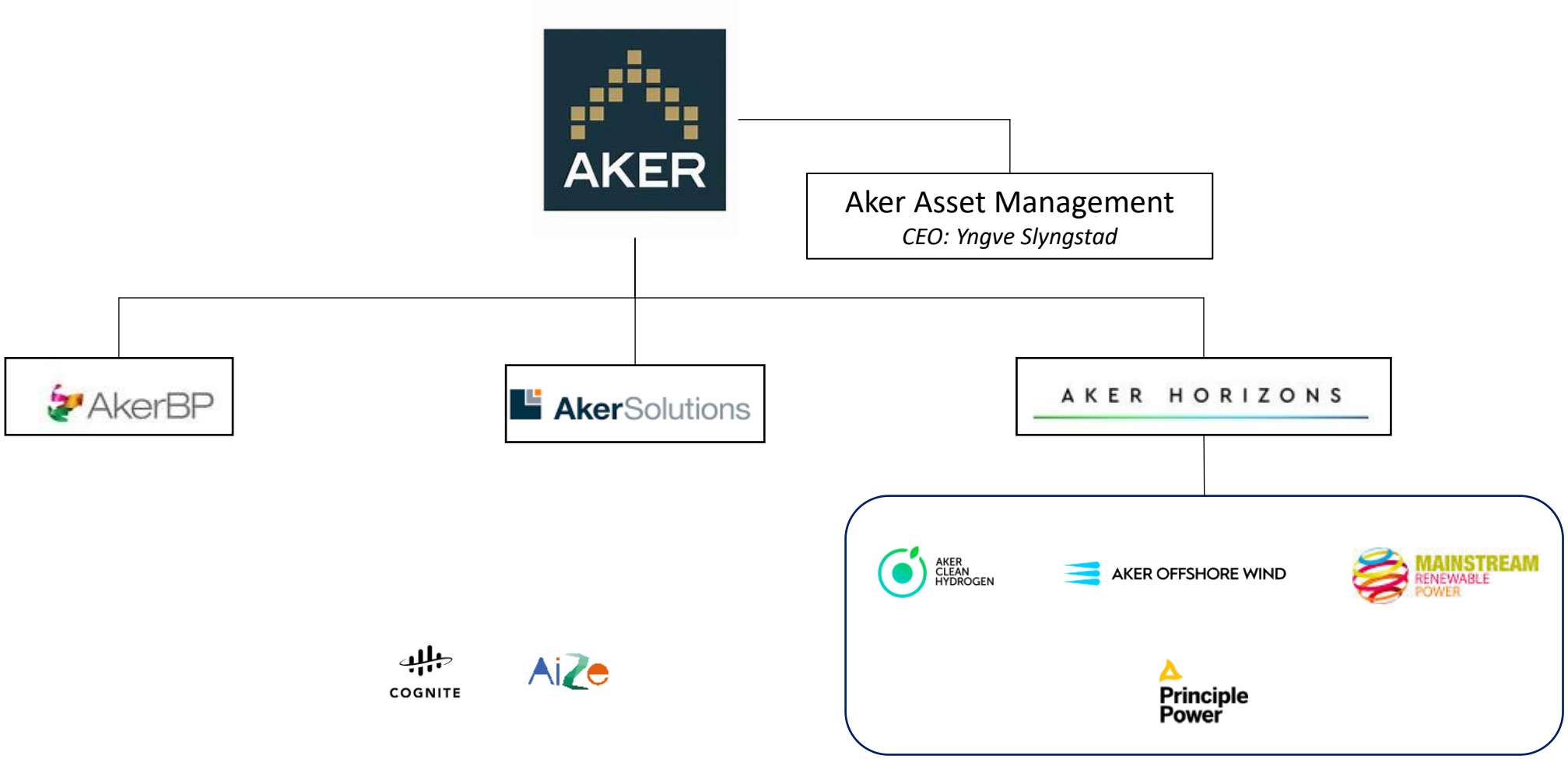
Floating Offshore Wind Poland

Spotkanie Pomorskiej Platformy Rozwoju – 16.05.2022

Malte Paul – Aker Offshore Wind Europe GmbH

Aker Companies



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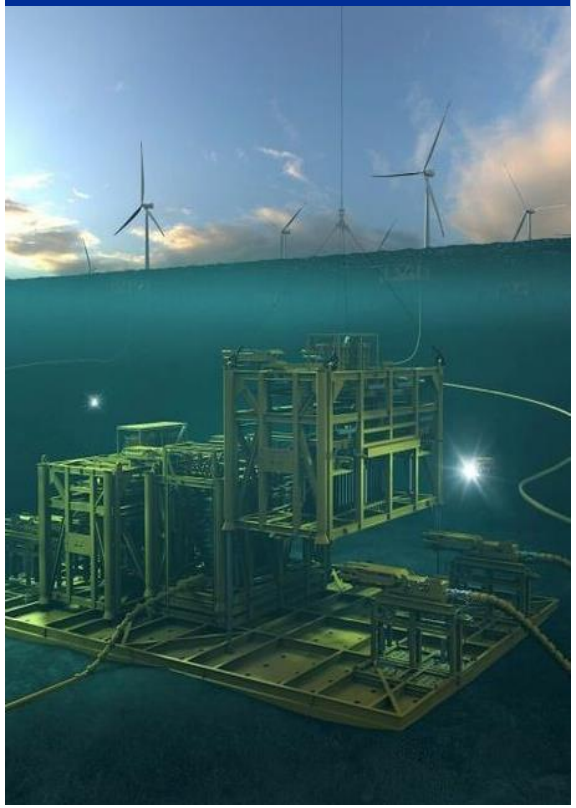
Leveraging the Aker Ecosystem of Companies

