Marinus Link Pty Ltd
PO Box 721, Hobart 7001
Tasmania
Australia 7009

11 July 2025

Dr Kris Funston
Executive General Manager, Network Regulation
Australian Energy Regulator

By email

Dear Kris,

Re: Project Marinus RIT-T update

I am pleased to provide you with a copy of the Regulatory Investment Test for Transmission (**RIT-T**) update report (attached), which Marinus Link Pty Ltd (**MLPL**) will publish on its website in advance of submitting its revised Revenue Proposal on 15 July 2025. The purpose of the RIT-T update is to ascertain whether a proposed transmission investment continues to be the optimal solution, where circumstances have changed materially since the original RIT-T assessment.

As you know, the AER's Commencement and Process Paper, which governs the process for MLPL's revenue determination, set the following expectations regarding the RIT-T update and AEMO's feedback loop, which provides a similar cost-benefit assessment from a national planning perspective:[1]

> "We note Marinus Link's proposal to complete the AEMO feedback loop process and an updated RIT-T assessment prior to submitting the revised proposal in July 2025. Our expectation is that Marinus Link will undertake these as a prudent and necessary step prior to lodging a revised regulatory proposal."

On 19 May 2025, MLPL wrote to the AER to explain that while the RIT-T update could be published prior to the submission of our revised Revenue Proposal on 15 July 2025, AEMO had advised that the feedback loop assessment will take some time and is expected to be completed by mid-September. For that reason, MLPL proposed that it should lodge a feedback loop request to AEMO prior to submitting its revised Revenue Proposal, and AEMO should conduct its assessment in parallel with the AER's revenue determination process. In its response, the AER accepted MLPL's proposed approach noting that the feedback loop should be completed prior to the publication of the AER's supplementary Draft Decision on 10 October 2025.

This RIT-T update is the second update that MLPL has published. In April 2024, we reviewed the outcome from the Project Assessment Conclusions Report (**PACR**), published in June 2021, which determined that the 1500 MW link commissioned in two stages was the preferred option for Project Marinus. The RIT-T

[1] AER, Marinus Link, Decision to amend Commencement and Process Paper, December 2024, page 6

update in April 2024 was in response to the material changes that had taken place since June 2021, including:

- the accelerated closure of coal plants and a growing need for renewable generation and energy storage projects; and
- the emergence of an inflationary environment and concerns regarding energy security, which had increased the costs of delivering major transmission projects, including Project Marinus.

At that time, MLPL concluded that the preferred option identified in the PACR remained unchanged, although we noted that the timing of the first and second cables is expected to be slightly later than indicated in the PACR. MLPL published the RIT-T update on its website and invited stakeholder feedback. MLPL did not receive any feedback in response to that update.

In relation to the current RIT-T update, MLPL expected that the changes since April 2024, including the application of technology-specific WACCs and AEMO's latest assumptions regarding hydrogen load in Tasmania, were more likely to increase the estimated net market benefits provided by Project Marinus. Nevertheless, MLPL is pleased to have undertaken this further RIT-T update to assist stakeholders in understanding the impact of these changes.

We engaged EY Parthenon (**EY**) to undertake independent market modelling, using the same modelling approach employed in the PACR and the RIT-T update in April 2024, but using many of AEMO's updated inputs and assumptions. In particular, EY was engaged to compute the least-cost generation dispatch and capacity development plan for the National Electricity Market (**NEM**) for two scenarios in AEMO Draft 2025 Input, Assumptions and Scenarios Report (**IASR**), being the Step Change and Progressive Change scenarios. The modelling for each of these scenarios used the following updated input assumptions:

- The Draft 2025 IASR assumptions relating to policies, costs and generator technical parameters.
- AEMO's August 2024 Electricity Statement of Opportunities demand projections, excluding hydrogen demand.
- The Draft 2025 IASR hydrogen demand projections.
- The assumed timing for major transmission upgrades based on AEMO's outcomes from the 2024 ISP or the proponent's earliest in-service date where these dates were later.

While the Green Energy scenario has not been modelled, the RIT-T update in April 2024 indicated that this scenario is more favourable to Marinus Link compared to the Step Change and Progressive Change scenarios. In comparison to these scenarios, the Green Energy scenario is favourable because it adopted a higher system demand and a more restrictive carbon budget, which requires additional renewables. EY confirmed that the latest assumptions that underpin the Green Energy scenario will continue to favour Project Marinus compared to the other two scenarios. On that basis and given this scenario has a small weighting factor, MLPL concluded that it was not necessary to conduct updated modelling for the Green Energy scenario.

EY's modelling complies with the AER's Cost Benefit Analysis Guidelines, which contain the applicable RIT-T guidelines for actionable ISP projects, such as Project Marinus. The analysis considered options involving a single cable commissioned in 2030 and an option that includes both cables, with the second cable commissioned in 2034. It should be noted that the net market benefit assessment presented in this RIT-T update is conservative because we have not included the benefits of emission reductions, which would

materially increase the expected net market benefits. Further information is provided in EY's report, which is also provided alongside this letter.

