

Why Port of Hastings?

Summary Report –
Selection of the Primary
Assembly Port for
Offshore Wind
Development in Victoria



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Introduction

The Victorian Government has committed to achieving net-zero emissions in the state by 2045. Offshore wind (OSW) energy is a key pillar of Victoria's renewable energy transition, playing a part in replacing fossil fuel powered generation. In March 2024, offshore wind energy generation targets were legislated and are at least 2 Gigawatts (GW) of offshore generation capacity by 2032 – enough to power 1.5 million homes; 4 GW by 2035; and 9 GW by 2040.

This aligns with the Commonwealth Government's role to support an offshore wind industry that ensures Australians have access to reliable, secure, and affordable energy and contributes to their goal of net zero emissions by 2050. The Minister for Climate Change and Energy has declared a number of OSW areas, including those below, that demonstrate this commitment:

- Gippsland area in 2022 and subsequent granting of 12 feasibility licence holders.
- Southern Ocean area in 2024 and preliminary decision to grant a feasibility licence.
- Bass Strait, Northern Tasmania area in 2024.
- Indian Ocean off the Bunbury region, Western Australia in 2024.

Ports are critical enabling infrastructure in the OSW supply chain and there is a need for swift action to start port development to deliver Victoria's OSW energy targets.

OSW components are large and steadily increasing in size. About a decade ago, OSW turbines were just over 100 metres in height, whereas today they can be over 300 metres. Turbine components that large can only be transported via sea and are not feasible to move via landside transport networks. These components are shipped on correspondingly large vessels and stored at sites adjoining or near deep water shipping berths. Turbine components are stored, staged, and assembled, then loaded onto specialist installation vessels that ship them to the offshore site for installation.

The Department of Energy, Environment and Climate Action (DEECA) has published four 'Offshore Wind Implementation Statements' that set out a requirement for a port to support assembly and enable construction of OSW developments, and the Victorian Renewable Energy Terminal (VRET) at the Port of Hastings has been identified as Victoria's primary assembly port. The VRET will be developed, subject to necessary approvals, to support receipt, storage, and assembly of offshore wind components prior to installation to achieve Victoria's legislated offshore wind energy generation targets. The VRET is a key priority set out in the Department of Transport and Planning's (DTP) Victorian Commercial Ports Strategy¹.

Implementation Statement 3 states:

'The Port of Hastings has been identified to develop the Victorian Renewable Energy Terminal as the primary assembly port in Victoria', and

'The Port of Hastings rated significantly higher than alternative ports through the multi-criteria assessment process which informed the Government's decision making. The Port of Hastings has major strategic and competitive advantages compared to other ports when it comes to managing the unique and challenging port demands presented by offshore wind and assisting the rapid uptake of offshore wind projects.'

Implementation Statement 4 states:

'The Victorian Government confirmed the development of the Victorian Renewable Energy Terminal at the Port of Hastings as the primary offshore wind construction and assembly port'.

Purpose of document

In reaching the decision to pursue development of an OSW assembly port at Port of Hastings, the Victorian government sought expert advice about the nominal requirements for potential OSW developments in Victoria's Gippsland declared area. It was determined that there was no existing port in the vicinity of the declared area that had the available berths or land facilities to meet the requirements sought by the OSW project proponents.

¹ <https://www.vic.gov.au/victorian-commercial-ports-strategy>



This document discusses the Victorian Government's conclusion that the VRET at the Port of Hastings is the most feasible port to develop as the primary, full-service assembly port for OSW development in Victoria. This position is reaffirmed by the Victorian Government in OSW Implementation Statements 3 and 4.



Approach

Both Victorian OSW declared areas in the east and west of the State were considered, however this document will focus on the Gippsland area. Relative strengths of identified ports to provide facilities for OSW proponents were assessed. Information feeding into this was sourced from desktop research and consultations with:

- leading OSW proponents who are progressing in their Victorian OSW development
- port operators and lessees, including port facilities, berths, shipping channels, draughts, existing utilisation, development requirements and timeline estimates
- technical specialists across the disciplines of ports and supply chain logistics, OSW energy, environment and planning.

Through consultations, it was identified that OSW developers required an assembly port to receive imported components from heavy lift vessels, assemble installation ready modules and provide a home port base for installation vessels during development of OSW farm campaigns.

