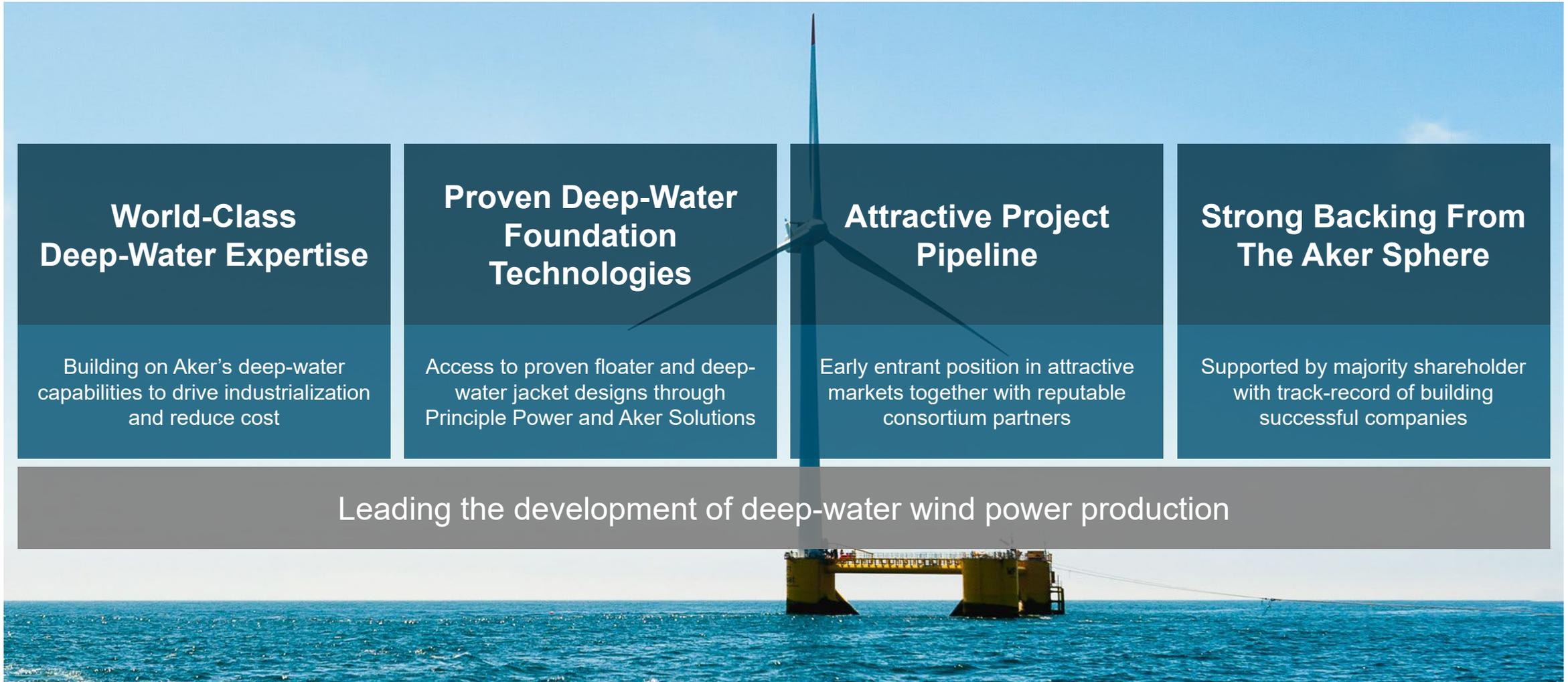
Astrid Skarheim Onsum
CEO

25 August, 2020

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Aker Offshore Wind – A pure play deep-water¹ wind IPP²

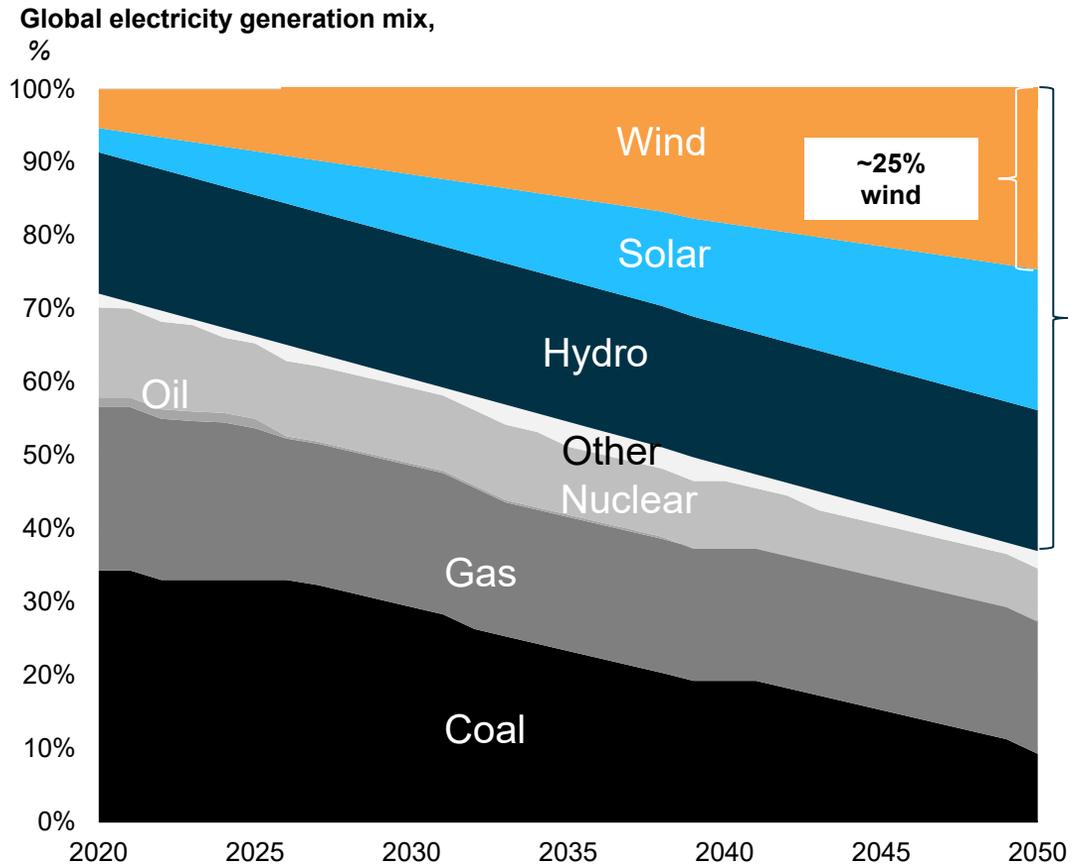


World-Class Deep-Water Expertise	Proven Deep-Water Foundation Technologies	Attractive Project Pipeline	Strong Backing From The Aker Sphere
Building on Aker's deep-water capabilities to drive industrialization and reduce cost	Access to proven floater and deep-water jacket designs through Principle Power and Aker Solutions	Early entrant position in attractive markets together with reputable consortium partners	Supported by majority shareholder with track-record of building successful companies

