



# Tasmanian Renewable Energy Alliance

[www.tasrenew.org.au](http://www.tasrenew.org.au)

221 Main Rd, Derwent Park TAS 7009

[eo@tasrenew.org.au](mailto:eo@tasrenew.org.au) (0407) 486-651

## **A second interconnector: who pays? who benefits?**

**A submission in response to the Project Marinus Project Specification Consultation Report**

**26 October 2018**

Stephen Clark  
Technical and economic lead  
Project Marinus  
TasNetworks  
PO Box 606,  
Moonah TAS 7009  
by email: [projectmarinus@tasnetworks.com.au](mailto:projectmarinus@tasnetworks.com.au)

### **Overview**

TREA appreciates the opportunity to comment on the proposed Marinus link at this early stage of project investigation.

Our major concerns at this point are:

- The RIT-T assessment process looks only at costs and benefits to the NEM as a whole but does not address the allocation of costs and benefits between Tasmania and the rest of the NEM. Nor does it address the allocation of costs, risks and benefits between electricity customers and the owners of generation assets.
- By framing the project need as increased interconnection, the investigation does not sufficiently address the possibility that increased wind generation in Tasmania without additional interconnection may meet Tasmanian affordability and energy security requirements with less cost and less risk to Tasmania and to Tasmanian consumers.
- While the combined development of additional interconnection, Tasmanian pumped hydro and Tasmanian wind generation may in theory be the most cost effective way to provide new dispatchable renewable generation to Victoria, pursuing this involves considerable risk being allocated to consumers.
- The political reality is that, in the absence of a national strategy to phase out coal generation, states are increasingly pursuing the benefits of renewable energy development at a state and regional level to capture the economic benefits locally.
- The rapid deployment of new technologies such as grid and decentralised battery storage and demand management could meet the need to match energy supply and demand faster than can large scale projects such as pumped hydro. This undercuts the business case for investments such as Marinus and may result in the cost to consumers of a regulated asset exceeding the benefits.

## Recommendations

The statement of identified need used in the RIT-T process should be framed in such a way that the benefits can be compared with a 'credible option' of meeting the needs of Tasmania and the mainland NEM for energy security and affordable energy by separate developments in Victoria and Tasmania without the need for additional interconnection.

Funding options should be identified which create better alignment between who benefits from developments and who bears the cost and risk. Specifically, Tasmanian electricity consumers should not carry the cost and risk of development which benefits mainly developers of wind farms in Tasmania exporting electricity to Victoria.

Any inclusion of the regional economic benefits of constructing new assets should be based on a rigorous and transparent methodology.

Emissions reduction benefits from export of Tasmanian renewable energy to the mainland should be based on a credible case that they displace fossil fuel sources of electricity and should be financed by an appropriate national mechanism.

## Definition of need

The RIT-T process requires that a project proposal should consider all 'credible options' that would meet the 'identified need'.

The identified need as defined in the PSCR is stated as:

*"The characteristics of customer demand, generation and storage resources vary significantly between Tasmania and the rest of the NEM. Increased interconnection capacity between Tasmania the other NEM regions has the potential to realise a net economic benefit by capitalising on this diversity." {PSCR p.9}*

This is a statement of a business opportunity rather than a statement of a need.

A number of potential benefits of greater interconnection are described in section 3 of the PSCR. However by defining the core need as greater interconnection almost by definition this rules out other solutions.

Paraphrasing section 3 of the PSCR the following needs are identified:

- Access to increased dispatchable generation for Victoria
- Increased energy security for Victoria
- Cost reductions for Victoria
- Increased energy security for Tasmania
- Cost reductions for Tasmania.

## Development scenarios

Separation of the needs as described above leads to the identification of additional scenarios which could meet these needs in other ways without additional interconnection.

### **Additional wind capacity in Tasmania**

We believe there is a strong case that the benefits sought for Tasmania (reduced costs and increased energy security) could potentially be met simply by the construction of additional wind generation capacity in Tasmania. Benefits include:

- low cost energy due to Tasmania's highly favourable wind resource
- meeting the government's stated objective of Tasmania having a net 100% renewable electricity supply by 2022

- additional export opportunities using the existing Basslink cable
- increased energy security due to being able to build up dam levels.

We note that the Tamblyn report states:

*“The modelling showed that without a 2IC in operation Tasmanian wind generation could increase by up to 730 MW by 2036 and with a 2IC an additional 365 MW could be developed over the same period.”* {Tamblyn 2017, p.vii}

This 730 MW is considerably more than total of approximately 256 MW from the Granville Harbour and Cattle Hill wind farms which have been given the go-ahead since the Tamblyn report. UPC have indicated that around 450 MW of development at Jims Plain and Robbins Island could proceed without a second interconnector. {Parkinson 2018}

This option has minimal risk to Tasmanian electricity consumers.

## **Victorian generation and storage options**

We are not in a position to propose or cost alternative Victorian development options to replace retiring coal capacity but note that considerable development is taking place in:

- large scale renewables via the VRET process
- [grid scale battery projects](#)
- encouragement of distributed generation and storage via solar and battery programs

Additional opportunities that might be pursued in Victoria include:

- off river pumped storage – Blakers identifies 4,400 potential sites in Victoria with a total storage capacity of 11,000 GWh
- off-shore wind, for example the proposed [Star of the South](#) project of up to 2000 MW.