World-class deep-water experience

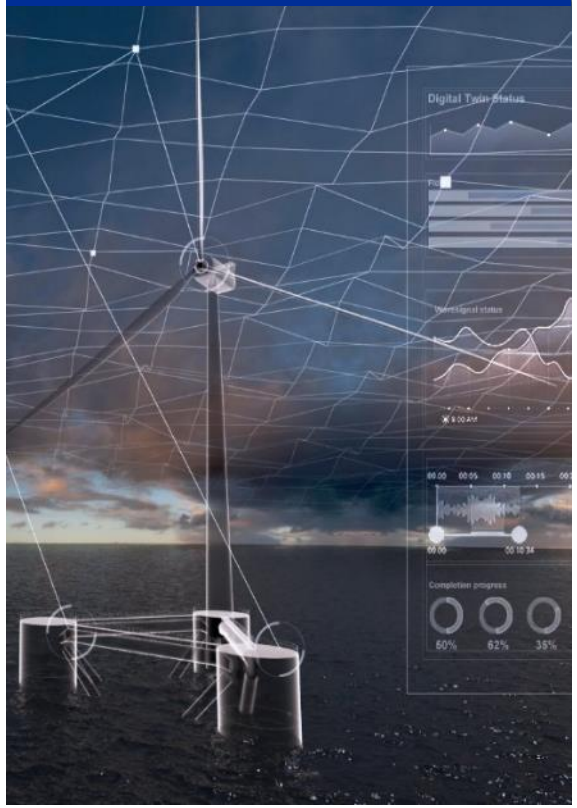


AkerSolutions

Proven deep-water foundation technologies

Principle Power

Digitalization to drive down costs



COGNITE AiZe

Leverage innovative and efficient solutions to produce green H2

AKER CLEAN HYDROGEN

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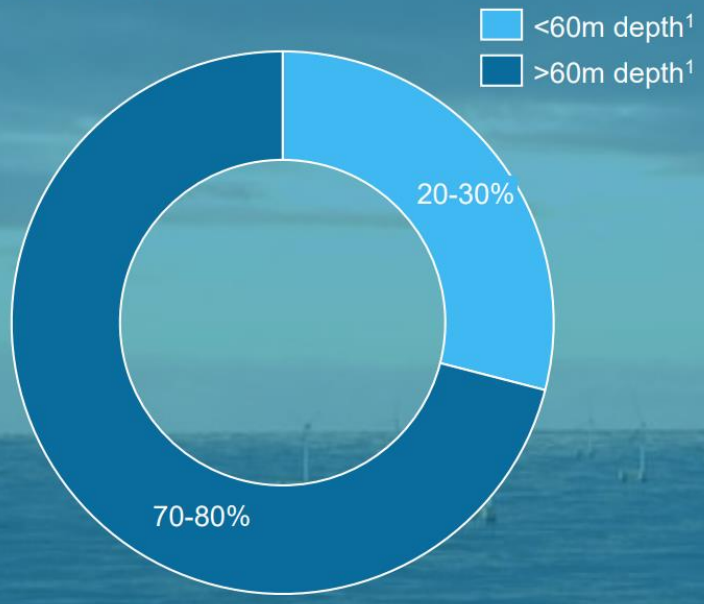
Deep-water wind is expected to become the most effective renewable energy source

Virtually unlimited potential
~7,000 – 8,000 GW (>60m[1])

Total offshore wind potential
in percent (100% = 10,000 GW[2])



Superior wind conditions

Wind capacity factors[3]