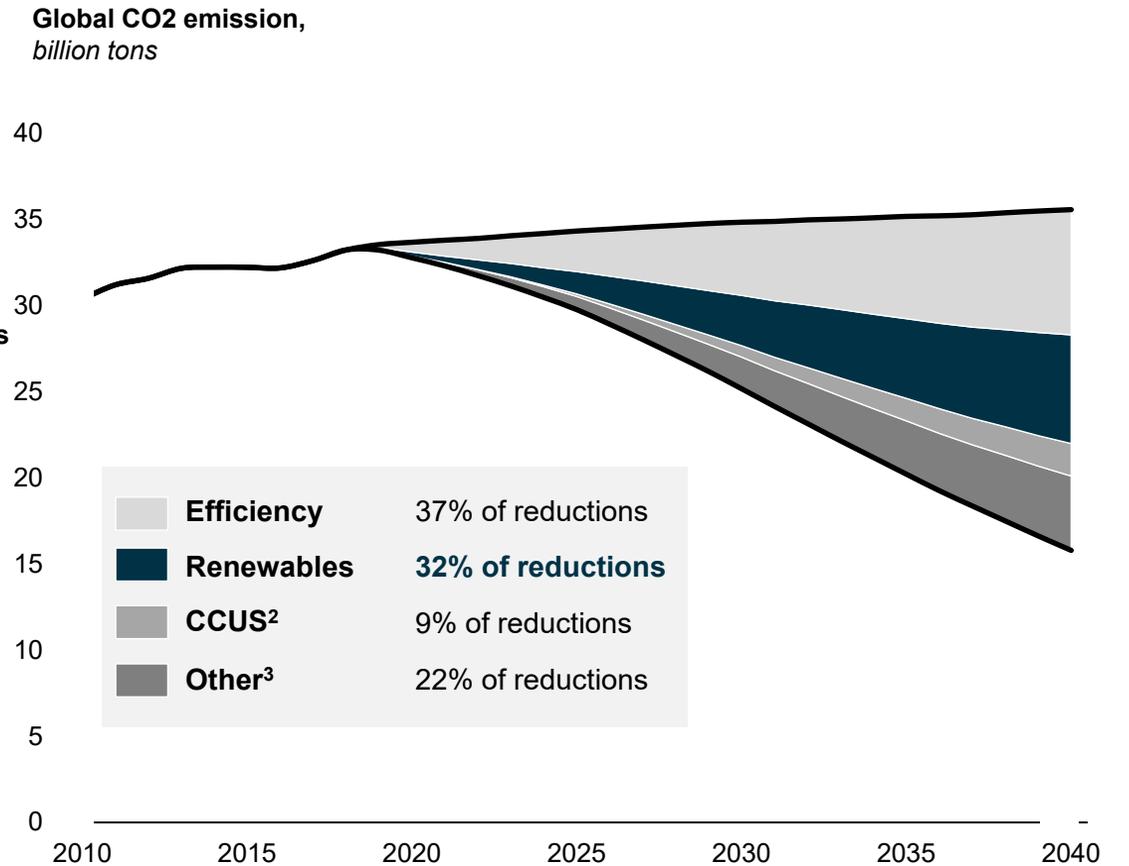
Leading the development of deep-water wind power production

Growing renewable energy is the pillar of global CO2 reductions

Renewables expected to constitute ~60% by 2050



CO2 emission reduction by measure¹



Source: Bloomberg New Energy Finance

- 1) Sustainable development scenario (bottom line), relative to stated policies scenario (top line)
- 2) Carbon capture, utilization and storage
- 3) Includes fuel switching, nuclear and other

Deep-water wind to become the most effective renewable energy source



Virtually unlimited potential
~7,000 – 8,000 GW (>60m¹)

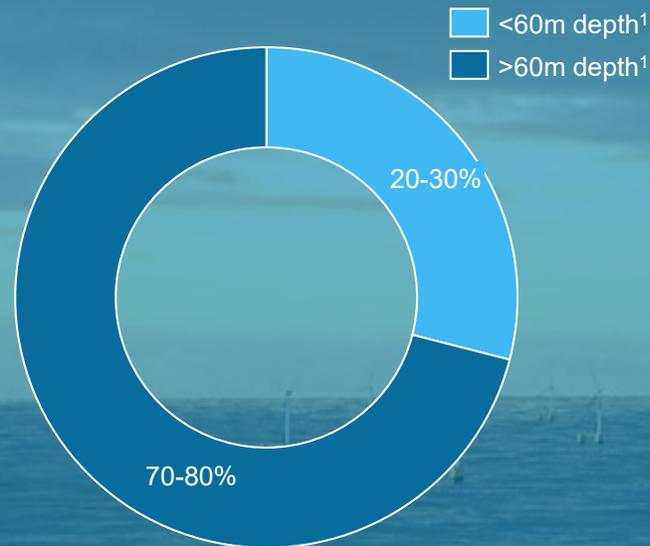


Superior wind conditions



Less intrusive and smaller footprint

Total offshore wind potential
in percent (100% = 10,000 GW²)



Wind capacity factors³

30-40%
Onshore wind

45-50%
Offshore Bottom-fixed

50-60%
Offshore Floating

Increasing from 45% to 50% allows for 10-15% increased capex

Benefits of deep-water wind



Limited impact on fisheries



Less interference on marine life



Outside of traditional shipping routes

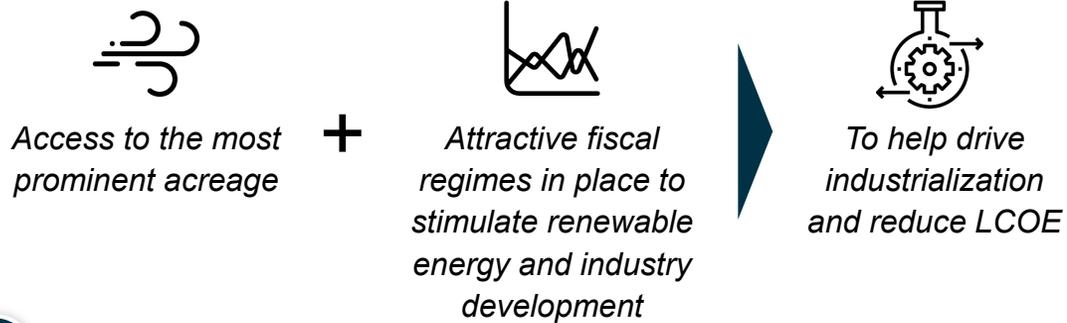


Avoids visual and noise pollution

Targeting markets with strong fiscal regimes for initial development

Early-mover strategy

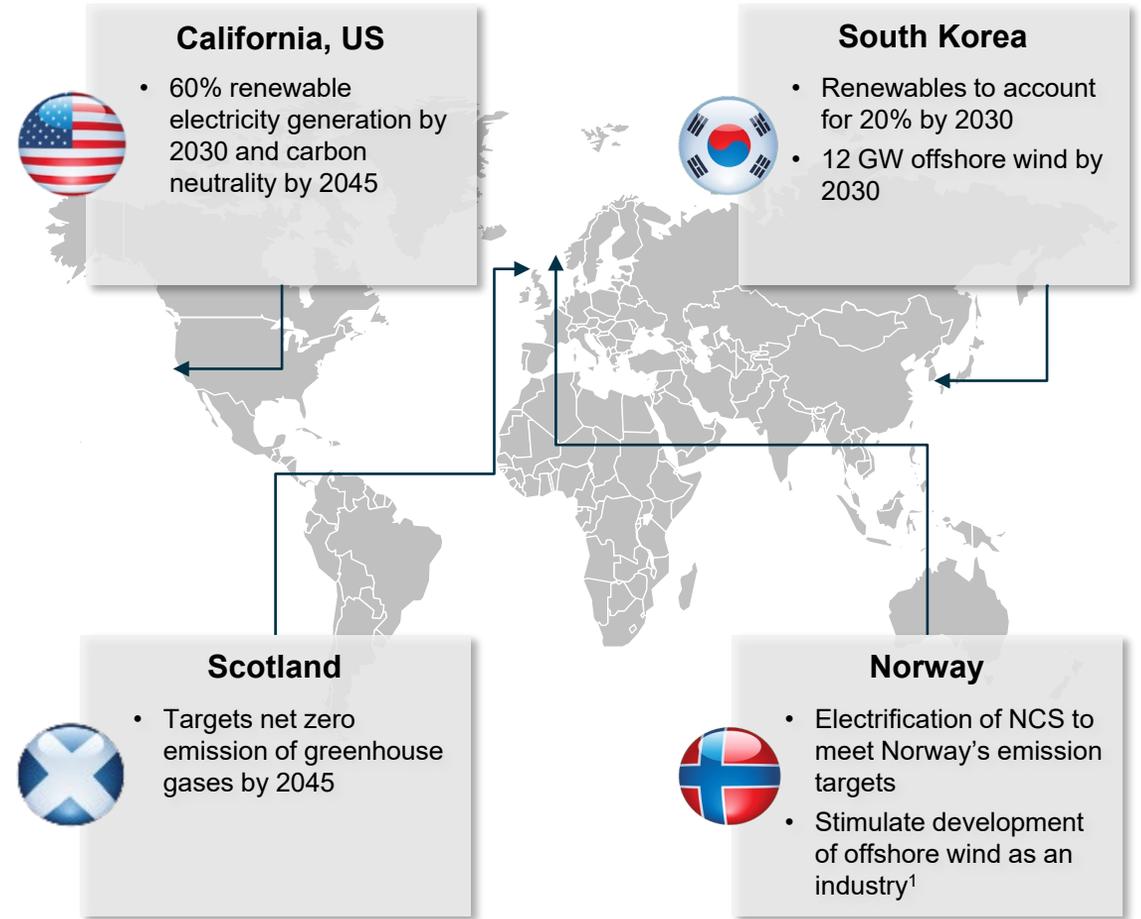
1 Early entrant position critical to succeed at current stage of industry