Installation vessels would require deep channels to safely access the port with minimal dwell time, as well as access to long and deep berths for loading and unloading components. A large area of assembly and construction land would need to adjoin the berth for easy loading and unloading; also needing to be strong enough to support the heavy components.

Criteria drawing from the information gathered, including OSW developer requirements, include the following:

- the port's ability to provide the physical facilities and resources sought (e.g. Berth properties and availability)
- assessment of challenges in obtaining environmental approval, with potential impact on timelines
- operational aspects such as proximity; affecting sailing distances and project feasibility
- funding risk and priority change risk
- the degree to which OSW project proponents interviewed were open to use the identified ports
- the port's apparent level of commitment to pursuing and achieving the various developments proposed to improve their ability to meet proponent's needs
- potential for proposed OSW developments could be used for other purposes after OSW needs subsided.

Ports assessed and initial screen

Victorian ports considered included:

- Port of Geelong
- Port of Hastings
- Port of Melbourne
- Port of Portland
- Barry Beach Marine Terminal in Corner Inlet

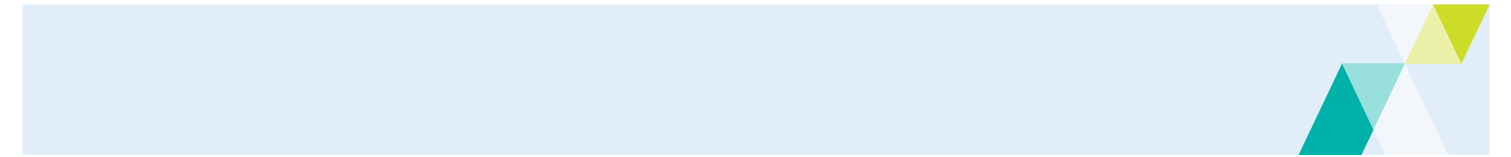
Other interstate ports considered included:

- Port of Bell Bay, Tasmania
- Port of Eden, NSW
- Port of Newcastle, NSW

The scope did not consider the many Victorian local ports which do not have the necessary characteristics to support OSW or a new green field port in a new location. A new port on a green field site not currently zoned for port development could not be developed in time to meet the OSW legislated targets, with the various acquisition, planning, approvals, design and construction steps for a new port expected to take 10 -15 years from commencement.

An initial screening of these ports for their potential to be assembly ports for the Gippsland zone removed:

- Port of Melbourne
- Port of Portland
- Barry Beach Marine Terminal (BBMT)



- Port of Eden

Port of Portland, Barry Beach Marine Terminal and Port of Eden lack suitable marine conditions such as sufficiently deep berths and channels to accommodate large OSW installation vessels.

Port of Melbourne lacks available berths, constraints due to lack of air draft under the West Gate Bridge, and OSW did not fit into their future trade profile given the focus on containerised trade.



Summary of findings

It was concluded that the Port of Hastings is best placed to provide unimpeded access for OSW construction projects, where OSW construction projects in this context includes both OSW development in Victoria's Gippsland and Southern Ocean declared areas.

This is not an exhaustive list of characteristics but highlights the key priority areas that conclude Port of Hastings is the most feasible option due to being the only feasible single port solution identified.

Port of Hastings is preferred

Environmental impacts

It is acknowledged that no port development is without some environmental impact, requiring relevant environmental assessment and approval processes before proceeding.

The VRET will be approximately 40 hectares in size, comprising development of 22 hectares of the Old Tyabb Reclamation Area (OTRA) existing land, 12 hectares of land reclamation into Western Port as part of the operational area and an additional 6 hectares of reclamation for a quay wall and quay apron.

Large areas of Western Port are Ramsar listed wetlands of international significance, and the region is a UNESCO biosphere reserve. Environmental approvals comprising an Environment Effects Statement (EES) under the Environment Effects Act 1978 and a referral under the Environment Protection Biodiversity and Conservation (EPBC) Act 1999 are required. It was noted that environmental assessment and approval processes including state EES and commonwealth EPBC referrals were assumed to take several years.

This assessment recognised the significance of the Port of Hastings operating within the Western Port Ramsar Wetland and UNESCO Biosphere, with a high environmental value.