30-40%
Onshore wind

45-50%
Offshore Bottom-fixed

50-60%
Offshore Floating

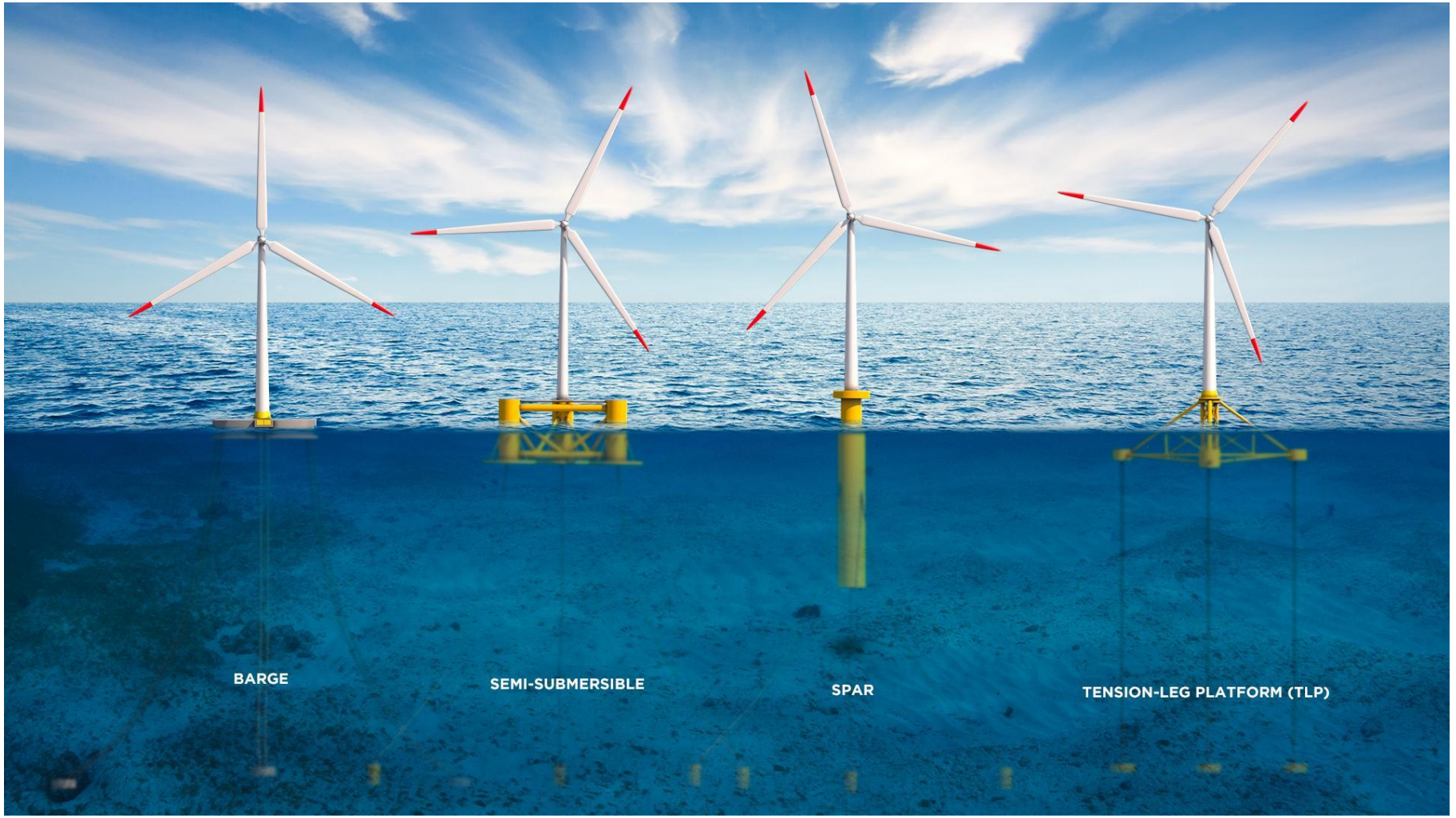
Increasing from 45% to 50% allows for 10-15% increased capex

Less intrusive and smaller footprint

Benefits of deep-water wind

- Limited impact on fisheries
- Less interference on marine life
- Outside of traditional shipping routes
- Avoids visual and noise pollution