2 Building the track-record needed to thrive as industry matures



Securing a position in the most attractive markets



De-risking industrial development

World-class deep-water capabilities



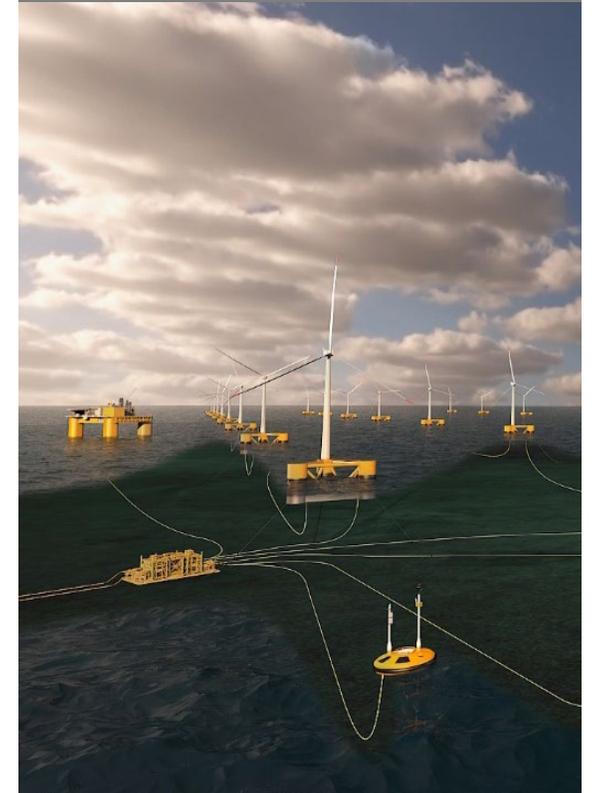
Proven deep-water foundation technologies



Digital platforms to drive down costs

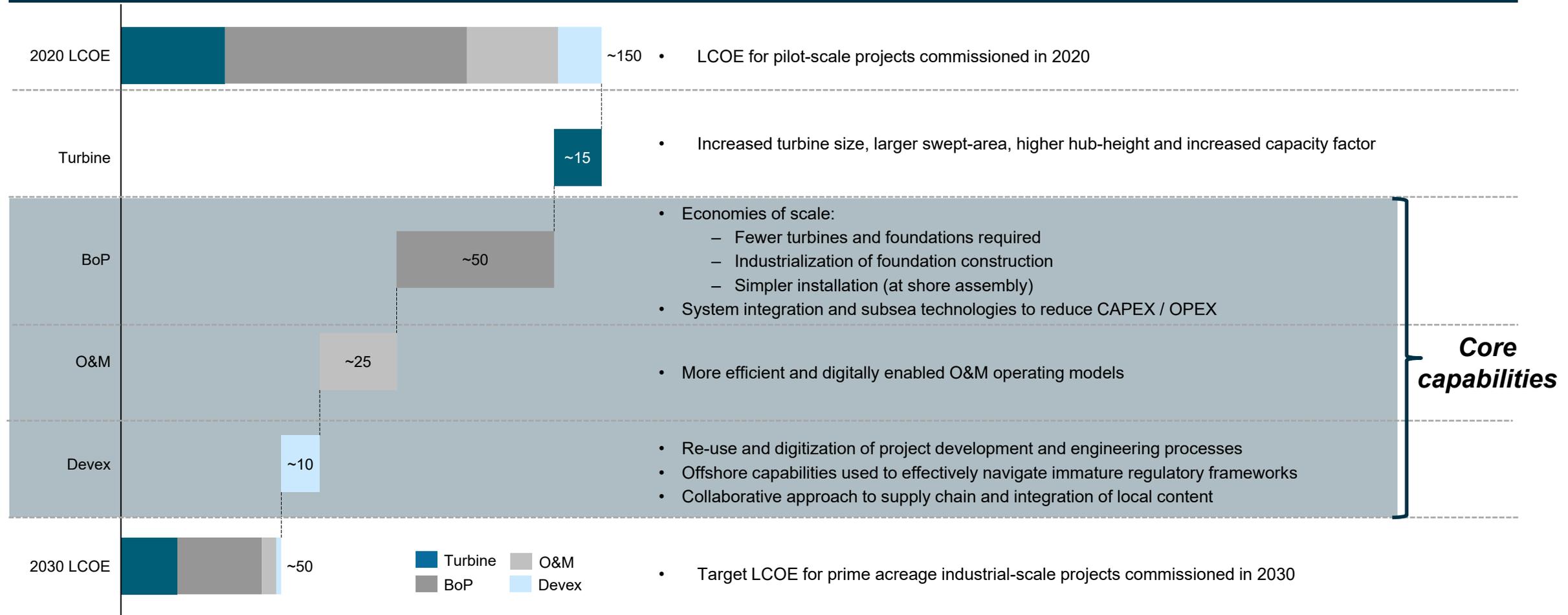


Leveraging Aker BP's position on the NCS



Target to drive down cost (LCOE) to ~50 EUR / MWh by 2030

LCOE for deep-water / floating offshore wind (EUR / MWh)

