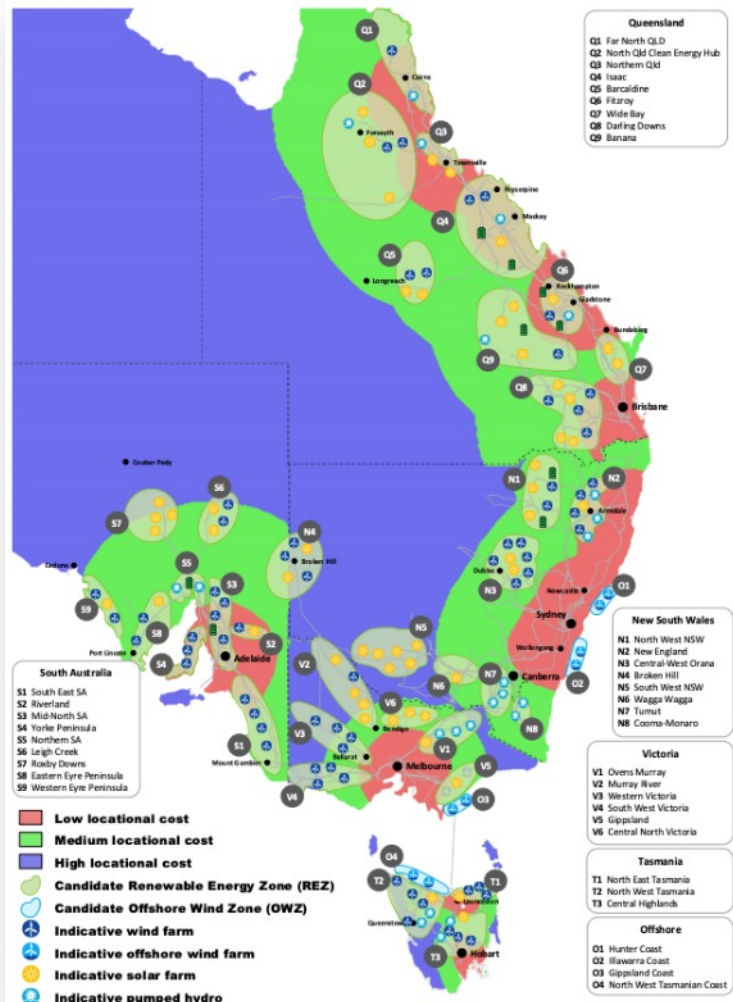


Star of the South

Melbourne Maritime Heritage Network
November 2021

We acknowledge the Traditional Owners of the lands on which we all meet today and pay our respect to their elders past, present and future. In particular, we recognise the Gunaikunai people as the Traditional Owners of the area where Star of the South would be located.

Offshore wind – a new opportunity for Australia



6 NEWS OCTOBER 25, 2020 SUNDAY AGE

Offshore wind farm promises jobs boom

STAR OF THE SOUTH BY THE NUMBERS

- 185m-245m** Turbine height range
- 1.8m** Homes will have their power needs met
- \$10b** Cost to build
- 8000** Direct and indirect jobs
- \$8.7b** Invested in Victoria's economy

Star of the South's offshore wind farm, which would be built off the coast of South Gippsland, would cost about \$1.7 billion and create 8,000 jobs over its 30-year lifetime, according to a report released by the project's lead developer, Alpha Dhabi, part of Australia's largest energy company, Masdar.

The report also shows the project would generate an estimated \$8.7 billion in economic activity over its 30-year lifetime, but the company is yet to release more detailed data on the project, and a key claim is that the wind farm would provide about 30 per cent of Victoria's energy needs, a claim that is being questioned by the state's energy regulator.

Star of the South chief executive Casper Frost Thorhaug said the project would offer regional job opportunities and be a boost to the state in the wake of the coronavirus pandemic.

"We believe we can create a new wave of economic growth and be part of a green economy," Mr Frost Thorhaug said.