Summary of results

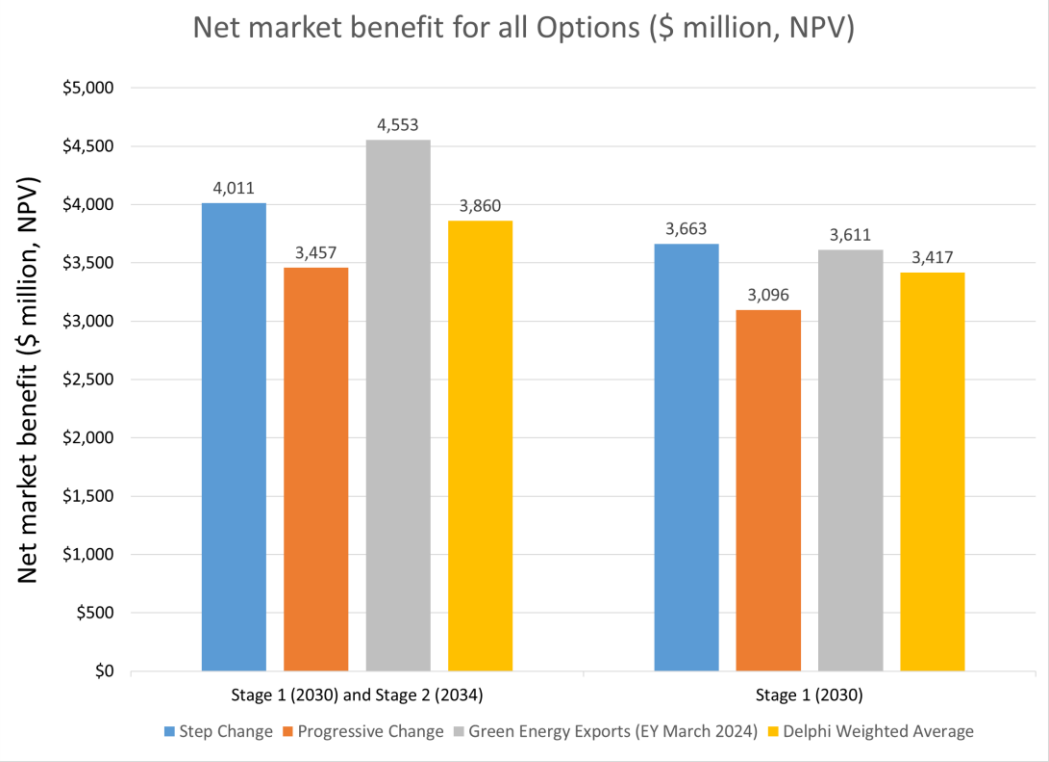
Table 1 shows EY's modelled gross market benefits for a 750MW and 1500 MW link for the Step Change and Progressive Change scenarios using the updated information described above. It also shows the gross benefits for the Green Energy scenario, which adopts the value assessed in the RIT-T update in April 2024, updated for real 2024 prices and expressed as a present value discounted to 2025.

Table 1: EY July 2025 gross market benefits for Project Marinus, $million, real June 2024, discounted to July 2025

Marinus Link Capacity	Timing	Step Change	Progressive Change	Green Energy Exports	Delphi weighted average
1,500 MW	2030 & 2034	6,601	6,026	7,321	6,468
750 MW	2030	5,591	5,002	5,666	5,356

Figure 1 below presents the net market benefit for Marinus Link that is derived from the EY gross market benefits and MLPL's project cost estimates to be submitted to AEMO for the Project Marinus feedback loop request[2]. The total project cost used in the net market benefit figure below has been reduced by approximately $534m of sunk costs in accordance with the AER's Cost Benefit Analysis Guidelines.

Figure 1: Project Marinus net market benefits by scenario, for Stage 1 + 2 and Stage 1 only, real June 2023



Source: Marinus Link

2

Figure 1 shows that Marinus Link provides material net market benefits across all scenarios in both the 1500 MW and 750 MW options. It also shows that the 1500 MW option delivers higher net market benefits across each of the three scenarios. The Delphi weighted average, which is AEMO's adopted weighting of the three scenarios, shows that the second cable provides an incremental net market benefits of $443 million[3] compared to the single cable option.

EY's previous report that accompanied the RIT-T update in April 2024 included sensitivity analysis to test the robustness of the gross benefit assessment. At that time, EY's sensitivity analysis indicated that there were highly credible circumstances that would significantly enhance the economic case for the two cable option. In particular, the sensitivity analysis showed that a reduction in the hydrogen load assumptions in Tasmania would further enhance the case for Project Marinus. This RIT-T update confirms that these sensitivities were appropriate, as AEMO's draft 2025 IASR has now modified its assumptions regarding hydrogen load.