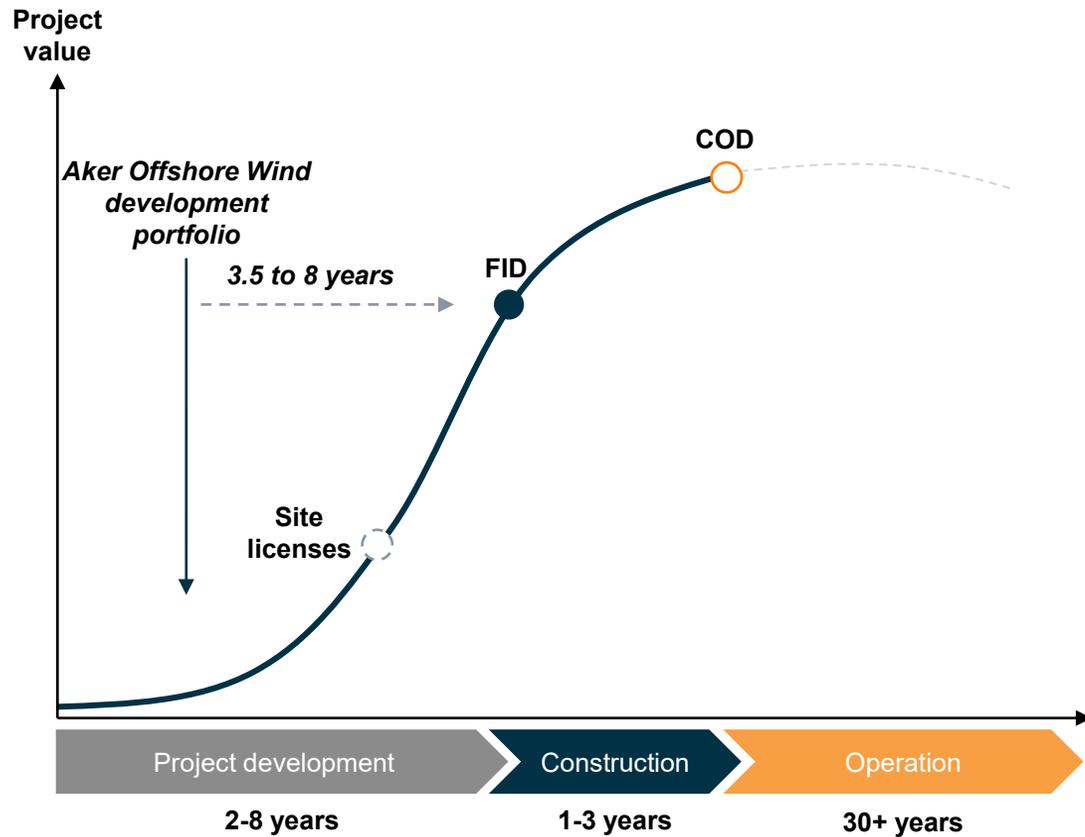


Attractive and sizeable development portfolio of >1.5 GW

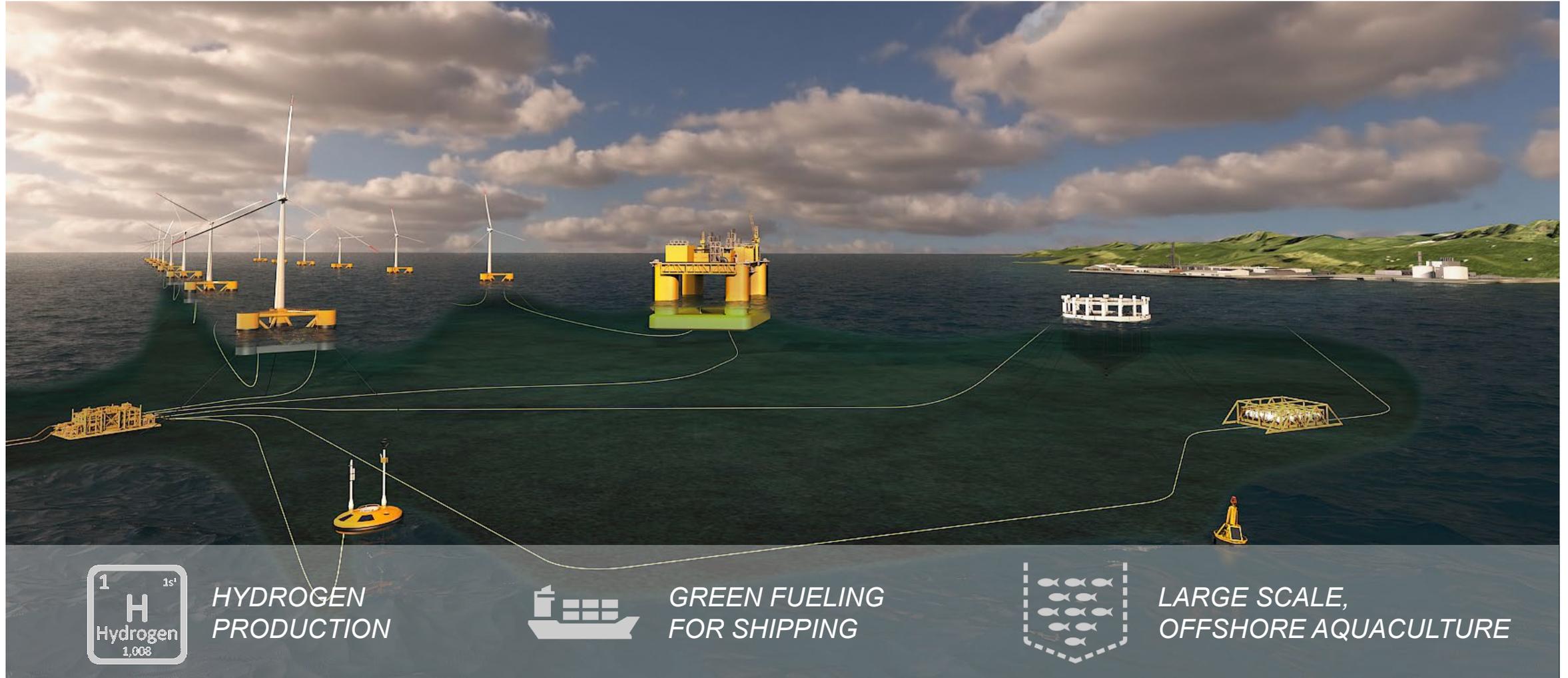
	PROJECTS		PROSPECTS	
	 South Korea	 USA	 Norway	 Scotland
Project	KF Wind	Redwood Coast Offshore Wind	Vestavindar and Sønnavindar	TBD
Region	Ulsan	California	Utsira North, Sørlige Nordsjø II	TBA
Estimated gross capacity¹	~1,500 MW	~150 MW	~1,700 MW	>500 MW
Estimated net capacity¹	~450 MW	~75 MW	~1,000 MW	TBD

Significant value creation potential

Illustrative deep-water wind development timeline and value profile



Deep-water wind part of an emerging sustainable ocean economy





VAST POTENTIAL FOR DEEP-WATER WIND

- “Unlimited acreage”
- Superior wind speed
- Highest capacity factors
- Less intrusive and smaller footprint



WORLD-CLASS DEEP-WATER EXPERTISE

- Leverage the Aker sphere’s world-class deep-water capabilities to industrialize and drive down LCOE
- Proven technologies through Principle Power and Aker Solutions



ATTRACTIVE GLOBAL PORTFOLIO

- Attractive early entrant position with access to prime acreage in growing markets
- Close partnership with leading industry players



STRONG BACKING

- Well-reputed majority shareholder in Aker Horizons
- Raised NOK 500m in successful private placement
- ~20,000 shareholders
- OSE Merkur 26 August 2020
- Ambition to move to OSE Main List

DRIVING THE INDUSTRIALIZATION OF DEEP-WATER WIND

Aker Offshore Wind



Aker Carbon Capture

Valborg Lundegaard
CEO

25 August, 2020

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A unique pure play carbon capture company

Pure play

Carbon capture

Unique HSE¹

Leading proprietary technology

Validated & certified

50,000+ operating hours



“Carbon capture utilisation and storage is a crucial variable in the Sustainable Development Scenario, designed to meet the UN’s² energy and climate related sustainable development goals” – IEA³