The proposed location was chosen because of its proximity to the Victorian coast, which is one of the strongest and most consistent in the National Electricity Market.

Wind turbines produce no carbon emissions and use no fossil fuels, making them a key part of the state's renewable energy strategy.

Star of the South is a joint venture between Masdar and the state-owned Victorian Energy Infrastructure Trust.

The project is expected to start construction in 2021 and be completed by 2025.

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Wind farm blows hot

EXCLUSIVE
TOM MINEAR
NATIONAL POLITICAL EDITOR

Heatwaves generate high hopes

EVERY heatwave in Melbourne over the past three decades also brought strong winds in the evening at the proposed site of Australia's first offshore wind farm.

The team behind the Star of the South project say this means the wind farm would be perfectly positioned to pump power into Victoria's energy grid when it is stretched to the limit by Melbourneans turning on their air conditioners on sweltering days.

The \$8bn-10bn project, proposed off the south coast of Gippsland, could generate a fifth of the state's electricity needs, powering about 1.2 million homes.

A detailed analysis of weather bureau records found weather patterns which caused heatwaves in Melbourne were accompanied by a high pressure system that brought strong winds in Bass Strait.

Last summer, wind monitors in place to assess the project's viability found that on four of the hottest evenings, the site's capacity factor was nearly 70 per cent — well above the 20-40 per cent capacity of a typical wind farm.

Wind speeds at those times averaged 47km/h, compared to a summer average of 13km/h.

Victorians have had their power switched off in recent years as energy authorities have battled keep the grid operating during heatwaves.

Ageing coal-fired power stations have experienced reliability issues and onshore solar and wind generators have slowed down during peak afternoons.

Star of the South Project chief Casper Frost Thorhaug, who has developed offshore wind farms in Asia and Europe, said the project would complement other renewables "to make a more reliable and diverse system".

"We analysed data over nearly 30 years and found a unique weather pattern on hot days that sees Bass Strait winds build up in the evening, creating strong offshore winds when demand for power is high," he said.

The analysis of weather bureau records looked at conditions at the Star of the South site — and renewable energy zones in Victoria's west and south west — on days above 35C in Melbourne.

There were good wind conditions in at least one of the three sites during 85 per cent of hot hours.

The federal government is developing a regulatory framework to enable offshore wind projects.