Floater design´s



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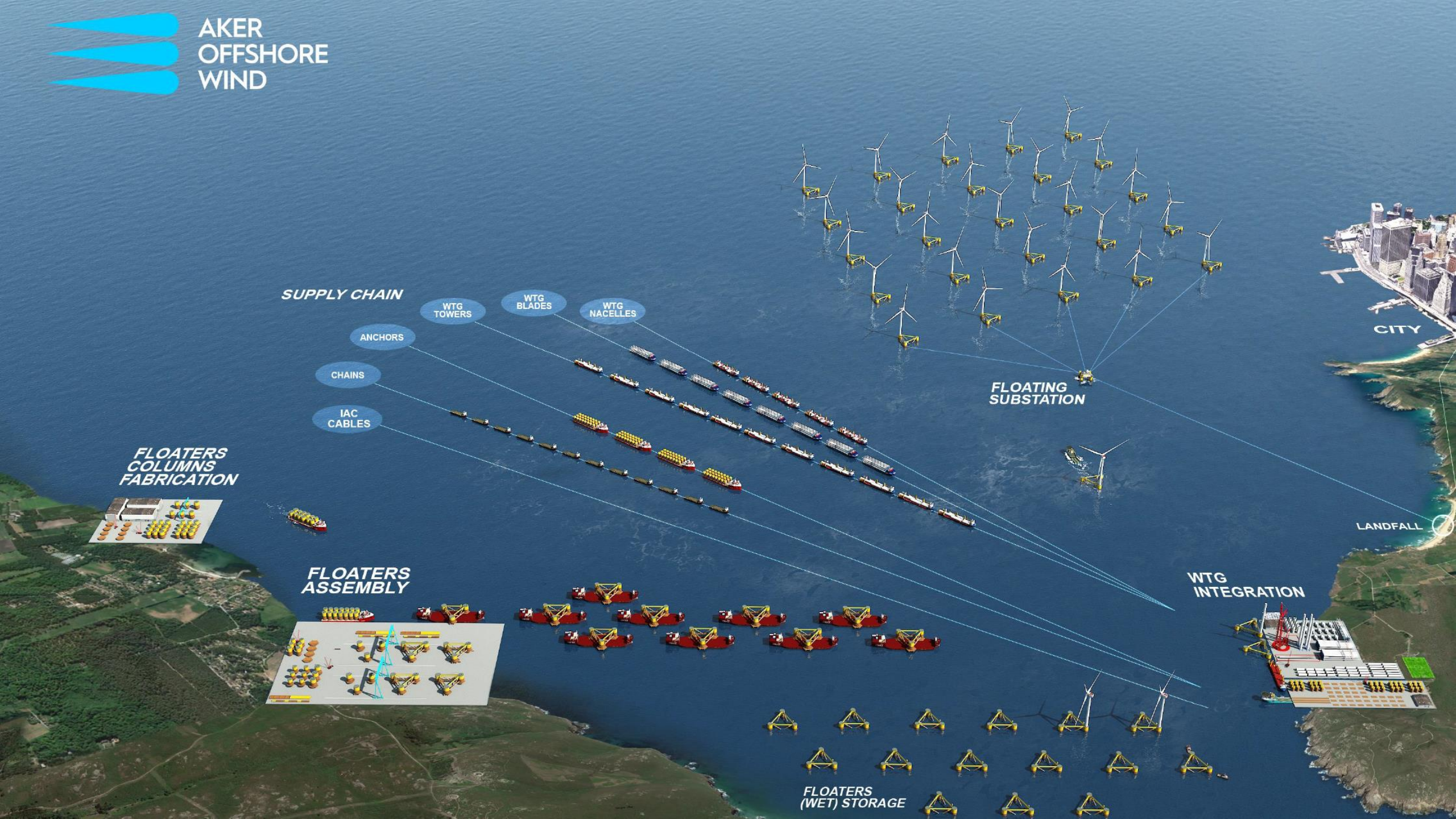
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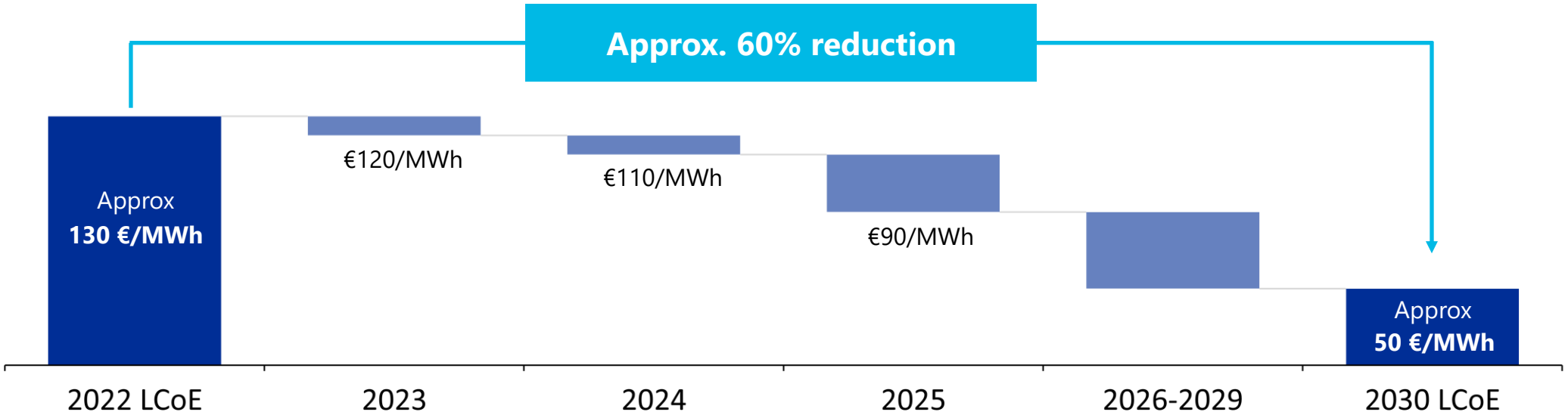
WIND
SUPPLY CHAIN
WTG TOWERS
WTG BLADES
WTG NACELLES
ANCHORS
CHAINS
IAC CABLES
FLOATING SUBSTATION
CITY
FLOATERS COLUMNS FABRICATION
LANDFALL
FLOATERS ASSEMBLY
WTG INTEGRATION
FLOATERS (WET) STORAGE

Timeline for Driving Cost Down to 50 €/MWh



ENABLED BY

ECONOMIES OF SCALE
- Turbine size
- Number of turbines
- Sizable project pipeline

INDUSTRIALIZATION
- Supply chain for mass production
- Ease of fabrication / constructability
- Reduce foundation/mooring system cost together with PPI and PPI shareholders
- Reduce WTG cost by partnering with WTG OEMs

