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Dear Mr Clark

TasNetworks — Project Marinus RIT-T Project Assessment Draft Report – 5 December 2019

EnergyAustralia is one of Australia's largest energy companies with around 2.5 million electricity and gas accounts across eastern Australia. We also own, operate and contract an energy generation portfolio across Australia, including coal, gas, battery storage, demand response, wind and solar assets, with control of over 4,500MW of generation capacity.

We welcome the opportunity to comment on TasNetworks' Project Assessment Draft Report (PADR) for Marinus Link under the Regulatory Investment Test for Transmission (RIT-T).

The PADR identifies the following preferred investment option, and costs and benefits:[1]

- construction of two 750MW HVDC links between Tasmania and the mainland, the first to be commissioned in 2028 and the second in 2032
- network augmentation in Tasmania to support the additional planned transfer capacity, including several 220kV lines and switching stations
- central estimate of capex of $2.76 billion (2019 dollars, excluding allowances for accuracy and contingencies)[2], at an annualised cost of $193 million[3] over 40 years for the HVDC assets and 60 years for others (costs beyond 2050 are excluded from the analysis)
- gross market benefits ranging from $2.12 to $4.52 billion out to 2050 (discounted to 2019 dollars) under four scenarios, of which $1.7 to $3.1 billion are avoided fuel costs. These benefits would arise from using excess hydro capacity in Tasmania to provide storage for mainland renewables, displacing the costs of running gas-powered generators and mainland storage capacity. Other benefits arise where mainland wind generation is displaced by better utilised wind generation in Tasmania. Tasmanian pumped hydro storage resources similarly displace more expensive mainland alternatives.

[1] TasNetworks, *Project Marinus RIT-T Project Assessment Draft Report*, December 2019, pp. 86-91.
[2] ibid., p. 9.
[3] ibid., p. 56.

We appreciate TasNetworks is undertaking this assessment at a time of significant uncertainty regarding COVID-19 impacts and changes to the regulatory framework around RIT-T assessments. This includes more weight being placed on AEMO's 2020 Integrated System Plan (ISP), which we understand will be finalised in the coming months, with the possibility of a further update in late 2020 to accommodate any material impacts arising from COVID-19 once these are understood.

These developments also present challenges in providing useful feedback on TasNetworks' analysis. We support TasNetworks' intention to release updated modelling on the basis of AEMO's Final 2020 ISP and will comment on this in due course.

Our attached submission provides the following feedback for TasNetworks in progressing its RIT-T assessment, based on the analysis that has been published to date:

- The optimal timing of Marinus Link appears to be considerably uncertain. Our view is that the evidence currently before stakeholders, in addition to the uncertainty posed by COVID-19 impacts, justifies a delay in considering this project for regulatory purposes.

- TasNetworks should be clearer where its analysis of government subsidies reflects modelling requests from governments or other stakeholders, and clearly call out where possible policy interventions would result in departures from optimal project scope or timing and added costs for consumers.

- The allocation of costs of transmission interconnection is an important issue. TasNetworks should ensure its RIT-T produces relevant and robust data to inform consultation to be led by the Energy Security Board (ESB), including analysis of how the current provisions of Modified Load Export Charges (MLEC) influence inter-regional cost sharing.

- Least cost optimisation and perfect foresight modelling relied on by TasNetworks has inherent shortcomings which over-state the value of interconnection and pumped hydro over the modelling period. This has important implications for Marinus Link, which in part depends on realising additional value from existing Tasmanian hydro capacity through accessing the NEM via Victoria. Modelling may assume that the cost of this capacity is sunk and therefore always bid into the market at zero cost, whereas other bidding assumptions are likely to be more realistic. The actual wholesale pricing outcomes for customers in each jurisdiction will be materially affected, particularly relative to counterfactuals where more generation is built in Victoria and without the (shared) cost of Marinus Link.