tom.minear@news.com.au

BLUE ECONOMY
COOPERATIVE RESEARCH CENTRE

Australian Government
Department of Industry, Science, Energy and Resources

AusIndustry
Cooperative Research Program

EXECUTIVE SUMMARY

Offshore Wind Energy in Australia

July 2021

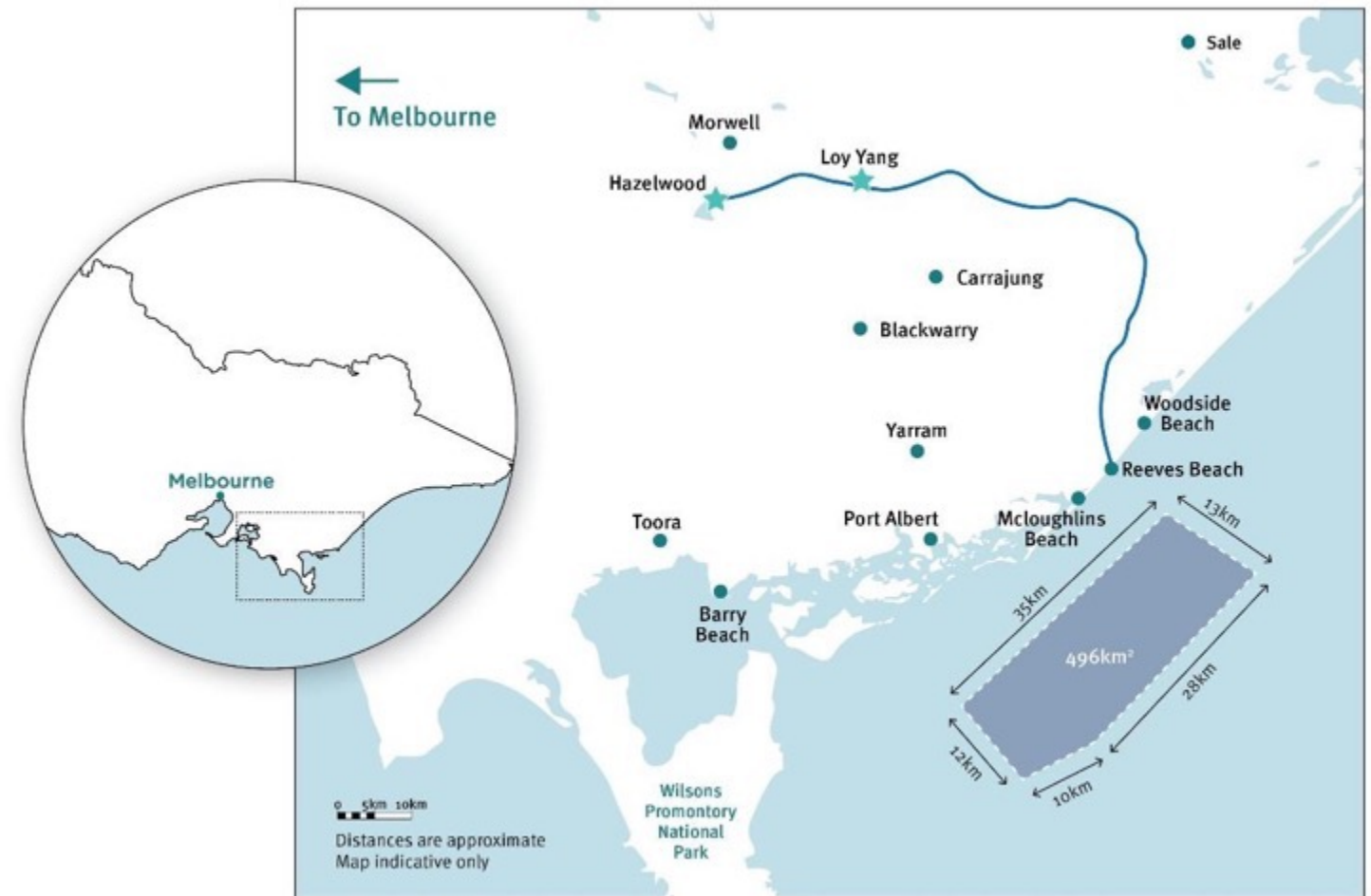
The Blue Economy CRC is funded in part under the Australian Government's CRC Program, administered by the Department of Industry, Science, Energy and Resources. The CRC Program supports industry-led collaborations between industry, researchers and the community.

We're excited to work alongside government, Traditional Owners, industry and communities to build this new industry

About Star of the South

Australia's first offshore wind project

- 7-25km off the coast of Gippsland
- Closest towns are Port Albert, Mcloughlins Beach, Woodside Beach
- Exploring up to 2.2GW installed capacity
- Up to 200 turbines
- Transmission cables connecting to the grid in the Latrobe Valley
- Ports to support construction and operations



Our team

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Founded by three Australians

Investment and offshore wind 'know how' from Copenhagen Infrastructure Partners (CIP)

