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# Aker Offshore Wind in brief

A pure play deepwater wind IPP



**Pure play offshore wind developer**, headquartered in Norway, focusing on assets in deep waters. The company aims to source, develop and operate offshore wind projects

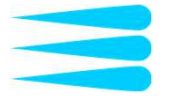


Aker Offshore Wind aims to deploy cost-effective solutions based on **decades of offshore experience**, in close cooperation with leading global partners



**> 1.5 GW portfolio of development projects** and prospects in South Korea (Ulsan), the US (California), Norway and the UK (Scotland)





# Positioned in attractive markets

## South Korea

Renewables to account for 20% by 2030  
12 GW offshore wind by 2030

## California, US

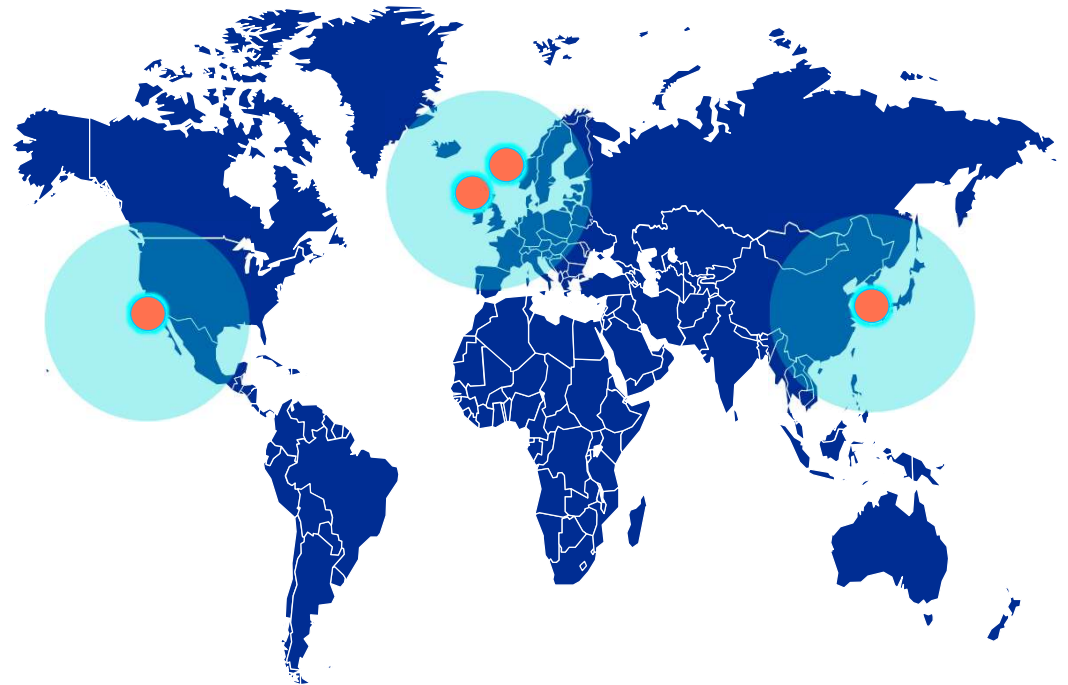
60% renewable electricity generation by 2030 and  
carbon neutrality by 2045

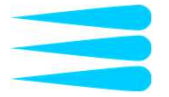
## Norway

Authorities preparing to open areas for offshore  
wind development from 2021

## Scotland

Targets net zero emissions by 2045  
11GW offshore wind by 2030





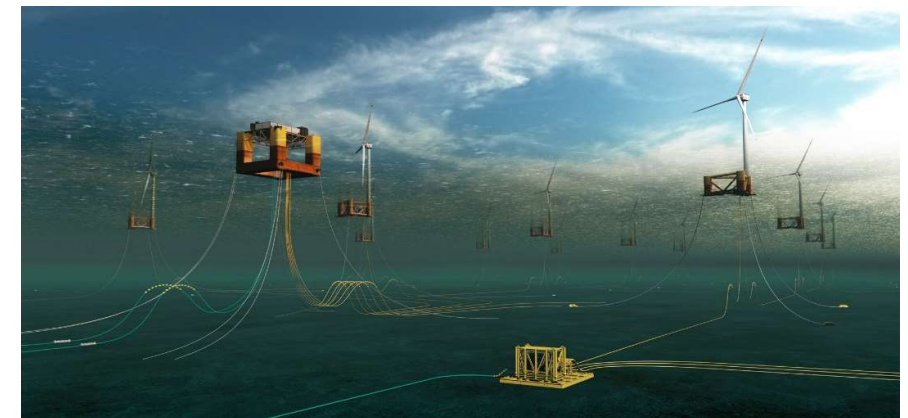
# >1.5 GW Development Portfolio

Country	Project / Prospect	Region	Estimated gross capacity
South Korea	KF Wind	Ulsan	~1,500 MW
USA	Redwood Coast Offshore Wind	California	~150 MW
Norway	Vestavindar and Sønnavindar	Utsira North, Sørilige Nordsjø II	~1,700 MW
Scotland	ScotWind	TBA	>500 MW

# Offshore wind technical trends



- High focus on HSSE (less intrusive, smaller footprint, safety,,)
- Wind development more complex and technically challenging:
  - Bottom fixed wind GW size projects taking place.
  - Commercial (+ 500 MW) projects appearing for floating wind
  - Offshore wind moving to deeper sites.
    - > Bottom fixed: 40 m now, 50-60 m soon,
    - > Floating prospects in 100 m - 1000 m range
  - Harsh met ocean conditions and strong winds (possible take advantage of superior wind conditions)
  - Complex power architecture with longer tie-back distances
- Larger WTG's available
  - 15 MW for delivery in 2024
  - 20 MW expected before 2030??
- Heavy lift installation vessels becoming available to handle 15 MW WTG's
- Increased use of software based - digital native concept / project execution value chain, to deliver projects faster and more efficiently
- LCoE targets asks for lean technical solutions
- Many learning arenas with technology partners, academia, R&D organizations and wind cluster organizations





# Offshore wind frontiers of science and technology



- Environmentally friendly technical solutions
- Holistic system engineering to handle complex and technically challenging projects
- Understanding complex dynamic aspects of floater / WTG and marine operations are crucial
- Power systems design and power system analysis is at the core of wind system design
- Significant savings expected by digitalization through the value chain which needs to be explored
- Technical solution needed to handle harsh met ocean conditions and strong winds.
- Design solutions that cater for local content needs to be part of the technology solutions portfolio
- LCoE target leads to and holistic approach where efficiency improvements through the complete value chain and on all "Products" (WTG, floater, cables, substations,.....)