It should also be noted for Port of Hastings:

- The proposed reclamation required covers only 0.03% of the total area of the Ramsar wetland.
- The footprint of the proposed port expansion sits within areas of the Ramsar that have previously been highly disturbed by land reclamation and dredging activities.
- Environmental impact assessments conducted to date by Port of Hastings Corporation have found no unacceptable impacts to the ecological character of the wetland from the proposed port expansion.

Timing of port development

Port of Hastings has the potential to be developed to commence assembly port operations in line with the legislated OSW targets and accommodate the number of vessels and turbine storage and assembly areas required. Government funding has been allocated for the development phase of the project and significant environmental assessment and site investigation work has been completed or is well advanced.

Distance from Offshore Wind Zones

Port of Hastings is the closest port (120-190 nautical miles) from the Gippsland OSW area. Reducing sail time between the port and OSW area is vital to installation timelines, reducing supply chain risks and minimising the impact of weather on the construction program. Installation vessels are chartered at significant cost and reducing sailing times improves the economics of such a development.

Channel

The channel into Western Port to reach Port of Hastings meets all shipping requirements of OSW developments. The channel is naturally wide and deep, and tidal flows mean that it requires very minimal maintenance dredging. Some capital dredging is required in the vicinity of the proposed terminal.

Land area

Port of Hastings is the only assessed port with a feasibly large, suitably shaped, appropriately zoned and available land adjacent deep water with the potential to be developed for OSW and support foundation and turbine components. These requirements are needed to develop an assembly port that can fulfill the OSW



capacity and timing in legislated OSW targets. Also, as components are manufactured overseas, a large enough area for storage protects the supply chain from delays.

There is also a significant amount of undeveloped and appropriately zoned land (around 3,500 hectares) in the immediate surrounds of the Port of Hastings which could be developed for offshore wind component manufacturing. This would be established by industry if local component manufacturing was assessed as feasible. This is a significant strategic asset not available at any other port considered. Port of Hastings is also supported by a labour catchment area favourable to the construction and operation of an OSW port and future OSW industry development.

The OTRA site at the Port of Hastings is specifically recommended to be developed as Victoria's OSW assembly port.

Ownership model

Port of Hastings is operated by a government owned commercial entity, Port of Hastings Corporation. As opposed to privately owned ports, it can be more directly managed to meet OSW targets set by the State and Commonwealth governments, increasing certainty of timelines for OSW development. Developing a purpose-built OSW assembly terminal and ensuring its future offshore wind development objectives could be difficult if there were competing commercial interests for the land and adjoining berth. All other ports assessed are privately owned, with competing existing trades that would likely require negotiation and may increase time till a port is developed.

Other ports options

The Port of Hastings is the only feasible solution that can operate as a single port solution for the development for OSW and can meet all OSW developer construction and assembly requirements. While other ports demonstrate feasibility to potentially meet some OSW construction or assembly infrastructure requirements, none could deliver the capacity to support the construction and assembly of both foundations and wind turbine generators. This significant factor, in combination with the proximate location of the Port of Hastings to the Gippsland area, makes the Port of Hastings the most cost effective and efficient port infrastructure solution to underpin OSW development. All ports considered require new terminal construction as the OSW port infrastructure requirements are distinctly different to all other port use cases in Australia.

Conclusion

Port infrastructure is vital for achieving Victoria's offshore wind energy generation targets and extensive studies conclude there is currently no existing port in Australia with capacity to meet requirements to develop Victoria's OSW industry.

The findings outlined in the document found Port of Hastings to have superior attributes over other locations including:

- Proximity to offshore wind zones
- Existing deepwater shipping channel that can accommodate additional shipping requirements
- Available land area for port development
- Timing to develop new port infrastructure
- Single port solution that can handle foundation and wind turbine generator components
- It is a government owned entity it can be more directly managed to meet OSW targets

Further, preliminary environmental impact assessments have found no unacceptable impacts to the ecological character of the wetland from the proposed port expansion.

Although the offshore wind industry is continually developing, and fast, these findings have endured, and subsequent work completed reinforces that the Port of Hastings has been assessed as the most feasible port to support OSW assembly and construction.

The ongoing VRET EES process enables the design to respond to the findings from extensive environmental studies and investigations, mitigating impacts as appropriate.