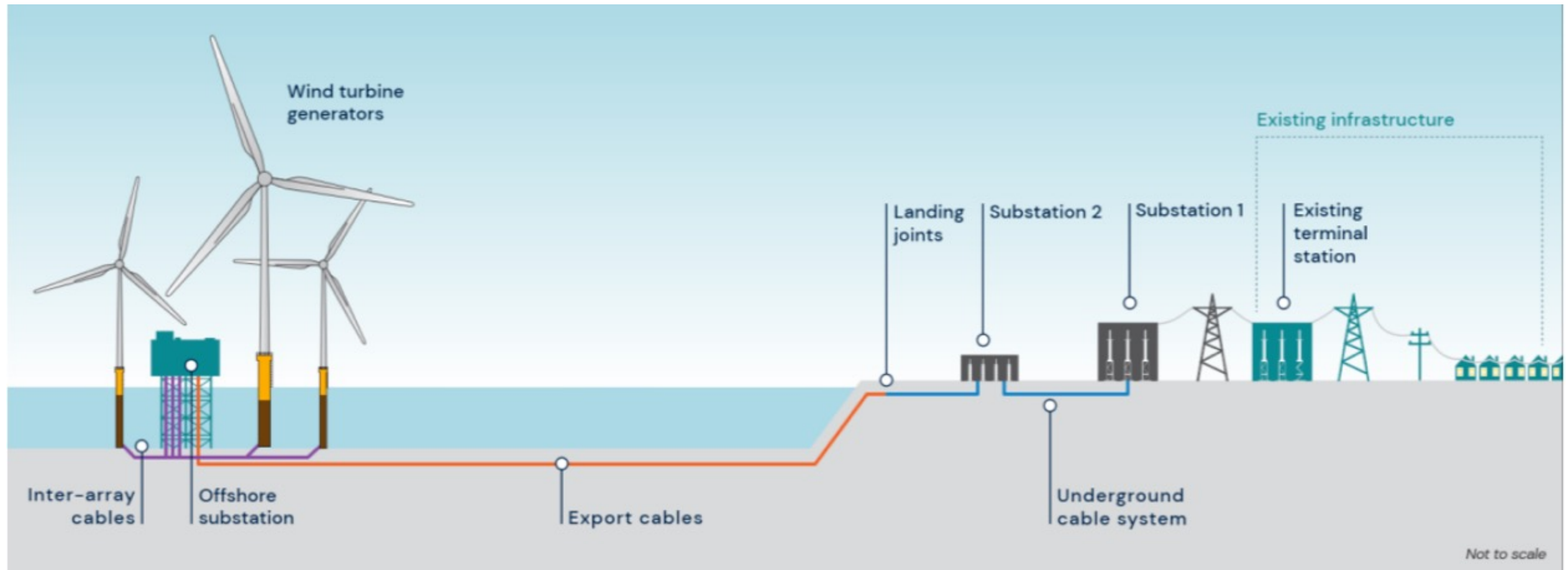
CIP are world leaders in offshore wind – closed the world's largest renewable energy fund – 7 billion Euro

Team of around 40 Australians and Europeans, based in Melbourne and Gippsland to progress the project.