- We also have some detailed suggestions for TasNetworks in improving its modelling, including the treatment of Snowy 2.0, scrutinising the heavy reliance on Tasmanian wind capacity, and a possible accelerated timing of VNI West.

If you would like to discuss this submission, please contact me on 03 8628 1655 or Lawrence.irlam@energyaustralia.com.au.

Regards

Lawrence Irlam
Industry Regulation Lead

The regulatory consideration of this project should be delayed

Overall the prudent timing of this project is under significant doubt, to the extent where we consider any RIT-T assessment should be deferred.

TasNetworks has already recognised inconsistencies between its PADR and AEMO's Draft ISP which, in part, have arisen because these assessments were completed simultaneously. We agree that further modelling should be undertaken after the 2020 ISP is finalised, allowing consistency in inputs and assumptions.

AEMO's Draft ISP recommendation for Marinus Link to be progressed to a 'shovel ready' status will be revisited in its 2020 Final ISP, however we expect AEMO's recommendations to be tempered by uncertainty over COVID-19 impacts. We also understand AEMO's Final ISP will model these impacts as a sensitivity to one or more of its existing scenarios. The new ISP rules framework gives weight to AEMO's latest Inputs, Assumptions and Scenarios Report, and 'most likely' scenarios, with obligations on RIT-T proponents to use these[4], however it is not clear if these will be updated, or subject to a partial update. As TasNetworks would appreciate, the new regulatory framework is intended to streamline RIT-T assessments but the current situation presents unusual complications for assessments currently under way.

Given there is no urgency surrounding this project, it seems prudent to delay further regulatory consideration of Marinus Link until at least early 2021. This relatively short delay would accommodate any possible ISP update and provide more certainty on the prudent timing of projects identified as 'Actionable' under the new regulatory framework. It would not jeopardise the ability to progress towards a final investment decision, if AEMO deems this to be prudent.

The prudent timing of this project is likely to be later than set in the PADR

Our expectation is that updating TasNetworks' analysis to be consistent with AEMO's 2020 ISP, combined with economic slowdown in the wake of the COVID-19 pandemic, would justify a delay in progressing Marinus Link towards being 'shovel ready' under most scenarios that have been constructed. The case for progressing Marinus Link early appears to be more dependent on the potential for earlier generation closure than solely on maximising net benefits and this should be considered further.

The following table reflects analysis carried out by TasNetworks in determining the optimal timing for Marinus Link. It shows that net market benefits are still increasing with later commissioning dates. We encourage TasNetworks to expand this table to show the inflection points at which the net benefits start reducing, and to increase the scope of the table to show increased difference in the timing between each 750MW stage development, and more data points — for example showing the timing of Stage one in the full range from 2026 to 2034, and with Stage two delayed by one to six years in each of these cases, in all the scenarios.

[4] For example, the ESB's final recommended rules require proponents to adopt the most recent ISP parameters (or provide demonstrable reasons for any departure) and adopt the ISP's market modelling in so far as practicable.

Table 11 Optimal timing for the 1500 MW option (Option D)

Credible option (MW)	Commissioning year of each 750 MW stage	Net market benefit by scenario ($ million)				
		Global slowdown	Status quo/ current policy	Sustained renewables uptake	Accelerated transition	Weighted average
1500 MW in two 750 MW stages	2026 and 2028	595	947	1,372	3,182	1,524
	2027 and 2028	627	953	1,353	3,166	1,525
	2028 and 2030	764	1,088	1,446	3,221	1,630
	2028 and 2032	851	1,147	1,451	3,246	1,674
	2030 and 2032	884	1,165	1,409	3,188	1,661

Source: TasNetworks

The impact of weighting each scenario (and choice of weightings) and presenting a blended net market benefit has the effect of diluting information about the optimal timing in each scenario, and we would appreciate understanding the optimal timing in each scenario more clearly. TasNetworks has identified that the 2028 and 2032 commissioning dates are preferred because it produces the highest weighted net benefit across the four scenarios. However, it is not appropriate to 'blend' timing in this way. For example, the difference in absolute value of net benefits across the scenarios means using a weighted average approach is highly dependent on outcomes of the 'Accelerated Transition' scenario. To some extent TasNetworks has explored this in its modelling of different weightings in a sensitivity analysis. Optimal project timing may be informed by other factors, such as the risk of early generation closure, rather than scenario-weighted net benefits.