Given the strength of the findings in this RIT-T update, MLPL does not consider it necessary to conduct further sensitivity analysis of the kind conducted in April 2024. In making this assessment, MLPL notes that the modelling approach is conservative as it excludes the benefits of emission reductions. In addition, the costs adopted for Project Marinus for modelling purposes do not exclude cancellation fees even though these costs are unavoidable and, therefore, should be regarded as a sunk cost for modelling purposes. The exclusion of these costs would further increase the estimated net market benefits.

Conclusions

The outcomes of EY's updated market modelling, combined with the latest project cost information confirms that the preferred option remains unchanged from the PACR and the RIT-T update in April 2024.

As explained in the PACR, the timing of Stage 2 will depend on future ISPs which will be informed by actual events and new information that will emerge with the passage of time. It is not necessary to commit now to a specific timeframe for the construction of Stage 2. Instead, the project plan is to proceed with Stage 1 as soon as practicable and to undertake the required work to facilitate the construction and commissioning of Stage 2 in accordance with the optimal timeframe which will be informed by future ISPs.

Next steps

We intend to publish and seek stakeholder feedback on EY's report and the attached RIT-T update - Summary Report. In the meantime, if you have any queries on this letter or attachments, please contact me at Prajit.Parameswar@marinuslink.com.au at your earliest convenience.

Yours sincerely,

Prajit Parameswar
Chief Commercial Officer

---

[3] The incremental net market benefit of $443 million is $3,860 million for two cables minus $3,417 million for a single cable, assuming the Delphi weighted average.

Marinus Link Pty Ltd
PO Box 721, Hobart 7001
Tasmania
Australia 7009

RIT-T update - Summary Report

This summary report provides an update of the RIT-T, which was initially completed for Project Marinus with the publication of the Project Assessment Conclusions Report (**PACR**) in June 2021. This is the second RIT-T update, with an earlier update published in April 2024.

For Project Marinus, the Rules require us to assess whether there has been a material change in circumstances which, in our reasonable opinion, means that the preferred option identified in the PACR is no longer the preferred option.[4] The purpose of this RIT-T update, therefore, is to enable us to form an opinion as to whether the preferred option remains unchanged or not. The RIT-T update is also being published to support our revised Revenue Proposal, which is being submitted to the Australian Energy Regulator (**AER**) on 15 July 2025.

The conclusion to draw from this RIT-T update is clear – the preferred option, which is to proceed with Stage 1 as soon as practicable and to keep the timing of Stage 2 under review, remains unchanged from the PACR and the RIT-T update published in April 2024. The timing of Stages 1 and 2 is expected to be slightly later than indicated in the PACR, with the timing of Stage 2 continuing to be informed by AEMO's future ISPs. While the timing has changed slightly from the PACR, the preferred option has not.

We are seeking stakeholder feedback on this RIT-T Summary Report and the accompanying EY report, which provides detailed information on the market modelling. Submissions should be provided to:

Ben Wagner
Head of Customer Projects
Marinus Link Pty Ltd
PO Box 721, Hobart TAS 7001
Email: team@marinuslink.com.au

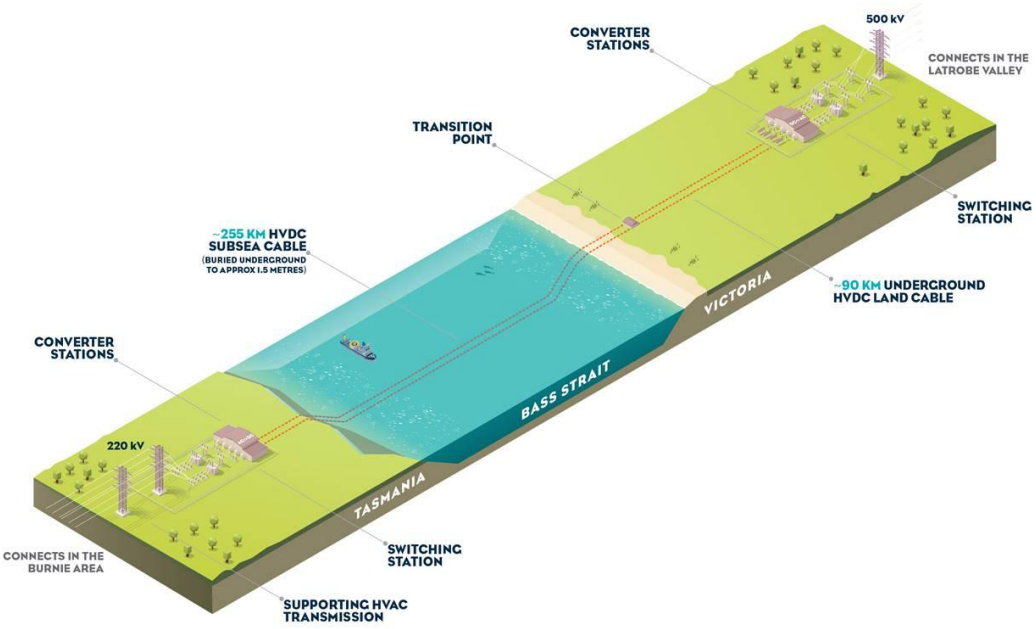
Submissions should be received by 8 August 2025.