Our team brings together local knowledge and international expertise

What's involved

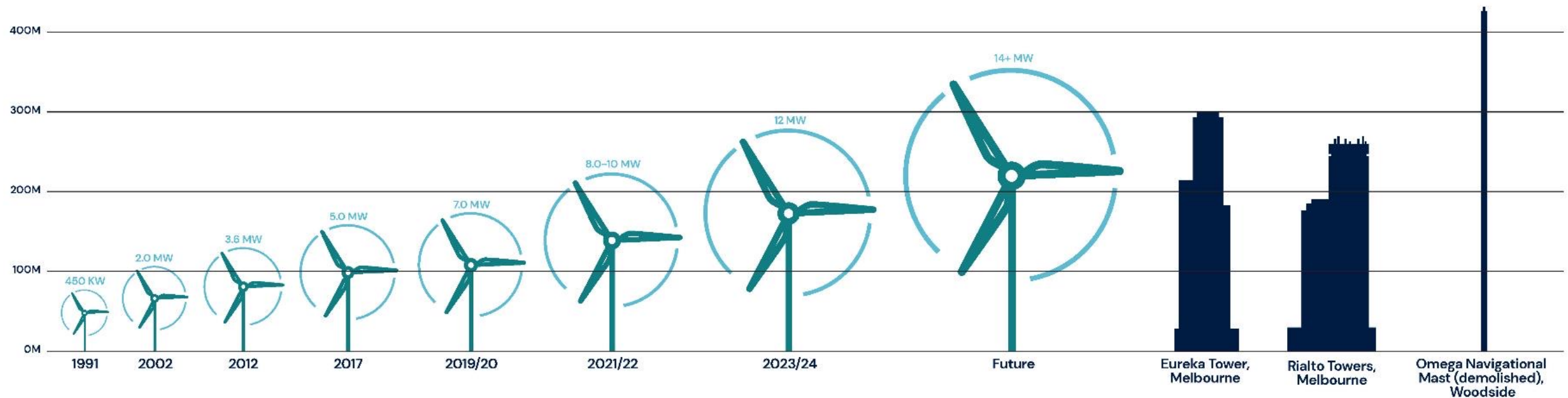


The project includes an offshore wind farm and supporting transmission infrastructure

Offshore wind turbines

A final decision on turbine selection will be made after all site investigations and environmental assessments are complete.

- Up to 200 positions
- 12-18 MW turbines
- Monopile foundation



We're looking at turbines in the 12-18 MW range, with up to 200 positions

Timing

We're in the feasibility and development phase



A typical offshore wind project takes 6-10 years to develop and build

What we've been working on

2019

- Exploration licence granted
- Wind and wave monitoring started November 2019
- Consultation to inform site investigations



2020

- Initial seabed investigations
- Project referred to the authorities
- Environmental surveys started
- Transmission route options analysis and consultation



2021

- Transmission route selected
- Environmental surveys continue
- Enabling legislation introduced to Parliament
- **25 technical studies underway**



We've made significant progress since being granted an exploration licence in 2019

Environmental assessment

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Key steps



We started research and data collection in November 2019 – we're aiming for approval decisions in 2024