INNOVATION
- Subsea power systems
- Mooring
- Digitalization

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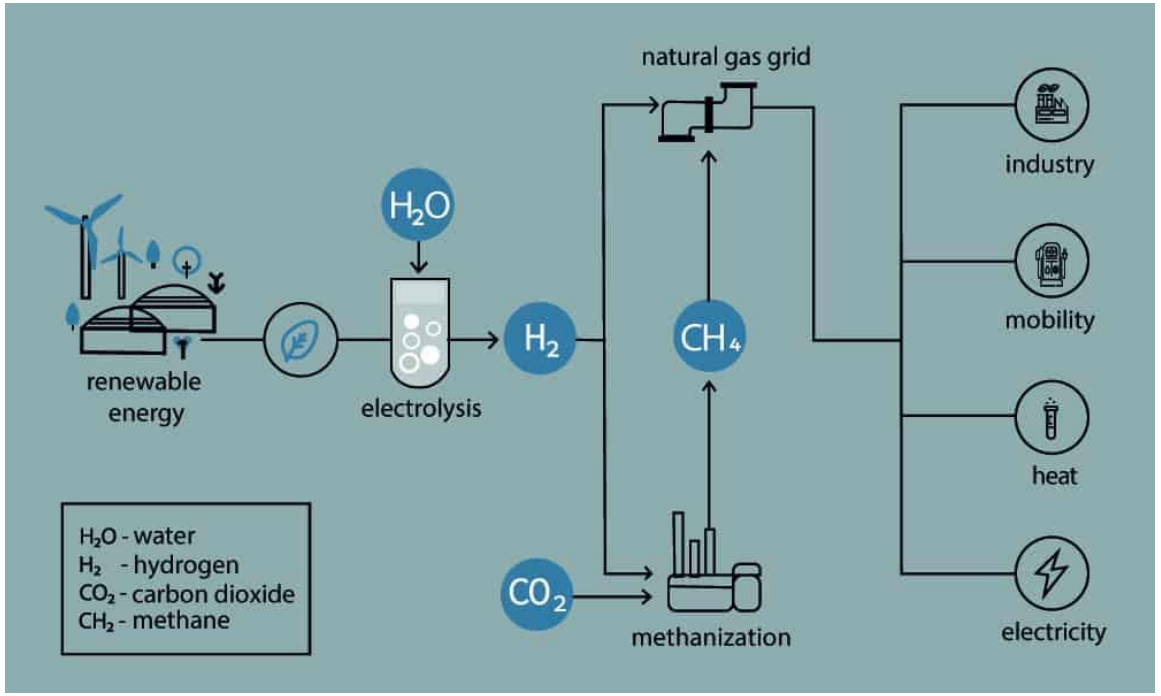
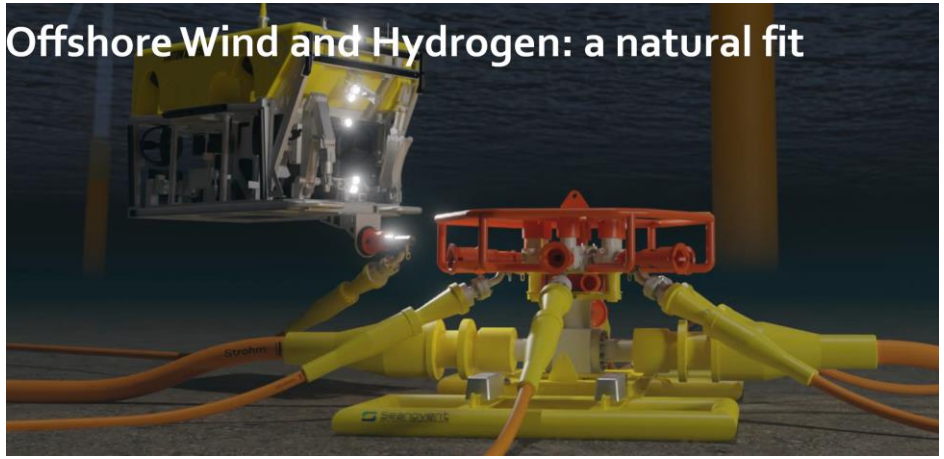
Power to X

Production
- on H2 Offshore Platform
- on WTG locations Offshore
- onshore

Transport
- via pipeline
- vessels

Opportunities
- More Offshore Wind Capacity can be utilized faster
- TSO relief !
- Additional impulse for the harbours