4 National Electricity Rules, clause 5.16A.4(n).

1. Project background

Project Marinus comprises Marinus Link and the North West transmission Developments (**NWTD**). Marinus Link involves approximately 255 kilometres of undersea High Voltage Direct Current (**HVDC**) cable and approximately 90 kilometres of underground HVDC cable in Victoria. It also includes converter stations in Tasmania and Victoria, as shown in Figure 1.

Figure 1: Marinus Link overview



Marinus Link will be owned and operated by MLPL, which has transitioned to three-part equity ownership between the Australian Government (49%), the Victorian Government (33.3%) and the Tasmanian Government (17.7%).

The other component of Project Marinus is the North West Transmission Developments (**NWTD**), which is being progressed by TasNetworks. The NWTD include new and upgraded overhead transmission lines that will link Cressy, Burnie, Sheffield, Staverton, Hampshire, and East Cam. These new and upgraded transmission lines, shown in Figure 2, are required to support the interconnector capacity to be provided by Marinus Link.

Figure 2: North West Transmission Developments

In June 2021, the PACR reached the following conclusion regarding the preferred option for Project Marinus:[5]

> "In accordance with the RIT-T, the preferred option is a 1500 MW HVDC interconnector, comprising two 750 MW HVDC interconnector stages, plus associated AC network upgrades for each stage."

In terms of timing, the PACR explained that the optimal timing would be determined by AEMO's 2022 ISP and subsequent ISPs:[6]

> "In relation to project timing, TasNetworks will proceed with the early works required for Project Marinus to be able to achieve a final investment decision in 2023-24 and subsequent commissioning of Stage 1 from as early as 2027 and Stage 2 by 2029. The actual timing of each stage will be determined by the 2022 and subsequent ISPs and AEMO's assessment of the proposed project in accordance with the feedback loop (as required by clause 5.16A.5(b) of the Rules) and its optimal development path at that time."

2. Why Project Marinus?

During the RIT-T process, stakeholders asked us to go beyond the formal regulatory requirements to explain the sources of benefits that Project Marinus would unlock. As part of this explanation, stakeholders specifically wanted to understand why Project Marinus is preferred to solely increasing battery capacity on mainland Australia, and how Project Marinus interacts with the various policy and project announcements in other NEM regions.

---

5 TasNetworks, Project Assessment Conclusions Report – Project Marinus, June 2021, page 77.

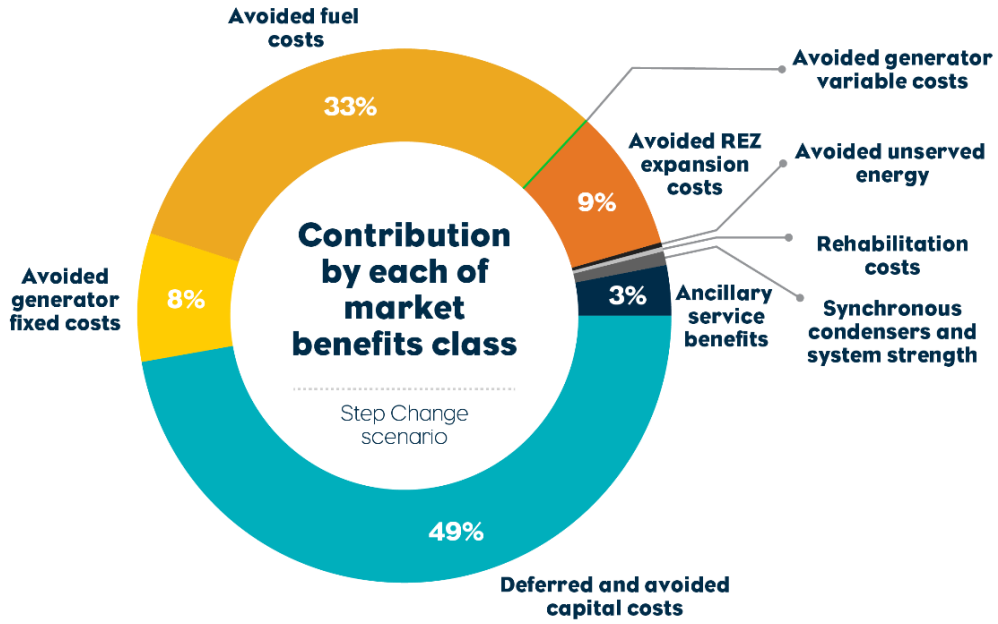
6 Ibid, page 78.