Noting its analysis was prepared on a different basis, AEMO's Draft ISP suggested that the optimal timing for Stage one was 2036-37 in all but its Step Change scenario, with Stage two not required over the modelling horizon.[5] Where TasNetworks partially adopted the Draft 2020 ISP assumptions, it found the optimal timing of Marinus Link would be delayed by two to three years, with a reduction in net market benefits by $710 million, or 62%, relative to its Status Quo scenario. In view of these results, TasNetworks concluded the project "should proceed to the Design and Approvals phase".[6] We acknowledge that a partial update of assumptions would have involved considerable modelling effort by TasNetworks, and a 'full' update was obviously not possible. Our expectation is that a 'full' update of the Draft ISP assumptions may have produced a further shift in optimal timings and this possibility should have been acknowledged.

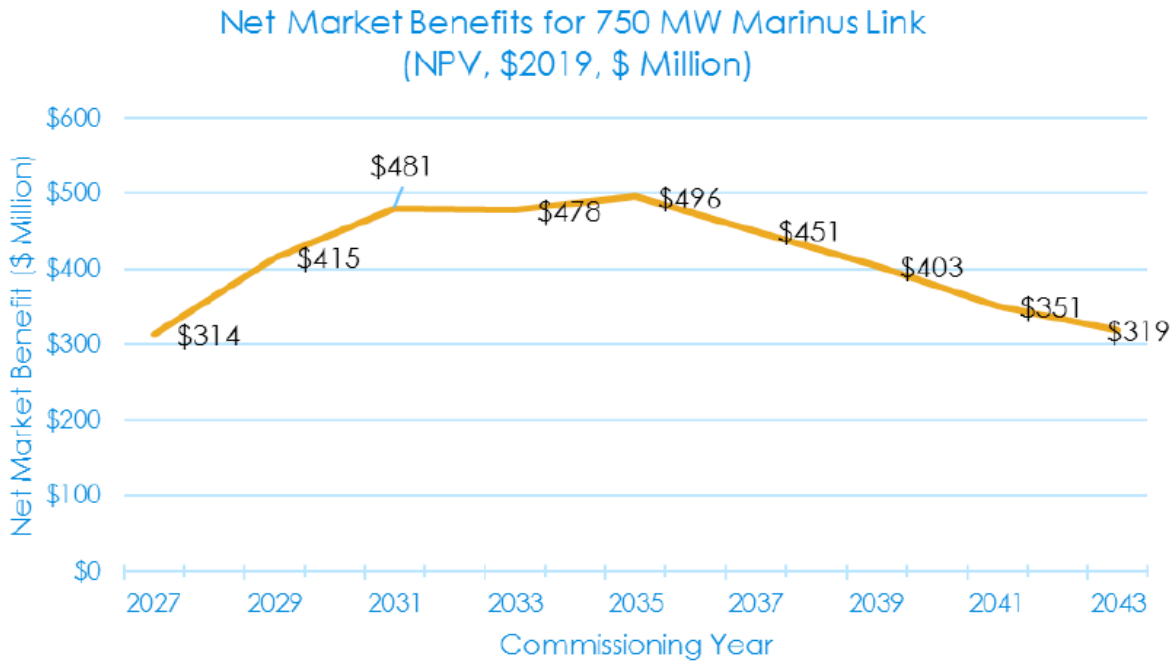
TasNetworks has made more recent comments in its own submission on the Draft ISP that AEMO has potentially understated the value of Marinus Link, which might support an

[5] AEMO, Draft ISP, p. 52.
[6] TasNetworks, p. 165.

earlier commissioning date.[7] TasNetworks has also modelled additional changes since the PADR to align with the Draft ISP, namely:

- increase in REZ hosting capacity
- increase in pumped hydro potential
- decreased demand forecasts for NSW and VIC.