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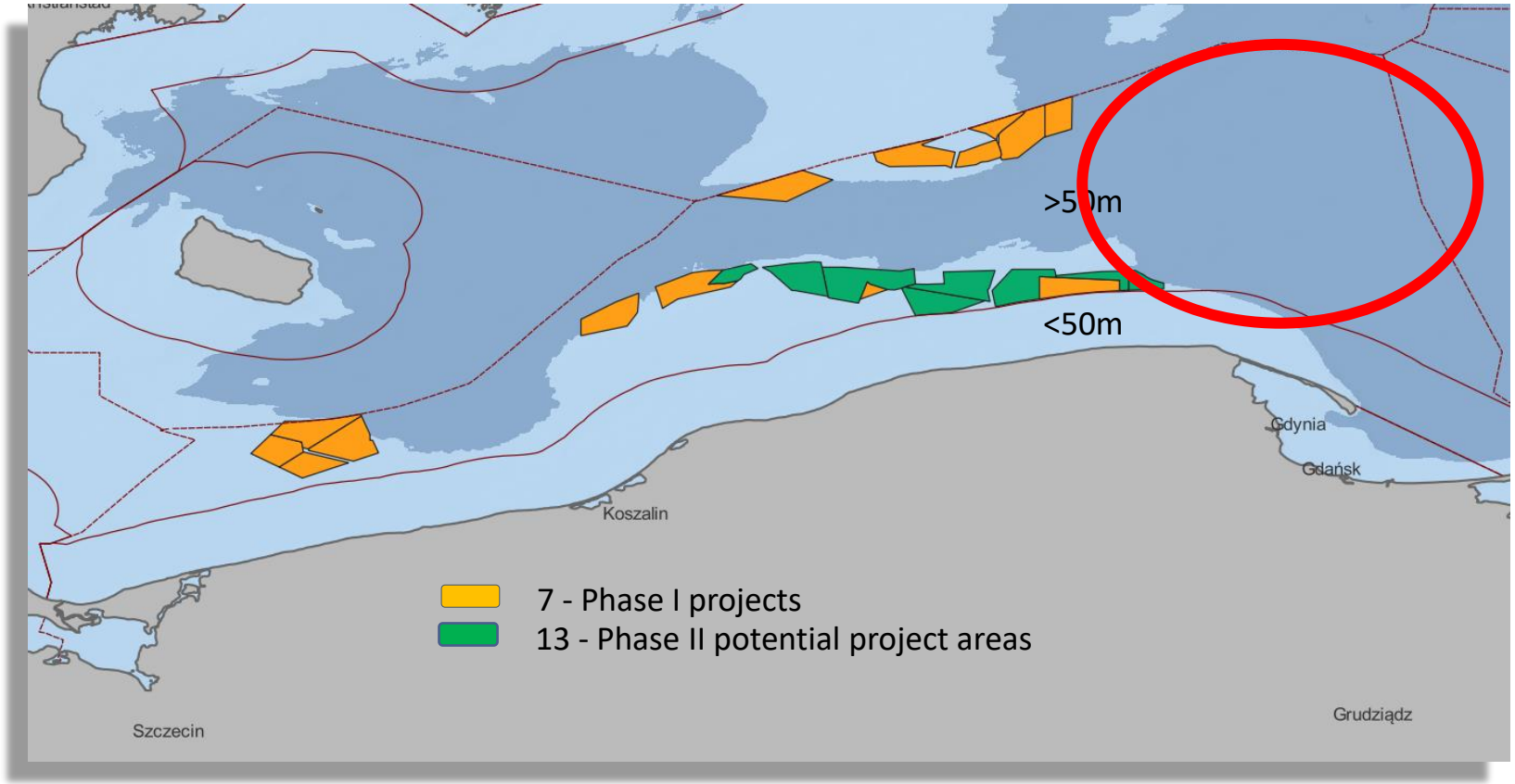
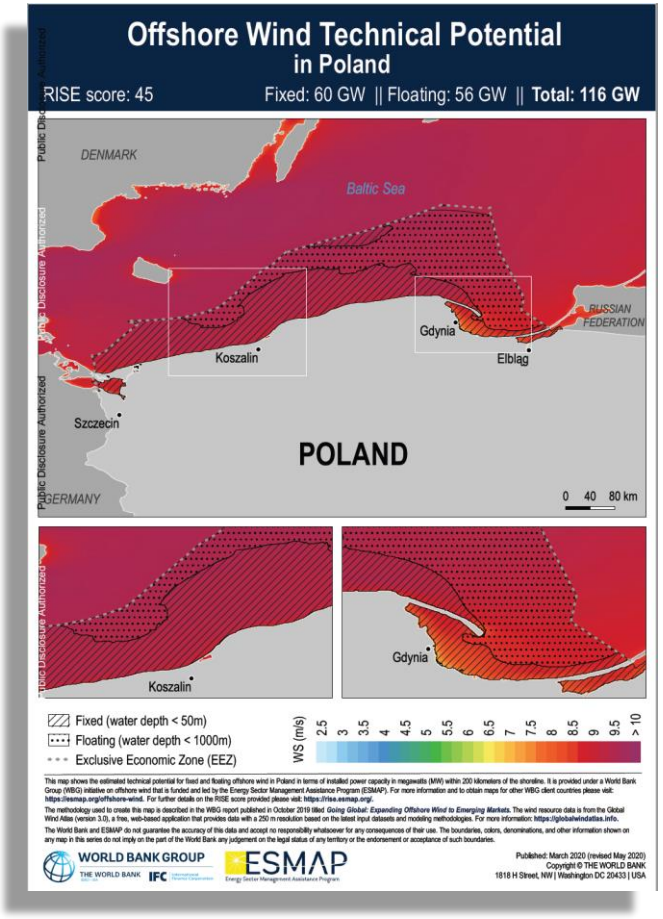
Status quo - Offshore Wind Poland

Offshore Status

- Phase 1: 7 fix bottom projects allocated (total 5.9 GW). Planned to be in operation until 2028
- Phase 2: 11 areas outlined (partly floating). CfD auctions planned in 2025 and 2027 each 2.5GW
- Phase 3: 28GW according to the Baltic Sea declaration to be shaped (including larger floating potential)