To address these questions, we provided extensive information in the PACR to explain how Project Marinus will deliver benefits to the NEM. In summary, we explained that Stage 1 of Project Marinus (i.e., the commissioning of the first 750 MW link) will enable customers in the NEM to benefit from cost-effective wind resources, together with the spare capacity that already exists in Tasmania's hydro system. The second 750 MW link (Stage 2) was expected to be in service at least two years after Stage 1, at which time our modelling showed that Australian mainland NEM regions would otherwise require additional peaking gas-fired generation and/or deep storage. By staging Project Marinus, we explained that investment in lower cost storage capacity and wind generation in Tasmania is expected to provide savings to the mainland NEM by displacing more expensive alternatives.

Our benefit assessment showed that strategic transmission investment and long-duration energy storage have a key role to play in addressing the risk associated with 'drought' in Variable Renewable Energy (**VRE**). We also explained that the system modelling understated the benefits of interconnection and deep storage to manage variability and VRE drought. This is because the model employs simplifying assumptions, such as perfect foresight, to manage the computationally intensive nature of the required system analysis. In addition, due to the computational requirements of the ISP and ISP-like long term modelling studies, single (or relatively few) weather traces are used for demand, wind and solar. This single future view tends to understate the size and nature of renewable energy droughts.

The figure below shows the breakdown of the benefits from Project Marinus at the time of the PACR, with the principal sources of benefit being capital expenditure and fuel cost savings. As explained later, while there are extensive changes in the input assumptions and scenarios, the principal sources of benefit provided by Project Marinus remain unchanged.

Figure 3: Breakdown of project benefits, as presented in the PACR[7]



7 Ibid, page 78.

3. AEMO's 2022 and 2024 ISPs

Following the publication of the PACR, AEMO re-examined the case for Project Marinus in its 2022 ISP. At that time, AEMO's cost-benefit assessment found that the economic case for Project Marinus had strengthened since its 2020 ISP:[8]

> "Marinus Link is a single actionable ISP project, without staging between the first and second cables. The optimal delivery in Step Change is 2029-30 for cable 1, and 2031-32 for cable 2. Any delay reduces net market benefits in all scenarios but the unlikely Slow Change."

In relation to actionable ISP projects more generally, AEMO's 2022 ISP highlighted their urgent need in the following terms:[9]

> "The schedule of actionable projects lists the earliest practical delivery time AEMO has been advised by the project proponents. Earlier delivery would either be more optimal to deliver benefits to consumers or would provide valuable insurance and guard against other potential delays. All actionable projects should therefore progress as urgently as possible, and state and Commonwealth mechanisms which support earlier progression of projects could deliver earlier benefits or cost savings."

In June 2024, AEMO published its 2024 ISP which again reconfirmed that Project Marinus remains actionable. AEMO's direction that Marinus Link continues to be an actionable ISP project provides strong support for progressing this project. MLPL notes that AEMO's draft 2026 ISP is expected to be published in December 2025.

4. New information since the publication of the PACR

The costs of delivering Project Marinus have increased markedly since the expenditure forecasts included in the PACR were developed. International events, such as the war in Ukraine, and emission reduction targets have created an unprecedented global demand for interconnector capacity.

In our RIT-T update in April 2024, we noted that the cost increases experienced by Project Marinus since the PACR are aligned with other major transmission projects, as highlighted in AEMO's 2023 Transmission Expansion Options Report.[10] AEMO has provided further commentary on the costs of transmission investments in its Draft 2025 Electricity Network Options Report.[11]

During the 'early works' phase of the project, we have worked closely with prospective service providers to obtain cost estimates that reflect the changed market conditions. This work has continued since our Revenue Proposal was published in November 2024 and our updated cost estimates, which are consistent with those provided in our November 2024 submission, are provided in Section 6.

---

8 AEMO, 2022 Integrated System Plan June 2022, page 73. It should be noted that AEMO's references to Marinus Link are references to Project Marinus, as defined in this Application.

9 AEMO, 2022 Integrated System Plan June 2022, page 18.

10 AEMO, 2023 Transmission Expansion Options Report, September 2023.

11 AEMO, Draft 2025 Network Options Report, May 2025, page 8.

In addition to the increase in project costs since the PACR, there have been significant changes to AEMO's inputs, assumptions and scenarios which are detailed in its draft 2025 IASR. The three scenarios in the draft 2025 IASR are: [12]

- **Green Energy**– Australia's energy transition in this scenario is commensurate with global actions underway to limit temperature increases to 1.5°C. Consumers in this scenario continue to invest in CER, with the greatest relative uptake of these assets, and the greatest relative acceptance of coordination opportunities. This scenario will examine two variants, Green Energy Exports or Green Energy Industries.