The analysis reflecting these changes, reflected in the chart below, tends to support the view that the optimal timing for Stage one, under the Central/ Status Quo scenario, would be in the mid-2030s. However, TasNetworks highlights that its updated modelling shows a plateauing of net benefits where commissioning takes place over the 2030's, which is likely to be the case over other scenarios. This notwithstanding, any apparent insensitivity of benefits to the commissioning year underline the importance of considering factors such as regret costs arising in other scenarios and sensitivities in the same way as AEMO has done. The inherent uncertainty in calculating market benefits, explored further below, is also a reason to be cautious about relying on them as a primary determinant for project timing.



Source: TasNetworks

[7] https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/draft-2020-isp/submissions/tasnetworks-submission-draft-2020-isp.pdf?la=en

The PADR already contains justifications for an accelerated 2027 commissioning date in terms of protecting against unexpected events, namely early coal plant closures, prolonged Basslink outages, significant generator outages and extreme heatwaves.[8] TasNetworks' analysis of each of these benefits and our observations are as follows:[9]

- An earlier closure of Yallourn (e.g. in 2027) shifts the optimal timing of Stage one of Marinus Link forward by one year (to 2029[10]), with an increase in expected net benefits of $85 million or around 7% relative to the status quo. Elsewhere TasNetworks calculates that an accelerated commissioning in the absence of any associated need would reduce net market benefits by $149 million.[11] Further analysis and comparisons of this type might give some idea of regret costs and uncertainty around Yallourn's closure and should be expanded by TasNetworks.

- Stage one of Marinus Link would avoid $19 million in costs in the event Basslink suffered a six month outage, with projected market parameters as at July 2027.[12] There is no information on the probability of such an outage, however TasNetworks refers to this as "1 in 10 years"[13], suggesting the $19 million value needs to be annualised and discounted for the purposes of net benefit comparisons. Our expectation is that such an amount would not justify any change in optimal project timing.

- Cases of significant generator outages or extreme heatwaves, and the benefits of avoiding such, do not appear to have been separately modelled by TasNetworks. Our understanding is that EY's analysis already accounts for various factors affecting reliability and security, including forced outages, demand and weather conditions, as well as a Climate Change sensitivity. The presence of other transmission projects such as EnergyConnect and VNI West will also likely mitigate these risks.

TasNetworks also states that a 2027 commissioning date would deliver jobs and investment stimulus for the Victorian and Tasmanian economies.[14] The counterfactual cases would also include such benefits, only in different regions and proportions. More importantly, and as TasNetworks has stated, these effects are not within the scope of RIT-T benefits assessments[15] and should therefore not be referenced.

As we have separately stated to AEMO in its draft ISP consultation[16], we seek further justification for progressing Marinus Link to a 'shovel ready' status ahead of the 2022 ISP. In particular, we would like to see a demonstration that the project would stall for an extended period if not progressed now, including the inability to achieve an earlier commissioning date e.g. 2028 if this is subsequently found to be prudent given changing market conditions.

[8] TasNetworks, p. 10.
[9] ibid., p. 80.
[10] Under the Status Quo/ current policy scenario.
[11] ibid., p. 84.
[12] ibid., p. 157
[13] ibid., Table 13
[14] ibid., p. 10.
[15] ibid., pp. 58-59.
[16] https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/draft-2020-isp/submissions/energyaustralia-submission-draft-2020-isp.pdf?la=en

Related to this, TasNetworks should publish further information on the impact and likelihood of delaying Marinus Link, including:

- expected costs involved in progressing Marinus Link to a 'shovel ready' status, including importantly who would pay for this
- what feasibility work has already been conducted (outside of the current RIT-T assessment, noting it has not received any approvals by the AER) and why this would need to be redone if preparatory work is delayed
- arrangements for and likelihood of any external funding needed to satisfy NER requirements for project commissioning ahead of optimal timing, as well as those affecting associated generation investments e.g. under the Australian Government's Underwriting New Generation Investment (UNGI) program.

