

BUILDING MOMENTUM FOR AUSTRALIA'S OFFSHORE WIND INDUSTRY



A vast coastline and abundant wind resources are among the attributes positioning Australia for a world-class offshore wind (OffSW) industry.

THE AUSTRALIAN ADVANTAGE



Consistent wind resources

2000 GW

Australia's potential power generated from OffSW. There's enough to power the country's entire electricity grid several times over.



Strong commitment

82%

The Federal Government's target for renewables capacity in the National Electricity Market by 2030.



Legislative frameworks

The Offshore Electricity Infrastructure Act 2021 and associated regulations outline how and where offshore electricity infrastructure can operate.



A workforce pipeline

Via the re-skilling of current energy sector workers and training for the next generation to support the sector.

PROPOSALS IN PLACE

5 OF 6

national priority OffSW wind areas have been formally declared across Victoria, NSW, Tasmania and WA.



13

Feasibility Licences have been awarded in the Gippsland and Hunter regions with the potential to deliver close to 27 GW of new capacity.

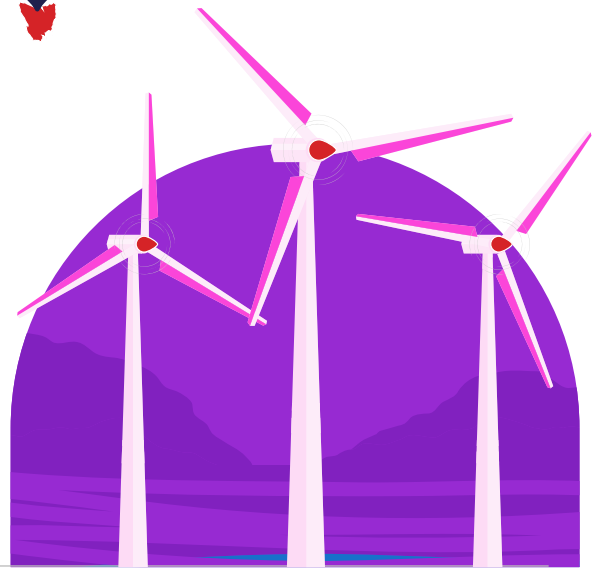
INTERNATIONAL PROOF POINTS

11 GW

The amount of capacity to the grid delivered by the global OffSW industry in 2023. That's a 24% year-on-year increase.

US\$1 TRILLION

Estimated value of the OffSW industry over the next two decades, according to the International Energy Agency.



BLOOMBERG NEF TIPS OFFSHORE WIND CAPACITY WILL GROW 10-FOLD BY 2040.

38 GW

the total output of OffSW installations in China, which led the world in annual OffSW developments in 2023 – for the sixth year in a row.

56 GW

of capacity of OffSW is currently under development in the US, propelled by the Inflation Reduction Act. That's enough electricity to power the equivalent of 22 million homes.

9 EUROPEAN COUNTRIES

including France, Germany, Belgium and Denmark, have committed to boost their combined North Sea OffSW capacity to 120 GW by 2030 and 300 GW by 2050.

50%

The reduction in cost of OffSW in the UK since 2015, making it one of the lowest-cost options for new power.



ONCE-IN-A-LIFETIME INVESTMENT BOOM

Under the 1.5°C scenario, the International Renewable Energy Agency (IRENA) estimates that global installed OffSW capacity would need to reach almost **500 GW in 2030 – 14 times the 2020 capacity**.



USD 100 BILLION

the investment needed in OffSW supply chains to meet global government 2030 targets.

Investors are expressing interest in Australia's OffSW capabilities and global developers are already involved in the Australian pipeline:



COPENHAGEN INFRASTRUCTURE PARTNERS

is part of the team behind Star of the South project off the south coast of Gippsland in Victoria



NORWEGIAN ENERGY GIANT EQUINOR,

along with Australia's Oceanex Energy, has been granted a feasibility licence for the NSW Hunter Novocastrian Wind project



SPANISH ENERGY GIANT IBERDROLA

has an offshore feasibility licence for the Aurora Green site off the Gippsland coast.

OVERCOMING COST CONSTRAINTS

The levelised cost of electricity (LCoE) of OffSW remains much higher than for other renewable sources such as onshore wind or solar.

CSIRO's 2022-23 GenCost Report puts the midpoint LCOE for offshore wind at circa AUD170/MWh vs. around AUD80/MWh for onshore wind.

BUT CRITICAL FACTORS ARE IN ITS FAVOUR

CAPACITY FACTORS

OffSW generation capacity factor in Bass Strait is anticipated to be greater than 50% compared to onshore wind's capacity factor at around 35-45%, due to greater consistency of OffSW.

LOCATION

Transmission system focused around the coastal load centres enables OffSW to boost grid strength while reducing overall energy losses in the system.

GENERATION PROFILE

OffSW has a complementary time-of-day generation profile to onshore wind.

GRID-STRENGTHENING POTENTIAL

OffSW at scale can replenish the supply deficit as coal plants retire, while infrastructure can also be repurposed.

GENERATING JOBS

Estimates for job opportunities from an OffSW industry in Australia range from 3,000 to 8,000 jobs annually.

SHIFTING RISKS

OffSW brings concerns about the migratory patterns of fish, seabed stability and blocking sea views, but it overcomes onshore wind's prevailing licence risks, including visual amenity on land and noise generation.

CATALYSTS FOR GROWTH

Spurring future industry growth:

- Larger wind turbine platforms
- More advanced technology
- Accelerated learning
- Enabling net-zero goals



"Offshore wind is an opportunity to speed up transition of the energy grid to renewable sources. Australia needs to look at what's been done globally in terms of best practice to provide the right level of financial incentive to bring on our offshore wind industry."

David Scrivener
Head of energy, infrastructure and resources.