  Compared to the 2023 Green Energy Exports scenario, NEM-connected hydrogen production is lower reflecting that the scale of hydrogen developments remains uncertain and the opportunity for embedded electricity supply is expected to reduce grid investment. The two scenario variants include, or exclude, some hydrogen export opportunities. AEMO explains that it is likely to examine one of the variants as one of the three scenarios in its 2026 ISP, and explore the investment impacts of the other variant as a sensitivity.

- **Step Change** – Decarbonisation efforts that support Australia's share in limiting global temperature rise to below 2˚C compared to pre-industrial levels. This scenario uses significant transport electrification, as well as developing hydrogen production or low emissions alternatives to support domestic industrial loads. This is a refinement of the 2024 AEMO ISP Step Change scenario.

  Compared to the 2023 Step Change scenario, while consumer investment in the energy transition remains strong (with energy efficiency and electrification investments, as well as aggregators of consumer resources, being a key part of the transition), consumers are tentative to share control and coordinate the operation of their consumer energy devices through a third party such as their electricity retailer.

- **Progressive Change** – meets Australia's current Paris Agreement commitment of 43% emissions reduction by 2030 and net zero emissions by 2050. This scenario has more challenging economic conditions, higher relative technology costs and more supply chain challenges relative to other scenarios.

The table below summarises the decarbonisation targets, key demand drivers, technological improvements and other key parameters for each of the scenarios, as set out in the draft 2025 IASR.

[12] For further details, please refer to AEMO, draft 2025 Inputs, Assumptions and Scenarios Report, December 2024, chapter 2.

Table 1: AEMO's key parameters for each scenario, draft 2025 IASR[13]

Parameter	*Green Energy* [A]	*Step Change*	*Progressive Change*
National decarbonisation targets	At least 43% emissions reduction by 2030. Net zero by 2050	At least 43% emissions reduction by 2030. Net zero by 2050	At least 43% emissions reduction by 2030. Net zero by 2050
Global economic growth and policy coordination	High economic growth, stronger coordination	Moderate economic growth, stronger coordination	Slower economic growth, lesser coordination
Australian economic and demographic drivers	Higher, with near-term economic growth impacted somewhat by current economic challenges	Moderate economic growth, with near-term economic growth impacted by current economic challenges	Lower
Electrification	Higher electrification efforts to meet aggressive emissions reduction objectives, with faster pace of adoption	High electrification to meet emissions reduction commitments, with pace of adoption reflecting economic conditions	Electrification is tailored to meet existing emissions reduction commitments, with slower adoption given weaker economic circumstances
Emerging commercial loads	Emerging sectors such as data centres match opportunities associated with higher domestic economic drivers	Emerging sectors such as data centres match opportunities associated with moderate domestic economic drivers	Emerging sectors such as data centres experience lower growth as weaker economic circumstances limit technology uptake
Coordination of CER (VPP and V2G)	High long-term coordination, with faster acceptance of coordination	Moderate long-term coordination, with gradual acceptance of coordination	Low long-term coordination, with gradual acceptance of coordination
Energy efficiency	Higher	High	Moderate
Hydrogen use and availability	High production for domestic industries, with moderate exports in the short term, and high exports in the longer term	Moderate-low production for domestic use, with minimal export hydrogen	Low production for domestic use, with no export hydrogen
Industrial load closures	No specific load closures	No specific load closures	Weak economic conditions provide challenging commercial conditions, resulting in load closures across key commercial and industrial facilities
Demand side participation uptake	Higher	Moderate	Lower
CER investments (batteries, PV and EVs)	Higher	High	Lower

13 AEMO, draft 2025 Inputs, Assumptions and Scenarios Report, December 2024, Table 2, page 20.

Parameter	*Green Energy* [A]	*Step Change*	*Progressive Change*
Renewable gas blending in gas distribution network [B]	Up to 10% (hydrogen), with unlimited blending opportunity for biomethane and other renewable gases	Up to 10% (hydrogen), with unlimited blending opportunity for biomethane and other renewable gases	Up to 10% (hydrogen), with unlimited blending opportunity for biomethane and other renewable gases
Potential for supply chain limitations affecting demand forecasts	Low	Moderate	High
Global/domestic temperature settings and outcomes [C]	Applies Representative Concentration Pathway (RCP) 1.9 where relevant, consistent with a global temperature rise of ~ 1.5°C by 2100	Applies RCP 2.6 where relevant, consistent with a global temperature rise of ~ 1.8°C by 2100	Applies Representative Concentration Pathway (RCP) 4.5 where relevant, consistent with a global temperature rise of ~ 2.6°C by 2100
International Energy Agency (IEA) 2024 World Energy Outlook scenario alignment	*Net Zero Emissions by 2050* (NZE)	*Announced Pledges Scenario* (APS)	*Stated Policies Scenario* (STEPS)

As noted in the RIT-T update in April 2024, these scenarios are significantly different from the five scenarios developed by AEMO in its 2020 ISP, which were adopted in the PACR for Project Marinus in June 2021. Furthermore, the inputs and assumptions developed by AEMO in its draft 2025 IASR have changed from the draft 2021 IASR that were adopted in the PACR, being the latest available data at that time. In addition, there have also been numerous policy and market developments, including the timing of coal plant closures and new generation/storage projects, that were not known at the time of the PACR.