We are concerned at further statements that anticipate political intervention

Extending from its reference to non-relevant benefits, we have concerns that TasNetworks' analysis has accommodated the potential for government interventions that would result in suboptimal investment timing.

As noted above, TasNetworks calculates that a $149 million financial contribution would be required to support a commissioning date that is earlier than the economically optimal timing measured under the RIT-T.[17] This analysis appears to be unsolicited and the PADR refers to the "evolution of the NEM during forthcoming years" warranting a prudent approach of progressing the project, with the possibility of delivery earlier than 2028.[18] TasNetworks should clarify whether this analysis, including EY modelling, was prepared in response to a government or stakeholder request, and if so, why it has not been dismissed as uneconomic.

The $149 million contribution also reflects a commissioning date that is one year ahead of its optimal timing for Stage one, and four years ahead for Stage two. The value of any contribution to support commissioning of both stages by 2028 would need to be revisited in line with updated modelling and, on the basis of analysis published to date, would likely be higher by several orders of magnitude.

We also have some questions around the modelling treatment and presentation of outputs associated with projects funded through UNGI. The analysis presented by TasNetworks in Appendix 4, including tables 29 and figure 35, is based on the cost of this generation investment being externalised, thus the true resource cost of this sensitivity is not reported. We accept that such a treatment is likely to be consistent with RIT-T requirements in that costs to be recovered through regulated revenues should only be reported. However, TasNetworks should clarify why this sensitivity is modelled on its 'Sustained renewables uptake' scenario, and not on the Central scenario as with the other sensitivities it has calculated. We would expect this sensitivity to result in net negative benefits if modelled on the Central Scenario. The much larger $537 million

[17] TasNetworks, p. 84.
[18] ibid.

change in net benefits for this scenario reported in table 13 is therefore potentially misleading by comparison and may be misquoted.

We recognise there may be a role for policy interventions or government subsidies. Where these take the form of credible announced policies they should be modelled. Beyond this, RIT-T processes should work towards identifying a 'pure' optimal investment decision and associated least cost outcomes for customers.

The discussion of cost allocation should be informed by TasNetworks' data

The COAG Energy Council in November 2019 directed the ESB to prepare advice on a fair cost allocation methodology for interconnectors (both in theory and practice) as part of its work to action the ISP.[19] TasNetworks has released a discussion paper as an attachment to its PADR and requested views to "inform its submission to the ESB's anticipated consultation on this issue."[20] The ESB has now been directed to report back to the COAG Energy Council by the end of May, with a final report by the end of September.[21]

We agree that this is an important issue, and that the proposed approach in TasNetworks' discussion paper represents one view that will be presented as part of the ESB's process.

The concept of value allocation, as opposed to cost allocation as a function of interconnector utilisation as per the current MLEC provisions, is presented in TasNetworks' discussion paper. TasNetworks should provide guidance on what the MLEC adjustments are expected to be if Marinus Link proceeds, and whether the project would proceed without changes to the cost allocation.

Furthermore, the Tasmanian Government has stated it "will reserve its right to decide whether to proceed to construction until it is satisfied that the best interests of Tasmanian electricity customers and taxpayers will be served by the projects."[22] It is not clear whether it has made this statement as TasNetworks' shareholder, or under its jurisdiction for various planning and construction approvals, or both. In any case, we have concerns that the Government's stance is a potential distraction from objectively considering the costs and benefits of Marinus Link.