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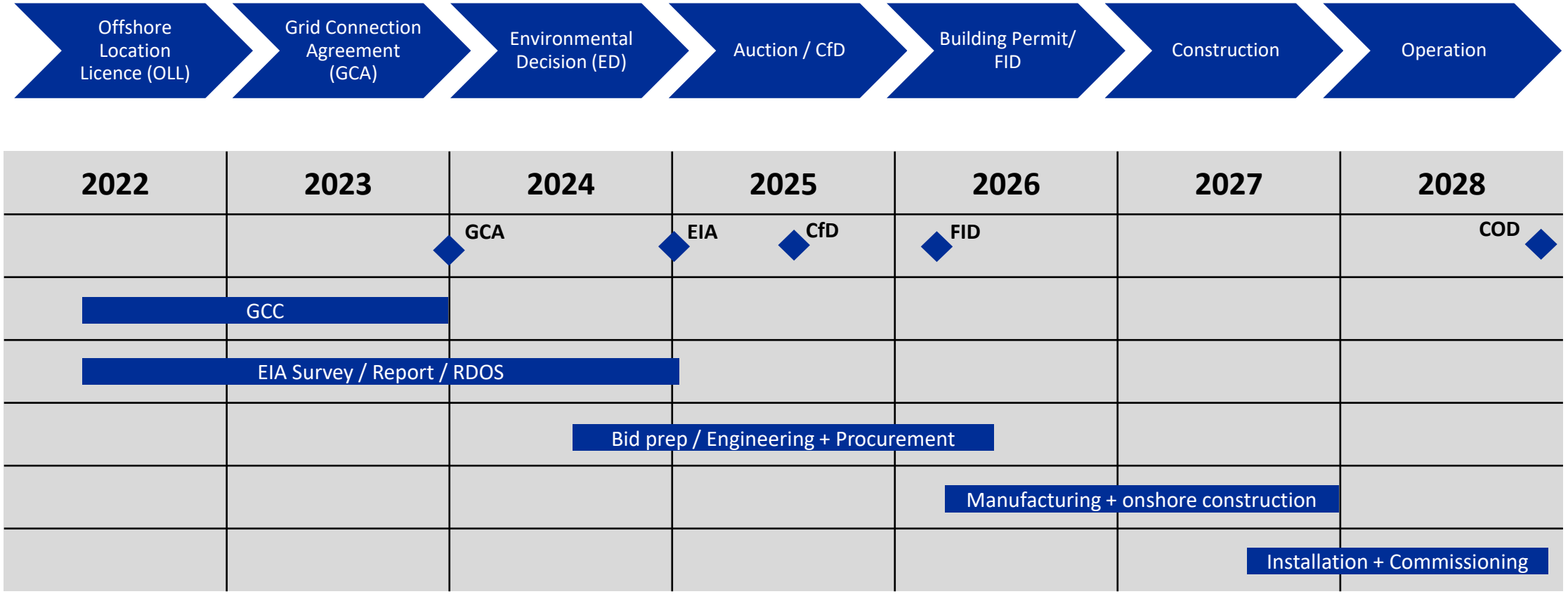
Polish project Lifecycle – Phase II



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CAPEX // Local Content Floating Offshore Wind

	Fixed Bottom		**Floating**	
	CAPEX %	Local Content %	CAPEX %	Local Content %
Foundation	25	30	40	80
Electrical Systems	20	30	15	30
WTG	35	20	30	20
T&I	20	20	15	20
Total	**100**	**25%**	**100**	**~40%**

→ Significant more **Polish Local Content** with Floating Offshore Wind
- → Due to more steel masses in Foundations + Moorings
- → Ideal steel fabrication and ship yard potential in Poland

Indicative numbers based on current assumptions which might change

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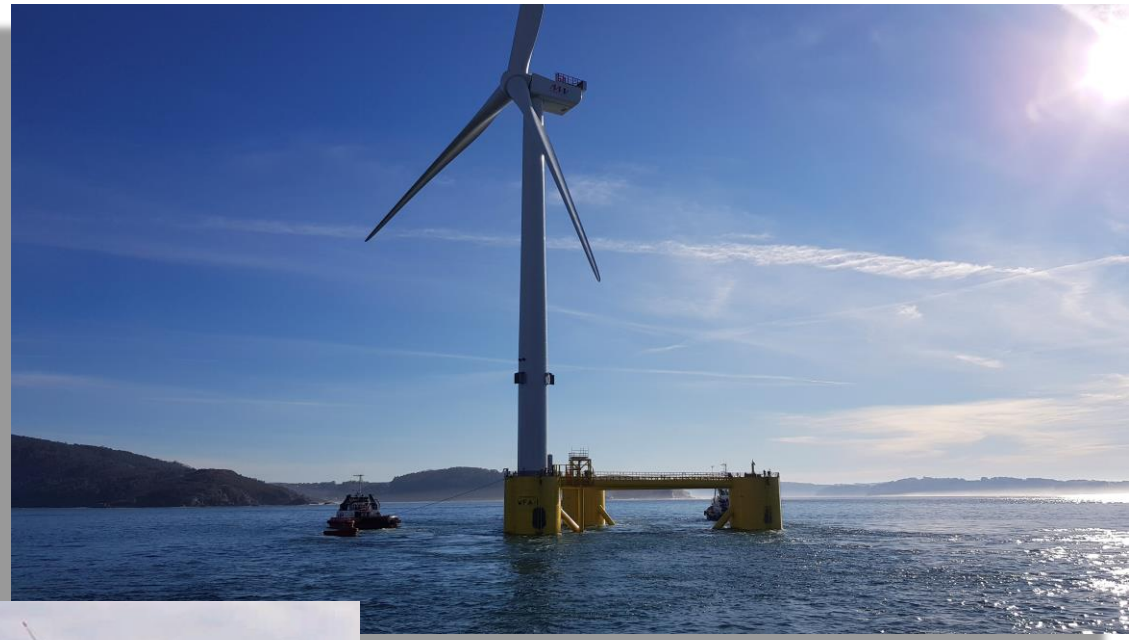