In this RIT-T update, MLPL engaged EY to model the gross market benefits for Project Marinus using the draft 2025 IASR. As noted in our RIT-T update in April 2024, EY are best equipped to model the gross market benefits noting that:

- EY has undertaken the previous market modelling for Project Marinus, including in relation to the PACR, using the same market expansion model. This ensures continuity in the modelling approach being applied to inform the assessment of whether the preferred option in the PACR remains unchanged.
- EY's market expansion model is recognised amongst industry as being robust and technology neutral. It examines the total integrated system costs of meeting customers' future electricity needs and assesses the benefits of the project by selecting lowest cost combination of generation, storage, demand-side response and transmission investments. In this way, the model does not favour any type of technology or response.

5. EY's updated market modelling – changes to scenarios, inputs and assumptions

Table 2 shows the key input assumptions adopted by EY for each of the two modelling scenarios.

Table 2: Summary of EY's key input assumptions for modelled scenarios [14]

Key drivers input parameter	Scenario	
	Step Change	Progressive Change
Underlying consumption	Hydrogen demand based on Draft 2025 IASR v7.2 – Step Change 2024 ESOO – Step Change	Hydrogen demand based on Draft 2025 IASR v7.2 – Progressive Change 2024 ESOO – Progressive Change
Committed and anticipated generation	Committed and anticipated generators from the 2023 IASR Assumptions Workbook	
New entrant capital cost and FOM for wind solar PV, SAT, OCGT, CCGT, PHES large-scale batteries	Draft 2025 IASR assumptions Workbook - Step Change	Draft 2025 IASR assumptions Workbook – Progressive Change
Retirements of coal-fired power stations	April 2025 Generation Information for announced retirements or earlier if economic or driven by decarbonisation objectives. QEJP coal retirements have not been considered in the modelling scenarios.	
Gas fuel price	Draft 2025 IASR Assumptions Workbook – Step Change	Draft 2025 IASR Assumptions Workbook – Progressive Change
Coal fuel price	Draft 2025 IASR Assumptions Workbook – Step Change	Draft 2025 IASR Assumptions Workbook – Progressive Change
NEM carbon budget to 2030	Draft 2025 IASR Assumptions Workbook – Step Change: 418 mega ton (Mt) CO2-e 2026-27 to 2029-30	Draft 2025 IASR Assumptions Workbook – Progressive Change: 418 Mt CO2-e 2026-27 to 2029-30
NEM long- term temperature-linked carbon budget	Draft 2025 IASR Assumptions Workbook – Step Change 586 Mt CO2- e from 2026-27 to 2049-50	Draft 2025 IASR Assumptions Workbook – Progressive Change 797 Mt CO2-e from 2026-27 to 2049-50

[14] EY, Gross market benefit assessment of Marinus Link, July 2025, Table 3.

Key drivers input parameter	Scenario	
	Step Change	Progressive Change
Federal renewable energy target	82% share of renewable generation by 2029.30 Consistent with the Draft 2025 IASR Assumptions Workbook v7.2	
Victoria policy	Victoria Renewable Energy Target (**VRET**) – 40% by 2025, 65% by 2030 and 95% by 2035 Victoria Energy Storage Target – 2.6 GW by 2030 and 6.3 GW by 2035 Victoria Offshore Wind Target – 2 GW by 2032, 4 GW by 2035 and 9 GW by 2040 Consistent with Draft 2025 IASR Assumptions Workbook v7.2	
Queensland Renewable Energy Target (**QRET**)	50% by 2029-30, 70% by 2031-32 and 80% by 2034-35 Consistent with Draft 2025 IASR Assumptions Workbook v7.2	
Tasmanian Renewable Energy Target (**TRET**)	100% by 2022, linear trajectory from the mid-2020s to 150% available renewable generation by 2030 and 200% by 2040 as a percentage of 2020 demand in Tasmania. The trajectory can be exceeded if part of the least cost solution. Consistent with Draft 2025 IASR Assumptions Workbook v7.2	
NSW Electricity Infrastructure Roadmap	NSW Roadmap, with at least the same amount of electricity as 8 GW in New England, 3 GW in the Central West Orana (**CWO**) REZ and 1 GW of additional capacity and 2 GW of long duration storage (8 hrs or more) by 2029-30. Consistent with 2024 ISP	
Victorian SIPS	300 MW/450 MWh, 250 MW for SIPS service during summer. In the summer months the remaining 50 MW can be deployed in the market on a commercial basis, in the winter months the full capacity is available. From April 2032 the full capacity is available to the market. Consistent with Draft 2025 IASR Assumptions Workbook v7.2	
EnergyConnect	Draft 2025 IASR Assumptions Workbook v7.2 Commissioned by July 2027.	
Western Renewables Link	Transmission Augmentation Information December 2024. Commissioned by July 2027.	
HumeLink	2024 ISP commissioned by July 2030	