TasNetworks has an important role to play in this discussion by ensuring its net benefit assessment is robust and in accordance with the NER. As noted above this includes further substantiation of the project's optimal timing, and ensuring its analysis is clear in terms of capturing relevant benefits and the treatment of government contributions. Disputes over these factors may unnecessarily aggravate customer or political concerns about who might pay for Marinus Link.

[19] COAG Energy Council, *Meeting Communique*, Friday 22 November 2019. http://www.coagenergycouncil.gov.au/publications/22nd-energy-council-meeting-communique

[20] TasNetworks, pp. 10-11.

[21] http://www.coagenergycouncil.gov.au/publications/energy-security-board-outcomes-23rd-energy-council-ministerial-meeting

[22] https://www.stategrowth.tas.gov.au/__data/assets/pdf_file/0007/185839/Current_Situation_Assessment_-_Marinus_Link_and_Battery_of_the_Nation.pdf

The ESB's eventual consultation will also be helped where TasNetworks, AEMO and other RIT-T proponents produce estimates of regional costs and benefits that are prepared using a consistent set of assumptions, methods and scenarios. As part of its RIT-T analysis, TasNetworks should also provide appropriate context and ancillary information (such as ranges or other measures of uncertainty) to ensure stakeholders appropriately understand quantitative results. As outlined in the next section, we would expect some consideration of how any data used for determining value or benefit allocation on an ex ante basis is affected by systematic modelling biases or limiting assumptions. This would inform any discussion of whether benefits are measured and change cost allocation ex post. TasNetworks should also anticipate differing perspectives of what constitutes a 'benefit' and furnish stakeholders with data to enable different calculations of regional impacts under each relevant scenario.

TasNetworks' modelling overly favours interconnection and pumped hydro

This section explores several matters common to AEMO's Draft ISP modelling and TasNetworks' PADR. We encourage TasNetworks to read our recent ISP submission in full.

One of our concerns is that modelling assumes perfect competition based on short run marginal costs (SRMC), and perfect foresight for hydro and renewable modelling, including prior knowledge of hydrological and wind droughts. This is critical in the case of TasNetworks' modelling as the benefits of Marinus Link depend heavily on drawing value from deep storage resources in a way that minimises resource costs for the entire system. Under SRMC bidding assumptions the significant capital costs of storage are effectively sunk and will materially alter dispatch patterns whereas in real life the owners of these assets will need to recover their fixed costs over time. The operation of these assets will also reflect uncertainty in weather and hydrological flows, and modelling on the basis of perfect foresight and operation will systematically overstate market benefits that can actually be realised.

This has important implications for the discussion of who pays for Marinus Link, which in part depends on realising additional value from existing Tasmanian hydro capacity through accessing the NEM via Victoria. Modelling may assume the cost of this installed capacity is bid into the market at zero cost, whereas other bidding assumptions e.g. related to the value of water, shadow pricing of new entrants or other under imperfect competition, are likely to be more realistic. The actual wholesale pricing outcomes for customers in each jurisdiction will be materially affected, particularly relative to counterfactuals where more generation is built in Victoria and without the (shared) cost of Marinus Link.

Several other factors inherent in modelling employed by AEMO and RIT proponents may skew outcomes. These should be acknowledged and ideally, compensated for, when interpreting model outputs. For example:

- centrally planned least cost modelling excludes real world market dynamics and influences such as ancillary services, the retailer reliability obligation, portfolio bidding and risk management practices used by participants and the inability to effectively hedge with Settlement Residue Auctions (SRAs)

- the integration of electricity and gas is simplified, and modelling uses theoretical co-optimisation principles across dispatchable and intermittent generation, transmission, storage and gas
- the modelling overstates our ability to capture the increasingly multi-dimensional impacts of diurnal and seasonal weather. In particular, we believe the perfect foresight assumptions can overstate the benefits of interconnectors and their utilisation by unrealistically optimising investment in and operation of storage.
- simplification of increasingly critical power system operation and performance considerations
- the need to make simplified representations across (and when interfacing between) the multi-staged modelling time horizons, particularly regarding new entrants and retirements.