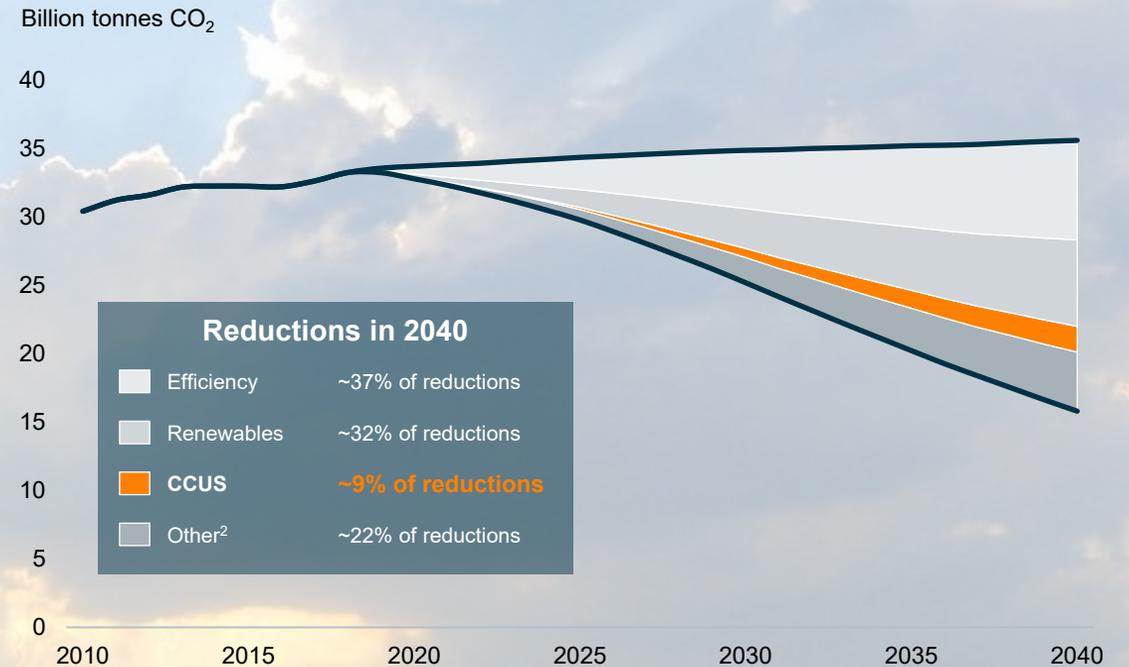
Carbon capture plays an important role in mitigating climate change

Carbon capture – A key measure to reduce global CO₂ emissions
9% reduction – ~2,400 million tonnes CO₂ per annum by 2040²

Required measures to meet climate goals



CO₂ emissions reductions by measure^{1,2}



A huge carbon capture market



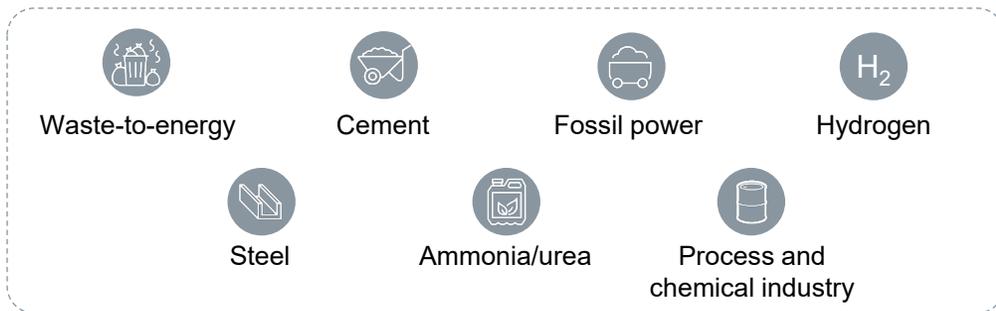
~37 billion tonnes¹
CO₂ emitted globally in 2019



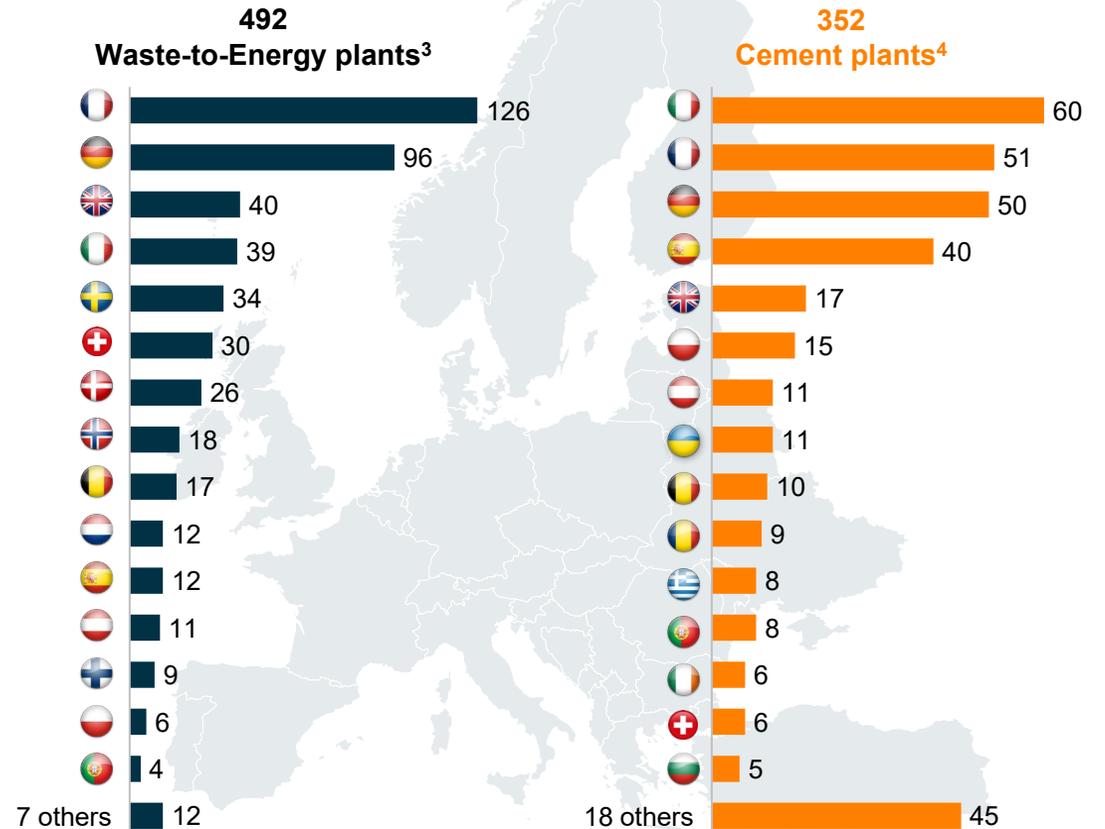
~5,200 plants globally²
with CO₂ emissions above 1 million tonnes / year



7 addressable end-markets
Flue gas applications accessible on a global basis



Example markets: European Waste-to-Energy and Cement plants



Dedicated focus on the carbon capture phase in the value chain

CARBON CAPTURE, UTILISATION AND STORAGE VALUE CHAIN

Carbon capture

Transportation

Storage or utilisation

KEY FOCUS

Supporting customers throughout plant lifecycle

Feasibility | Pre-FEED¹ | FEED¹ | EPC² | Services

← Aker Carbon Capture scope (incl. partners) →

Early engagement improves integration, capture and conditioning in selected carbon capture solution



CO₂ capture

Liquefaction
(CO₂ compression)

Intermediate storage
(on site)

SUPPORTING SPECIALIST COMPETENCE

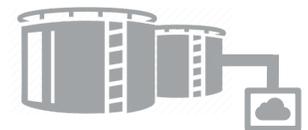
- Significant knowledge of the entire carbon capture, utilisation and storage value chain
- Strong competence within utilisation areas (e.g. greenhouse, methanol and fuels) and storage solutions, including EOR³



Land- and sea-based transportation



Other intermediate storage(s)



Utilisation / permanent storage

Offering a leading carbon capture technology portfolio

A comprehensive carbon capture technology with unique HSE characteristics from market leading solvent

