

OFFSHORE WIND TURBINES



CATCHING THE WIND

Wind turbines generate electricity from the wind's energy.

The first offshore wind turbine was installed in 1991 off Denmark. There are now more than 13,000 installed globally.

Just one spin of an offshore wind turbine can power an Australian home for two days.

They have a lifespan of 30 years. This can be extended with good maintenance.

New developments in turbine technology and learnings from other projects globally are helping to:

- Produce more electricity from fewer turbines
- Reduce construction impacts
- Extend turbine lifespan
- Improve sustainability
- Improve safety for workers maintaining the turbines.

Currently, offshore wind turbines are 90 per cent recyclable, with manufacturers targeting zero-waste blades by 2040.

SELECTING A TURBINE

Here's what we'll consider:



MANUFACTURER'S ADVICE

Which turbines are recommended for the project's timing and local conditions?



WIND PROFILE

Where, when and how is the wind blowing in the project area? Which turbine is best suited for this wind profile?



SEABED CONDITIONS

Which type of turbine and foundation is appropriate for the local geology?



PORT AVAILABILITY AND CAPACITY

Which ports are available and have the capacity to handle the turbine components and vessels?



ENVIRONMENTAL CONDITIONS

Can environmental impacts be reduced through turbine selection?



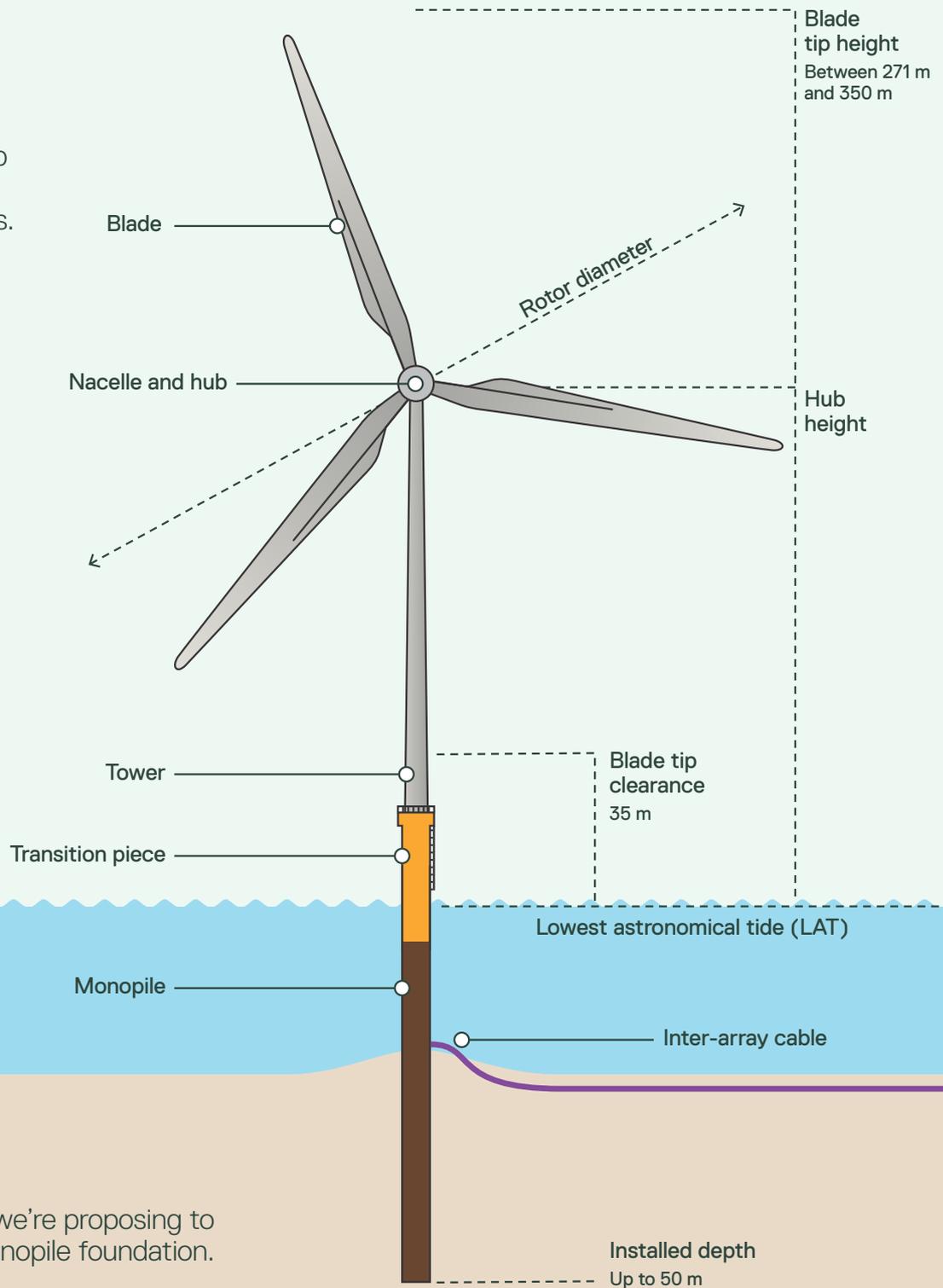
LOCAL JOBS AND MANUFACTURING

What opportunities are there to localise manufacturing and support local jobs?

TURBINES

Built to its full potential of 2.2 GW, Star of the South would include up to 150 smaller turbines or fewer larger turbines.

We'll select a turbine model after our investigations and assessments are complete.



FOUNDATIONS

For Star of the South we're proposing to use a fixed-bottom monopile foundation.

We analysed all foundation options and found monopiles offer a range of advantages, including:

- Proven design and installation track record
- Safe and reliable
- Suitable for local seabed conditions
- Smaller seabed footprint
- Available supply chain
- Suitable size for local ports to handle
- Fully recyclable when decommissioned.



See how turbines are installed.

A PROJECT BY



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We acknowledge the people of the
Gunakurnal nation as the original
custodians of Country and pay
respect to Elders past and present.