Many of these limitations mean that the economic drivers for storage and peaking generation are not captured. These drivers include, for example, retailer reliability obligations, access to firm regional capacity to hedge retail load or intermittent supplies in a retailer's position, ancillary services revenues and increased operational requirements for more localised synchronisation and system strength issues.

Across the scenarios, TasNetworks projects that the 42 GW of dispatchable capacity currently in the NEM would decline to around 35 GW by the mid-2030s. This is a significant finding. We consider that such a marked reduction in firm capacity would:

- lead to a critical scarcity in contracts required by retailers to manage their exposure to price risk, resulting in significant additional costs being incurred and passed onto consumers
- be at odds with the current focus on reliability of supply as thermal generators are reaching end of life and subject to higher forced outages. This includes AEMO's recent suggestions in the ESOO[23] around revising the reliability standard to better capture long tail risks and new RRO obligations
- be inconsistent with our view (and those of other stakeholders) of the increasing and complementary role of gas generation alongside wind, especially as wind droughts that can be broad across the NEM.

As with AEMO's ISP, TasNetworks' modelling suggests an increased and significant reliance on transmission investment and associated resource sharing in all scenarios, in lieu of more localised dispatchable generation. It represents a relatively extreme risk position from a reliability perspective that is at odds with the increased political and societal focus on reliability. For example, we question whether the modelled outcomes would be able to accommodate peak demand conditions and coincident high demand across regions, including allowance for thermal de-rates of variable renewables, and practical ramp rates of the dispatchable fleet of generators.

The modelling also projects an additional 10 GW of deep pumped hydro storage over the same time horizon. This represents capacity investment of twice the amount of existing generation in the Latrobe Valley. This seems ambitious, bordering on implausible, and

[23] AEMO, *2019 Electricity Statement of Opportunities,* Page 13.

represents a 'technology bet' that undermines the broader findings. PHES has high development risk and continued uncertainty regarding resource availability, construction costs and the economic threat of competing storage technologies. As noted above, assumptions around perfect foresight overstate the efficiency of PHES operations from a system-wide perspective. Bidding assumptions tied to SRMC ignore the sunk cost of existing or latent PHES capacity and this can further overstate the attractiveness of PHES from a total system cost perspective.

TasNetworks should produce a sensitivity that genuinely challenges the presumption of PHES playing a critical role in the transition of the electricity system. This might include a sensitivity which increases capex on PHES only by 30 per cent or adopts significant reductions in resource availability.

We understand TasNetworks has released hourly modelling results, which we have not had the opportunity to interrogate, however ask that TasNetworks confirm the plausibility of generator scheduling throughout days where intermittent renewable sources are not producing output. Our expectation is that the significant reduction in firm generation capacity throughout its scenarios would pose challenges in operating the power system in the face of 'tail risks' or interventions arising from low probability, high impact events.

Further detailed comments on TasNetworks' modelling

Snowy 2.0 uncertainty

We note that Snowy 2.0 exploratory works are not yet complete, and based on publicly available information, we understand the project is not fully guaranteed to proceed to completion. We therefore support TasNetworks' modelling a situation without Snowy 2.0, noting this is considered alongside the exclusion of HumeLink and VNI West. TasNetworks may wish to separately model a sensitivity with Snowy 2.0 and Humelink not proceeding and specifically elaborate on the impact on the optimal timing of Marinus Link under these three discrete sensitivities.

Sensitivity of wind development and gas prices

The market benefits of this project appear highly correlated with generation investment decisions in Tasmania and the PACR should explore this further in terms of publishing details and conducting sensitivities.

The benefits are highly concentrated on allowing Tasmanian hydro and wind to displace expected Victorian gas generation, with a further deferral of NSW PHES and PV by around 8 years.