Carbon capture process

1 Carbon capture

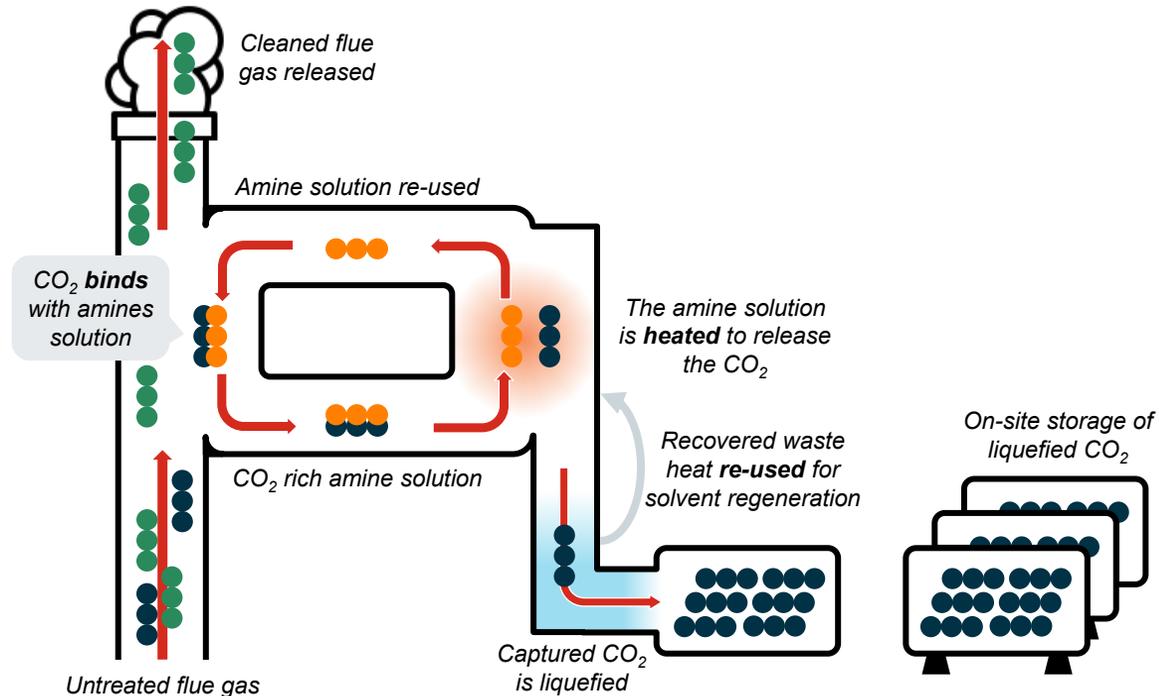
Relates to the amine loop of binding and releasing CO₂

2 Liquefaction

Relates to the cooling and compression of captured CO₂

3 On-site storage

Relates to storage of liquefied CO₂ before transportation



Superior HSE characteristics

- ✓ Minimum emission
- ✓ Non-toxic
- ✓ Biodegradable
- ✓ Minimum liquid waste
- ✓ Minimum corrosion

Energy efficient

- ✓ Energy efficient reclamation
- ✓ Superior energy plant integration
- ✓ Optimal integration toward conditioning

Proven

- ✓ 50,000+ operating hours
- ✓ Tested on seven different flue gases

Unique proprietary solvent with superior degradation and HSE profile

A superior solvent degradation profile is the key success factor for Aker Carbon Capture...

Reference solvent tested for **920 hours** in MEA campaign at Heilbronn plant in Germany



of hours

High solvent degradation (discolouring) in operation on coal flue gas at EnBW's pilot plant

Aker Carbon Capture solvent tested for **2,090 hours** in SOLVit Campaign



of hours

During the SOLVit CCx2 Campaign, the S26 solvent showed no discoloration (tested for 2,090 hours)

...yielding attractive characteristics

Attractive HSE profile

- ✓ Minimum emission
- ✓ Non-toxic
- ✓ Biodegradable
- ✓ Minimum liquid waste
- ✓ Minimum corrosion
- ✓ Efficient reclamation (HSS¹ removal)

Better performance

- ✓ High CO₂ capture rate (~90%)
- ✓ High CO₂ purity (>99%)
- ✓ Lower energy requirement
- ✓ Lower maintenance requirements
- ✓ Longer plant lifetime
- ✓ Easier operations and monitoring

Large-scale industrial contracts for Aker Carbon Capture technology

Heidelberg / Norcem
Brevik, Norway



*"We believe that today, **carbon capture is the only real solution for the cement industry's emissions**"*

- Per Brevik, Director Sustainability & Alternative Fuels, HeidelbergCement (NE)

Size and industry	400,000 TPA CO ₂ from cement
Delivery	Big Catch and liquefaction plant
EPC Start ¹ / Operation	Jan 2021 / 2024

Twence
Hengelo, the Netherlands



© Twence

*"...Significantly **lower environmental footprint overall**"*

- Twence

Size and industry	100,000 TPA CO ₂ from waste-to-energy
Delivery	Just Catch™ capture solution
EPC Start ¹ / Operation	Jan 2021 / 2022

Strong execution model ensured through Aker Solutions partnership

Key partnership



AkerSolutions

Aker Carbon Capture

- ✓ Project execution with proven ability to deliver on complex projects
- ✓ Access to technical engineering services specific to Aker Carbon Capture projects
- ✓ A leading maintenance and operations organisation
- ✓ Recognised global execution platform
- ✓ Established customer network and relationships

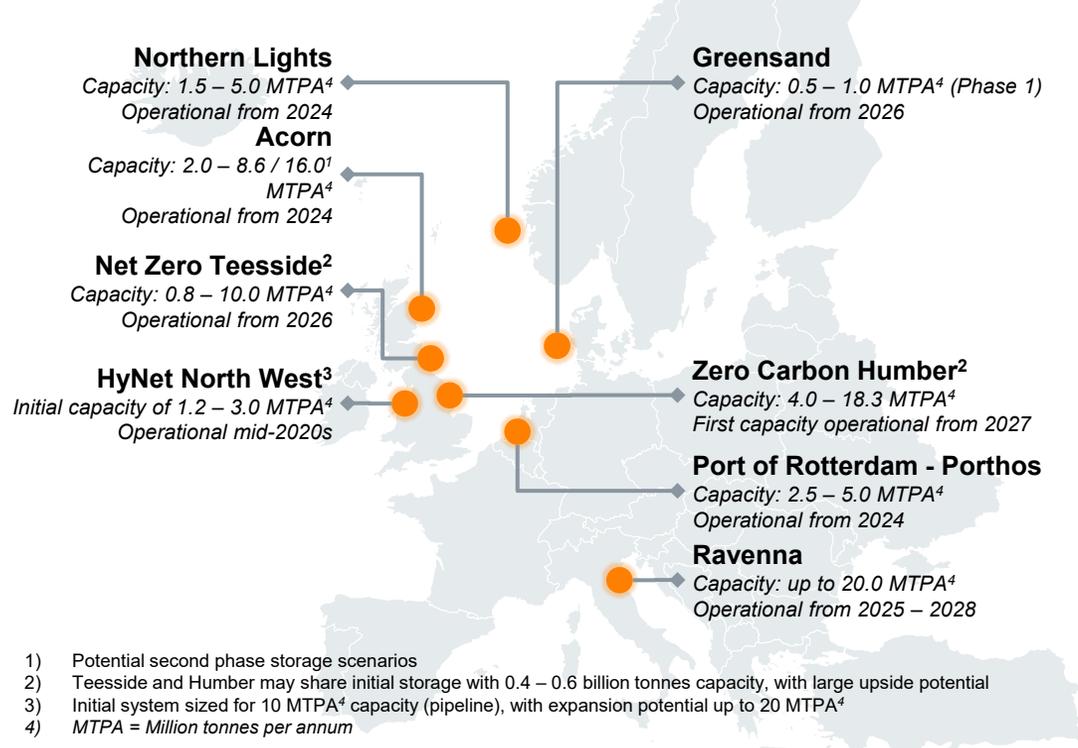
Strong growth in carbon capture storage projects in Northern Europe...