Marine ecology survey program



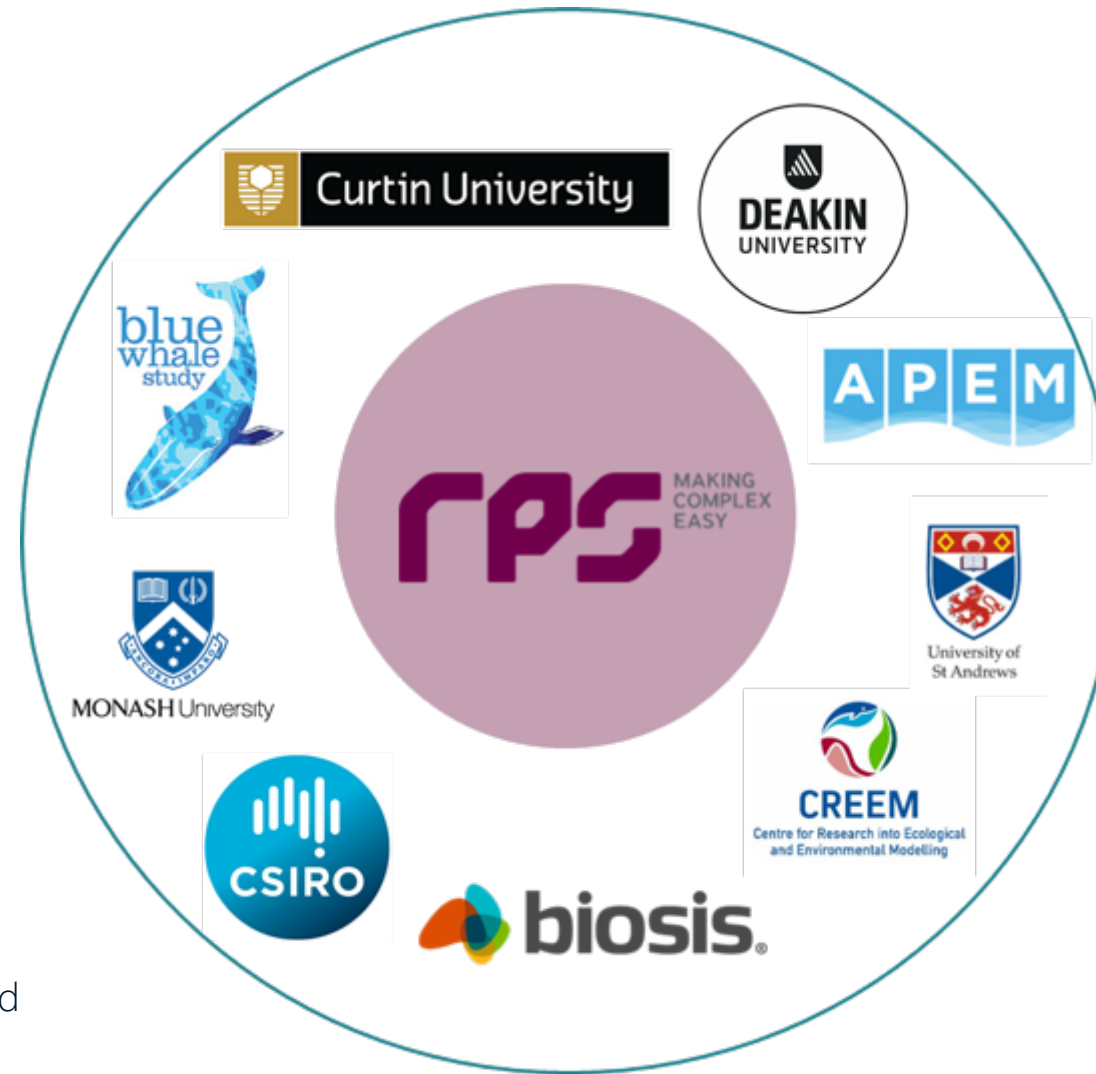
Vessels

Seapride Charters
Richey Services
Deep Blue Shark Fishing
AB Hunter Fishing



Peer reviewers

Fish – Professor Steve Kennelly (ICIC)
Benthic – Dr Jacquomo Monk (UTAS)
Seabirds & seals – Associated Professor Mary-Anne Lea (UTAS)
Marine mammals – Dr Tina Yack (EcoSound Bioacoustics)



Partnering with some of Australia's leading scientists and research agencies

25 technical studies underway

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Heritage

- Aboriginal cultural heritage
- Historic heritage
- Maritime heritage

Amenity and health

- Air quality
- Electromagnetic interference
- Noise
- Seascape, landscape and visual
- Traffic and transport



Social and economic

- Agriculture
- Business and tourism
- Land use planning
- Social



Onshore environment

- Ecology
- Groundwater
- Soil and waste
- Surface water

Marine environment

- Birds
- Coastal processes and sediment transport
- Ecology (benthic)
- Fish and invertebrates
- Fishing
- Infrastructure and co-existence with other users
- Marine mammals and turtles
- Marine protected areas
- Shipping and navigation

Specialists are undertaking these studies and documenting findings in technical reports

Involving communities and stakeholders

We believe that involving people now will result in a better project

- Gippsland hub with local staff
- Community Advisory Group
- Out and about in the community
- Presentations to local and interest groups
- Formal opportunities to have a say directly with us or through government processes
- Online consultation - 'Get Involved' website
- Sign up to our e-news or follow us on Facebook



We've spoken with thousands of people so far to gain input into the project's development

Focus on local opportunities

We're working to understand opportunities, make connections and build Australia's offshore wind capabilities

- 1  Gippsland
- 2  Rest of Victoria
- 3  Rest of Australia and New Zealand
- 4  International



Express interest in the project through our ICN Gateway



We're focused on local opportunities



We want to see regional communities benefit from an offshore wind industry

Construction



<https://youtu.be/mDvS7tizetg>

Construction typically takes 3-5 years, depending on the project size