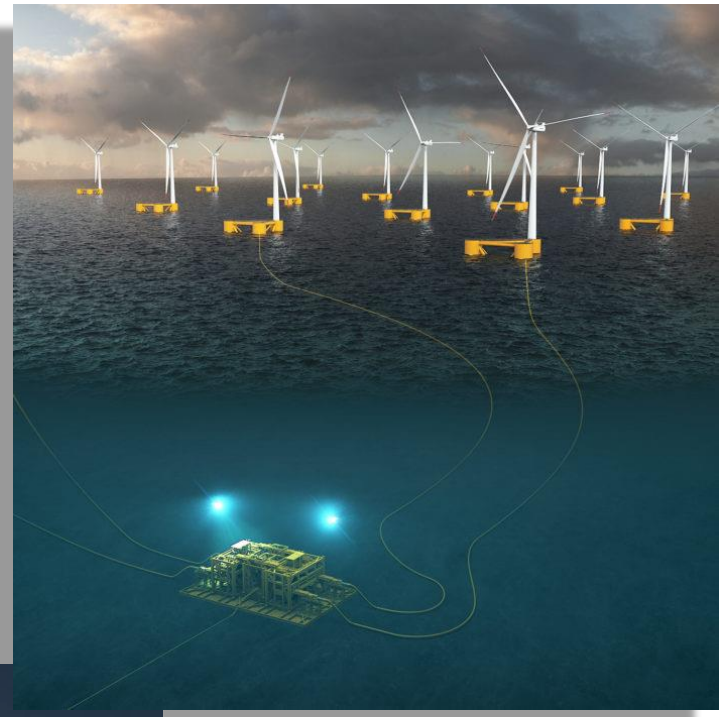

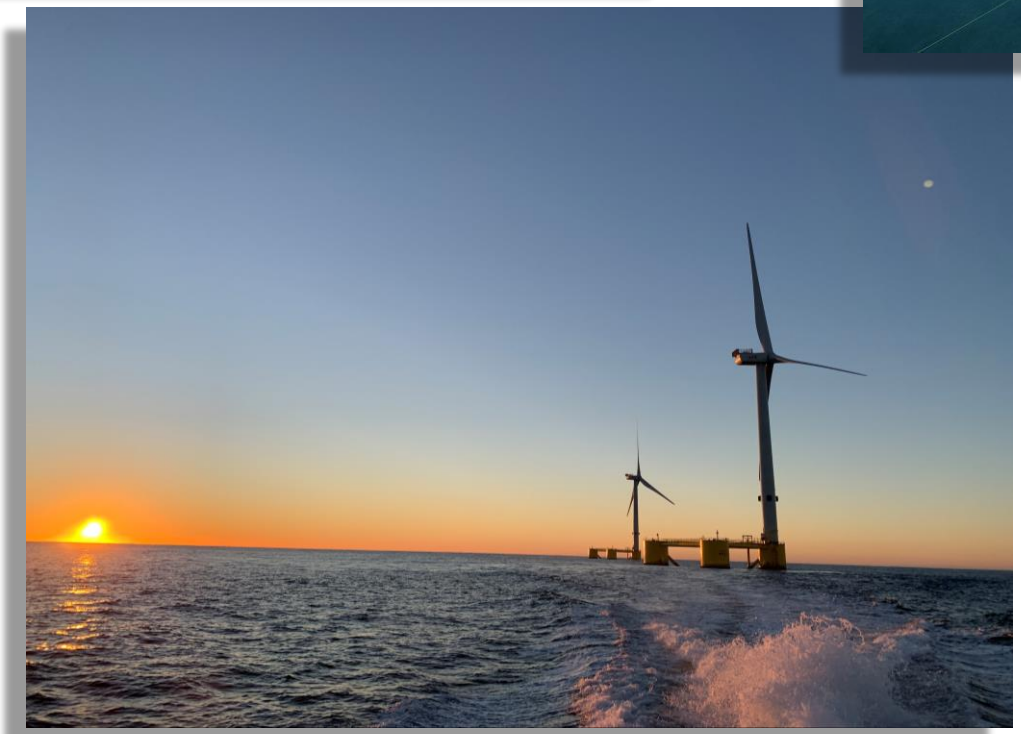

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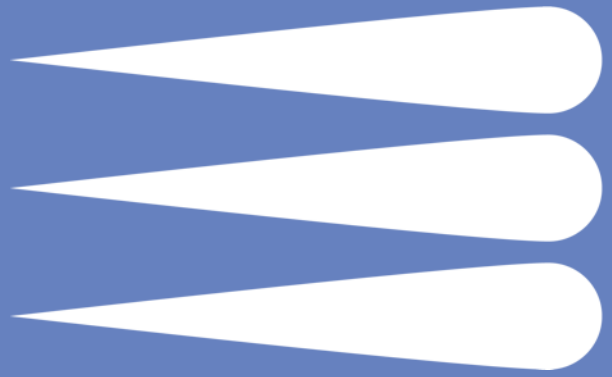

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