8 storage projects under development

~78 MTPA⁴ planned storage capacity, equivalent to

~780 Just Catch™

Currently, Europe has identified over 300 billion tonnes of geological carbon capture storage space available



UK remains focused on carbon capture, utilisation and storage

- Several storage locations in process
- Established CCS Infrastructure Fund of at least GBP 800 million
- Ambition to reach net-zero carbon emissions by 2050

Project Greensand

- New Danish carbon capture storage consortia with Ineos, Maersk Drilling and Wintershall Dea
- Received EUDP⁵ funding in June 2020
- Plan is to capture CO₂ in Ineos' Nini-felt

Project Ravenna

- New storage location by ENI in the Adriatic, off the coast of Ravenna, using exhausted natural gas fields
- Storage capacity of between 300 and 500 million tonnes
- Demonstration projects and full-scale projects in progress

...with Northern Lights being the Norwegian initiative

Up to **5 million** tonnes / year storage capacity

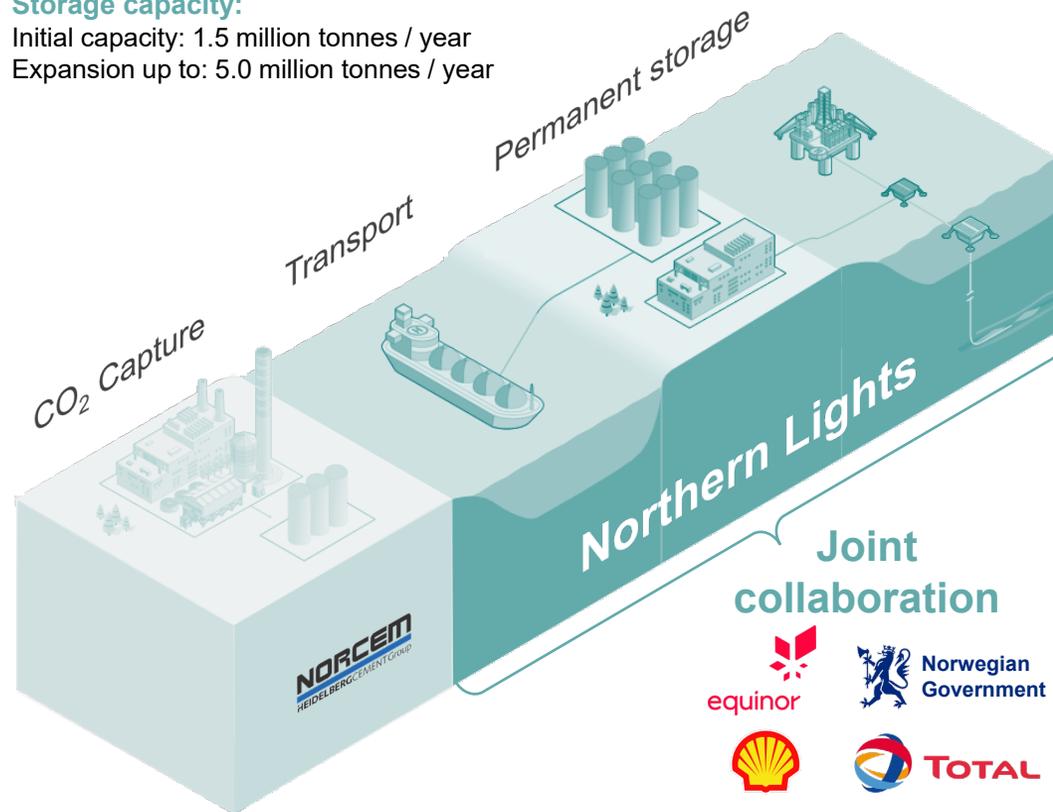
Serving plants **across Europe**

Operational from **2024**

Storage capacity:

Initial capacity: 1.5 million tonnes / year

Expansion up to: 5.0 million tonnes / year



Northern Lights – CCS value chain development

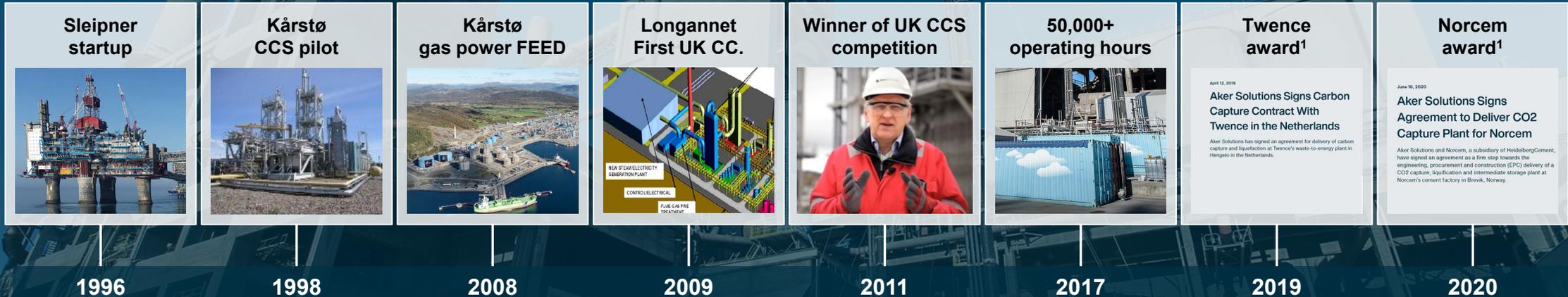
- ✓ **First step** in developing a full-scale CCS value chain in Norway. Northern Lights comprises the **transport and permanent storage** stages
- ✓ Northern Lights to receive CO₂ captured at **Norcem cement plant in Brevik / Fortum waste-to-energy plant in Oslo** and other **European sites**
- ✓ **Excess capacity of ~0.7 million tonnes / year** in the initial phase as Norcem and Fortum will provide ~0.8 million tonnes / year combined

Norwegian Government participation

- ✓ The Norwegian government is considering to fund **~80% of costs**. Final investment decision still pending - decision expected in **Q4 2020**

Validated technology through long-term operations at industrial scale

Aker investments of NOK +450 million in addition to public grants and partner investments



Aker Carbon Capture – at the forefront through long-term investment

KEY INITIATIVES

- 2008 – Current | Mobile Test Unit (MTU)
- 2008 – 2016 | Solvit R&D (European CCS R&D program)
- 2012 – Current | Technology Center Mongstad (TCM)