The considerable amount of wind investment envisaged should be examined further. We note that wind capacity in Tasmania rises from 565MW to 3000MW in TasNetworks' Status Quo scenario, and up to 4300MW in its Accelerated Transition scenario. These amounts are far above those in the recent draft ISP:

- AEMO's Central scenario projects only 1500MW of wind over the modelling horizon

- The installed wind capacity in AEMO's Step Change scenario more closely resembles Marinus Link's Status Quo scenario (i.e. 3200MW by 2042)

The location of this capacity also differs, with AEMO suggesting almost all would be located in the Tasmanian Tablelands, while EY's projections have new wind capacity divided across three zones but mostly in Northwest Tasmania. Based on current developer interest, it appears that most (over 2000 MW) of this capacity would be provided by two projects.[24]

As outlined in our submission on the PSCR, we have some concerns at the justification for transmission investment resting heavily on the presumption that new generation will connect in the 'future'.

To build confidence in the validity of its underlying assumptions, TasNetworks should provide substantiated insights into its differing views on renewables developments in Tasmania compared with AEMO, including views on the likelihood of the stated projects being built, and run a further modelling sensitivity to constrain wind development given potential blockages in the form of:

- resistance from local landowners
- concerns around the setting of marginal loss factors
- changes in how the cost of transmission investments are recovered, including generator-pays models.

The materiality benefits in the form of avoided gas generation also warrants consideration of the sensitivity of results to gas fuel prices.

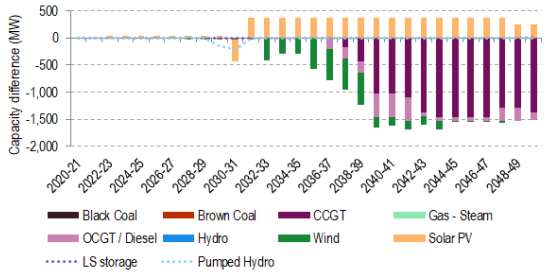
Complementarity with VNI West (formerly KerangLink)

TasNetworks states that Marinus Link will serve Victoria by firming renewables and subsequently allowing VNI West to transfer energy towards New South Wales. Dispatchable capacity would be provided from Snowy Hydro and Tasmanian hydro schemes to Victoria and New South Wales, while also sharing excess renewable energy generation between regions.[25]

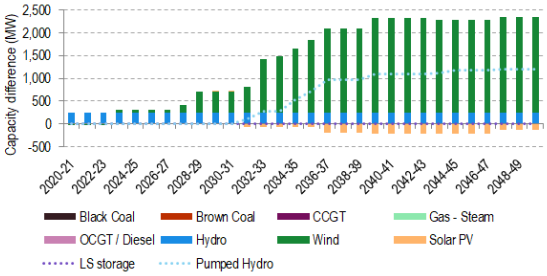
We question whether the benefits of Marinus Link would be affected in a situation where more renewable capacity is installed in Victoria, thereby displacing some of the generation that might otherwise be supplied from Tasmania. Additional Victorian generation could be facilitated via the REZ expansion options being explored as part of the VNI West RIT-T.

From a regional or cost allocation perspective, TasNetworks should provide further analysis that enables stakeholders to consider whether it would be more efficient to expand local Victorian renewables generation, coupled with dispatchable capacity, or access latent Tasmanian hydro capacity with Marinus Link, noting that in the Status Quo scenario it is Victorian combined-cycle gas generation primarily being offset by Tasmanian wind and pumped hydro generation.

[24] Robin's Island and Rushy Lagoon. See TasNetworks, pp. 122-3.
[25] TasNetworks, p. 97.



Victorian installed capacity delta (M28_32 vs Basecase)



Tasmanian installed capacity delta (M28_32 vs Basecase)

We also note uncertainties around the timing of VNI West, with government suggestions to accelerate this project, potentially via circumventing NER requirements. An accelerated VNI West option also appears likely to be supported by AEMO with commissioning dates that are earlier than envisaged in the PADR, and this may affect the optimal timing of Marinus Link.