Figure 9 in Hydro’s future NEM analysis {Hydro 2018, p.14} identifies Tasmanian wind, pumped hydro and Marinus as the cheapest way of delivering 600 MW of new dispatchable generation to Victoria. We are not able to comment on these relative costings. Our point is that Victoria is proceeding rapidly with a range of initiatives to increase renewable energy generation and storage.

The development envisaged in the PSCR involve three separate components, the Marinus link, investment in pumped hydro and substantial additional development of wind farms in Tasmania. Given the rapid development of new generation and storage options throughout the NEM, we believe there is a considerable risk that the identified need for new dispatchable generation in the mainland NEM will be met in other ways before the combined elements of a Tasmanian solution could be put in place.

## **Allocation of costs and risks**

It appears that the expectation is that the Marinus link would be built as a regulated asset. If this is the case the cost will be added to the regulated asset base (RAB) of transmission networks in Tasmania and Victoria. This will increase network costs for electricity consumers in both states.

The forecast TasNetworks transmission RAB at the end of the current regulatory period on 30 June 2019 is \$1,467m. Adding an additional \$1.4b-\$1.9b (the estimated cost of a 600 MW link) would have a large impact on transmission prices. The impact on Tasmanian consumers would depend on the apportioning of the RAB between Victoria and Tasmania.

The funding of Tasmanian pumped hydro is not addressed in either the PSCR or Hydro’s future state of the NEM analysis but we assume this would be developed as an investment by Hydro Tasmania and would involve additional borrowing by Hydro.

This presents a risk to Hydro (and ultimately to Hydro's owners, the people of Tasmania) if the benefits from operation of these assets does not exceed the cost.

The major beneficiaries of investment in Marinus and pumped storage will be wind farm developers who invest in Tasmania and are able to sell energy to Victoria.

Tasmanian beneficiaries are potentially:

- Hydro Tasmania if the pumped hydro is able to engage in arbitrage on market wholesale energy prices
- The Tasmanian economy in general as a result of increased investment.

## Consideration of benefits outside the RIT-T framework

In section 4.6 of the PSCR TasNetworks flags the possibility of including benefits outside the 'market benefits' identified in the RIT-T methodology. TREA is not opposed to this approach provided that:

- the benefits are quantified with a transparent and rigorous methodology, and
- there is a match between the funding source and the benefitting parties.

Two likely areas of additional benefit are:

- economic development in Tasmania
- emissions reduction in the mainland NEM.

### Economic development

The jobs and investment potential from Marinus and associated pumped hydro and wind farms could be substantial, at least during the construction phase. According to the Tasmanian Minister for Energy:

*"Early modelling shows the construction could create up to \$5 billion of investment and around 3000 jobs in regional Tasmania over 10 to 15 years."* {Barnett 2018}

We are not aware of any publicly available information on the methodology or the assumptions behind these estimates.

### Emissions reduction

TREA is strongly supportive of the Tasmanian government's objective of Tasmania having net 100% renewable electricity by 2022.

The recent IPCC report finds that limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society. The headline statements document says:

*"In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO<sub>2</sub> emissions decline by about 45% from 2010 levels by 2030 ... reaching net zero around 2050."*

Export of Tasmanian renewable energy into the mainland NEM could contribute to emissions reductions in the NEM. This could be a significant costed benefit provided that it can be shown that exported Tasmanian energy would displace fossil fuels. In the absence of a national carbon price, this benefit should be financed by some other national mechanism rather than being a cost to Tasmanian energy consumers alone.

## References

- Barnett 2018, *Pumped Hydro sites identified*, media release, Guy Barnett, Minister for Energy, 6 Jun 2018  
[http://www.premier.tas.gov.au/releases/pumped\\_hydro\\_sites\\_identified](http://www.premier.tas.gov.au/releases/pumped_hydro_sites_identified)

- Blakers 2017, *Want energy storage? Here are 22,000 sites for pumped hydro across Australia*, Andrew Blakers, 21 Sep 2017  
<https://theconversation.com/want-energy-storage-here-are-22-000-sites-for-pumped-hydro-across-australia-84275>
- Hydro 2018, *Battery of the Nation: Analysis of the future National Electricity Market*, Hydro Tasmania, Apr 2018  
<https://www.hydro.com.au/clean-energy/battery-of-the-nation/future-state>
- IPCC 2018, *Global Warming of 1.5 °C*, Intergovernmental Panel on Climate Change, 8 Oct 2018  
<http://www.ipcc.ch/report/sr15/>
- Parkinson 2018, *UPC lands investor to advance huge wind, solar projects*, Giles Parkinson, 25 May 2018  
<https://reneweconomy.com.au/upc-lands-investor-advance-huge-wind-solar-projects-17801/>
- PSCR, *Project Specification Consultation Report*, TasNetworks, Jul 2018  
<https://projectmarinus.tasnetworks.com.au/>
- Tamblyn 2017, *Feasibility of a second Tasmanian interconnector: Final Study*, Dr John Tamblyn, Apr 2017  
<https://www.environment.gov.au/energy/tasmanian-energy-taskforce>