High operational activity – 18 ongoing projects for our technology

EPC / Post FEED



Norcem¹, Cement, storage



Twence¹, Waste-to-Energy, greenhouse

Feasibility studies



Amager, 2020



KVA Linth, 2025



Energy company, 2020

Other selected ongoing projects



International FPSO company, 2020



Brage EOR, 2019-2021



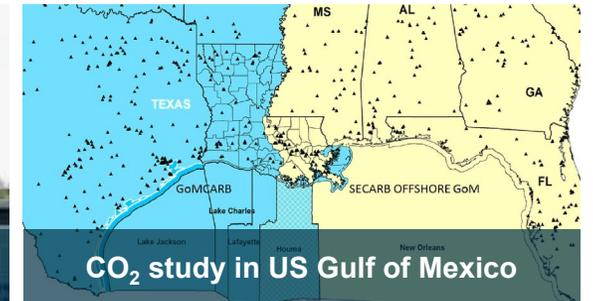
ForusEnergi – WtE capture study



Preem – Hydrogen production, 2020



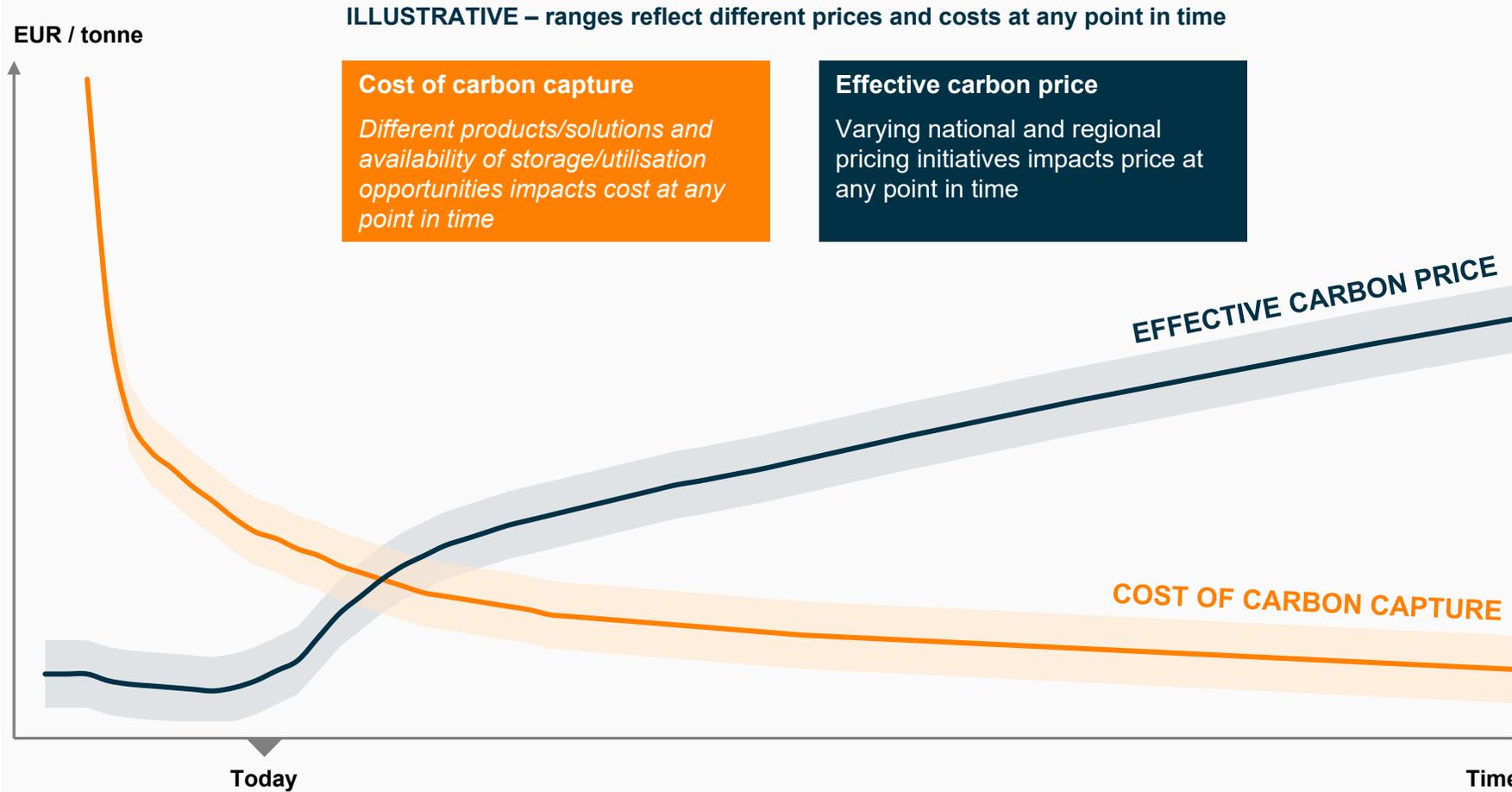
Membranes for CO₂ separation



CO₂ study in US Gulf of Mexico

Project economics turning positive

Market trends are leading to a more favourable market dynamic and project economics turning positive



Continuous cost reductions

- Standardisations
- Technology development
- Competitive supply chains
- Learning-by-doing

- Other regulations
- New carbon taxes
- CO₂ quota system design
- Public sentiment

Favourable price development

Aker Carbon Capture seeks to accelerate investments in technology and new growth opportunities to maintain and strengthen its market position



Improve existing technology portfolio

- Need for **continued innovation on current technology** to maintain leading position and be at the forefront in developing next generation capture technology
- **Improve energy efficiency** by enhancing heat integration to further improve HSE characteristics and reduce costs
- Increase focus on development of **standardisation and modularisation** of large industrial-scale capture plants to drive additional cost reductions to maintain leading position



Develop new technology to engage in emerging market opportunities

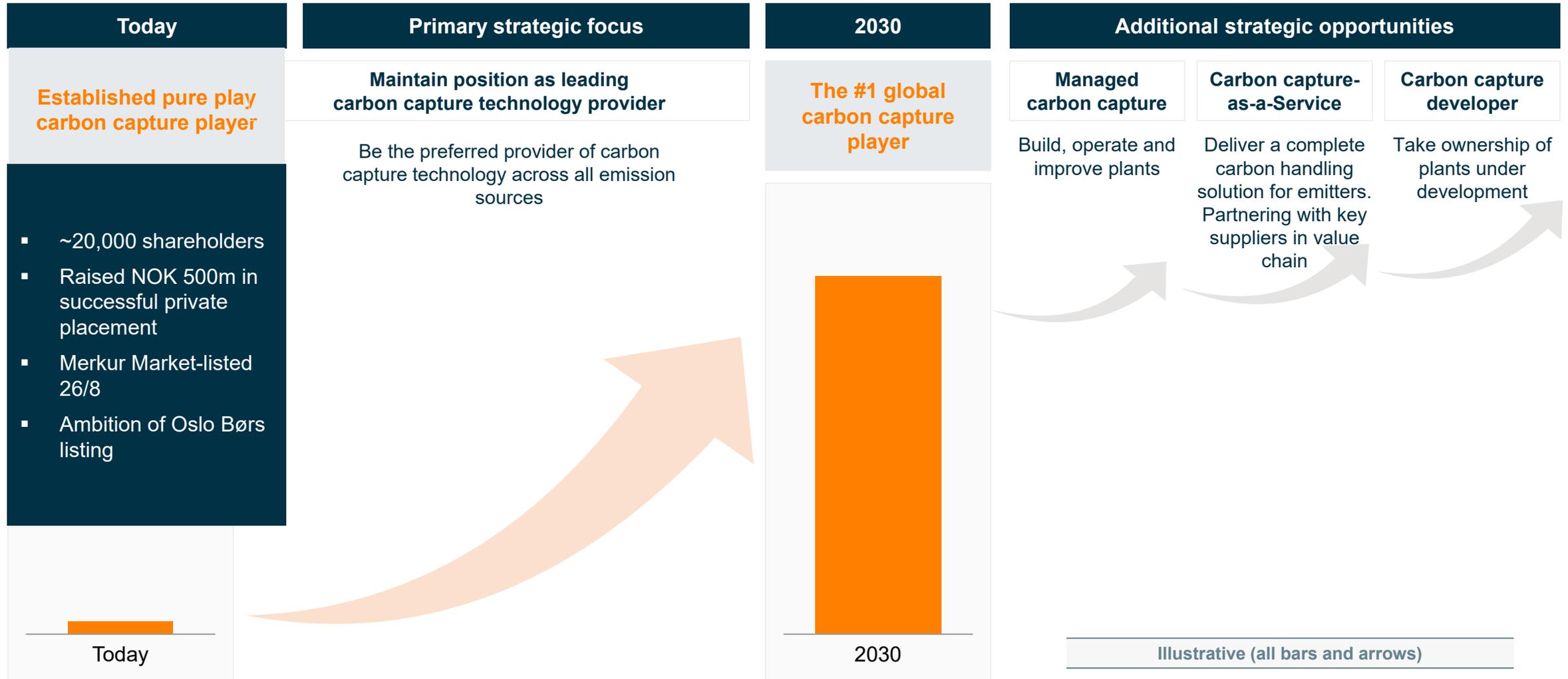
- **Expand Just Catch™ portfolio** to further improve product portfolio and market reach
- Develop **membrane technology** for separation of CO₂
- **Qualify and validate technology** for retrofit in existing large-scale **hydrogen production plants**
- Integrate solutions to **greenfield hydrogen** production plants



Actively monitor technology providers and developers to identify attractive M&A opportunities

- **Identify technologies** that are attractive additions to current technology portfolio
- Identify opportunities that are **complementary** to Aker Carbon Capture's current technology portfolio to further strengthen its leading market position
 - Potentially attractive technology solutions as emerging absorber technology, pre-combustion technology, and separation technology amongst other

2030 ambition – become the #1 global carbon capture player



A unique pure play carbon capture company



Huge market potential



Unique HSE technology



Validated & certified



Commercialisation happening now

ENABLING A SUSTAINABLE DEVELOPMENT

Aker Carbon Capture

