

Is Marinus Link right for Tasmania?

Professor Bruce Mountain

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**Victoria
Energy Policy
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**VICTORIA
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MELBOURNE AUSTRALIA

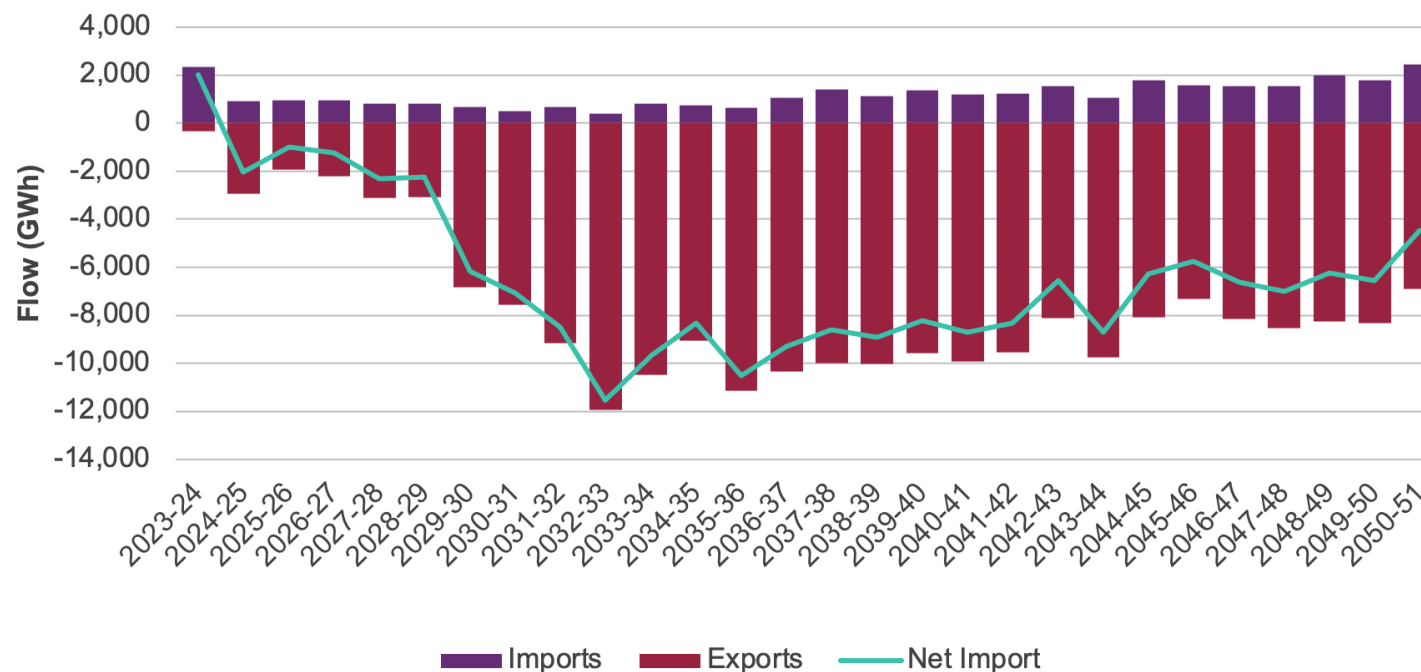
Outline

- 1. What is BoTN and Marinus?**
- 2. Why did AEMO say that Marinus is a priority and is their analysis plausible?**
- 3. Will the mainland value Tasmania's electricity?**
- 4. Will Marinus bring down electricity prices in Tas?**
- 5. Why has AEMO made such a bad mistake?**

What is BoTN and Marinus?

- ▶ **Marinus:** 2*750 MW DC cables (250km sub-sea, 90km underground) 220kV converter stations in Tas, 500kV converter stations in Vic.
- ▶ **BoTN:** Not yet clear – some combination of hydro repowering + pumped hydro. HydroTas say it will cost \$2.25bn
- ▶ **Wind:** about 2,100 MW of additional wind, which AEMO say will cost about \$2.4m/MW. None of this wind will proceed without long term off-take from HydroTas/Tas Govt. Implicit subsidy: unknown but probably several hundred million.

Here is how AEMO says Marinus + Basslink will operate (step change scenario)



Average annual northward flow 2032-2051	9,237	GWh
Average annual southward flow:	1,323	GWh
Average annual shipped:	10,560	GWh
Average annual shipped on Marinus (1,500MW/2000MW):	7,920	GWh

TasNetworks and AEMO both say the benefits of Marinus exceed its costs. Their modelling relies on obviously implausible assumptions

- ▶ AEMO & TasNetworks assumes, contrary to the Tas Govt's instruction, that 1,900 MW of wind will be built in Tas even if Marinus is not built. They therefore exclude \$4.7bn of capital outlay (+\$33pm pa fixed O&M) from the cost/benefit analysis. When accounting for this, the costs of Marinus exceed its benefits.
- ▶ TasNetworks and AEMO assumes that Tas wind displaces new Vic gas built in 2030s, and most of the assumed benefit of Marinus relies on this assumption.
- ▶ This modelling is **so** obviously not in the least bit credible.

Will the mainland value Tasmania's electricity?

- ▶ Using AEMO's ISP assumptions on Marinus ops, average price for Marinus will be \$38/MWh. Tas insist mainland gets 94% of benefit of Marinus and so mainland pays 94% of \$38/MWh = \$36/MWh for Marinus.
- ▶ Can Tas produce electricity for \$36/MWh less than Vic?
- ▶ Since Tas joined the NEM in 2007 to the present, the average price of electricity in TAS has been \$58/MW and in VIC \$57/MWh.
- ▶ New wind generation will cost much the same in Vic as in Tas (slightly better wind in Tas than Vic, but higher cost in Tas than Vic).
- ▶ HydroTas needs \$2.25bn to make its power system useful to Vic.
- ▶ How can it possibly be plausible to suggest that electricity in Tas will be \$36/MWh cheaper to produce in Tas, than in Vic ? Why would Vic be interested in paying such a premium for Tas electricity (it will roughly double Victoria's transmission charges)?

Will Marinus bring down electricity prices?

No, even if Vic pays for all of Marinus.



Marinus assumes it is almost always cheaper to produce electricity in Tas than Vic. Marinus+Baslink will make Tas+Vic effectively one market. Tas supply is small in relation to Vic demand. The Tas price will be dragged up to the Vic price.

Why has AEMO made such a bad mistake?

1. AEMO is a “national” entity and a “truly national grid” is an ideology baked into its DNA.
2. It does not bear the cost of its plan (“all care no responsibility”).
3. It operates the power system and seeks to minimize its own operational risks by imposing costs on others.
4. It can not instruct the development of generation or storage but can instruct the development of transmission. If the only tool you have is a hammer, every problem looks like a nail.