

# Draft 2020 Integrated System Plan

Star of the South submission



StaroftheSouth

[starofthesouth.com.au](http://starofthesouth.com.au)

## About us

**The Star of the South is Australia's first proposed offshore wind project, a real power plant at sea, off the south coast of Gippsland in Victoria. We are a private company comprised of Australian founders and Copenhagen Infrastructure Partners (CIP), who are a global leader in offshore wind.**

We are proud to be the pioneers of offshore wind in Australia. Our project has the potential to power up to 1.2 million homes with a consistent and reliable source of electricity, meeting around 18 per cent of Victoria's electricity needs. Offshore wind has proven to be a major driver of jobs and economic investment in regional coastal towns around the world. The Star of the South is expected to create thousands of jobs during construction and hundreds of long-term permanent jobs during operation in a region affected by the decline of other industries and most recently, devastating bushfires.

We have made significant progress on our project since receiving a Commonwealth Government licence to test the conditions out at sea – we are actively monitoring wind and wave conditions as well as commencing formal planning and environmental assessment processes to ensure we are ready before other forms of generation start to exit the market.

Offshore wind is in a category of its own, as the only variable baseload power generation technology.

*– International Energy Agency,  
November 2019*

## About offshore wind

Offshore wind represents an exciting new technology that can play a significant role in Australia's future energy mix. Our modelling shows that our project would drive wholesale electricity prices down while also preventing blackouts during peak demand periods in summer.

Many other countries are already experiencing the benefits of offshore wind power – the industry is increasing exponentially, with the total global installed capacity of offshore wind reaching 23GW in 2019, up from just 3GW in 2010.

The International Energy Agency (IEA) finds that global offshore wind capacity may increase 15-fold and attract around \$1 trillion of cumulative investment by 2040. This is driven by falling costs, supportive government policies and some remarkable technological progress, such as larger turbines and floating foundations.<sup>1</sup>

The UK has approximately 8,000MW in operation today, with a 40,000MW target by 2030.

In the US, state commitments for offshore wind are currently 22,000MW by 2035.<sup>2</sup>

China's offshore wind capacity is set to rise from 4,000MW today to 110GW by 2040. Policies designed to meet global sustainable energy goals could push that even higher to above 170 gigawatts.<sup>3</sup>

# Draft Integrated System Plan

We would like to acknowledge the Australian Energy Market Operator (AEMO) for its continued leadership and strategic guidance regarding electricity generation and security in Australia. Forward planning is critical to ensure a system that is resilient to changing market and weather conditions, varying government policy agendas and the introduction of new technologies.

While we recognise the Integrated System Plan is primarily focussed on the transmission and capacity needs of the National Electricity Market, we believe there is merit in considering the benefits created from large scale offshore wind projects, such as the Star of the South.

Offshore wind power can significantly enhance system security and delay over-investment in some parts of the network. Using the Star of the South as a case study, there is a significant opportunity to avoid transmission, development and planning risks associated with onshore alternatives through a connection point in the Latrobe Valley, where there is existing, unused capacity and infrastructure.

This is not to say that offshore wind power is a replacement for onshore renewables and transmission upgrades, but rather it provides the opportunity to better balance the whole system. The higher capacity factors of offshore wind power, combined with the ability to build at scale, allows for a system that has natural diversity through a complementary portfolio of generation sources, reducing the risk of dependent failure.<sup>4</sup>

We urge AEMO to consider the significant benefits of offshore wind power and its role in providing a more balanced and secure system into the future. This is especially timely given the impending introduction of the Commonwealth Government's *Offshore Clean Energy Bill* into the Parliament, expected later this year. This important legislation and regulatory framework, combined with first mover projects such as



Photo by Jan Kopriva on Unsplash

the Star of the South, is expected to catalyse a booming offshore clean energy industry that will play a major role in Australia's future energy mix, similar to what's currently occurring in other global markets.

Thank you for the opportunity to make a submission into this process. We would be pleased to share further details of our analysis with AEMO to inform future strategic planning and guidance.

4. Transmission cannot store power; pumped hydro is costly and has limited viable sites; and batteries have high costs and low capacity. Further, pumped hydro and batteries depend on power from the same renewable supplies they are backing up, so an extended period of low sun and wind risks draining them and leaving no source of supply (also known as dependent failure). Source: Richard Bolt, Driving Australia's energy transformation, February 2019.