Key drivers input parameter	Scenario	
	Step Change	Progressive Change
New-England REZ Transmission	Transmission Augmentation Information December 202428. Earliest in service date advised by proponent: • New England REZ Transmission Link 1 commissioned by 1 July 2032 • New England REZ Transmission Link 2 commissioned by 1 January 2034	
Marinus Link	As per MLPL assumptions. The first stage of Marinus Link commissioned by 1 January 2030 and the second stage of Marinus Link commissioned by 1 July 2034.	
QNI Connect	2024 ISP commissioned by July 2034	
VNI West	In line with Transmission Augmentation Information December 2024. Commissioned by December 2029	
Discount rate	7% real, pre tax	

EY also adopted input assumptions to align with the RIT-T update in April 2024, including:

- Group Constraints with intraconnectors: NQ1, NQ2, NQ3, MN1 and NSA1
- Committed and anticipated generators
- VOM for existing and new
- entrant generators
- NSW roadmap trajectory
- REZ capacity factors
- Hydrogen load dispatch.

Given the release of AEMO's draft 2025 IASR in late February 2025, the complexity of market modelling and the need for MLPL to submit its revised Revenue Proposal by 15 July 2025, some of the less material inputs and assumptions from AEMO's draft 2025 IASR could not be included by EY in the modelling.

For both scenarios, the following four additional changes have been adopted consistent with the AEMO Draft 2025 IASR:

- A 100 MW expansion of West Coast power scheme's capacities.
- A 150 MW upgrade of Tarraleah's capacity and a 90 MW upgrade of Gordon 1 capacity.

- A reduced REZ transmission expansion cost applied for the Central Highlands REZ, after Marinus Link stage 1 is commissioned. The assumed linearised cost decreases from $0.63m/MW to $0.32m/MW.

- A reduced REZ transmission expansion cost applied for the North West Tasmania REZ, after Marinus Link stage 1 is commissioned. The assumed linearised cost decreases from $0.38m/MW to $0.035m/MW.

6. Outcomes from EY's updated market modelling

EY's market model identifies the least cost solution for meeting forecast customers' electricity needs over the 25-year period from 2026-27 to 2050-51. The model is computationally complex as the analysis is conducted on an hourly basis; allows for the commissioning of all types of generation and storage capacity; and the withdrawal of existing generation on a least-cost basis.

EY's model estimates the gross benefits of Project Marinus for each of the scenarios adopted in the draft 2025 IASR by conducting a 'with and without' test. The gross benefit attributed to Project Marinus is the difference in the total resource costs 'with and without' Project Marinus, expressed in present value terms. We asked EY to examine the gross benefits for Project Marinus, assuming that the first cable is commissioned in 2030 and the second cable is commission in 2034. This is a simplified approach, but one that is able to verify whether the preferred option remains unchanged from the PACR.

In terms of cable capacity, as noted in our RIT-T update in April 2024, our discussions with prospective service providers have confirmed the conclusion in the PACR that the optimal incremental cable capacity is 750 MW. Accordingly, we did not ask EY to model the gross project benefits for different cable capacities. In making this decision, we also recognised that a 600 MW cable, for example, could not be delivered within the current project timeframes as the tender process and negotiations would need to be restarted given the materiality of the change. Accordingly, we concluded that the 600 MW and 1200 MW interconnector options considered in the PACR are no longer credible.

Table 3 shows the outcomes of gross market modelling results for a 750MW and 1500 MW link, using the updated information described above.

Table 3: Updated gross market benefits for Marinus Link, $Million, Real June 2024, discounted to July 2025

Marinus Link Capacity	Timing	Step Change	Progressive Change	Green Energy Exports	Delphi weighted average
1,500 MW	2030 & 2034	6,601	6,026	7,321	6,468
750 MW	2030	5,591	5,002	5,666	5,356

In addition to providing the gross benefit calculation, during our consultation process with MLPL's Consumer Advisory Panel (**CAP**), the CAP asked MLPL to explain the sources of benefits that Project Marinus is expected to provide. A detailed explanation of the benefits are provided in the EY report. At a high level, however, these benefits from Project Marinus comprise:

- **Capital expenditure savings**. By better connecting Tasmania with the mainland, Marinus Link is forecast to unlock the potential for high quality Tasmanian wind, new entry pumped hydro and

existing conventional Tasmanian hydroelectric power stations. Without Marinus Link, there is a requirement for higher cost renewable, storage and gas capacity on the mainland.

- **Fuel cost savings**. Marinus Link is forecast to provide fuel cost savings on the mainland by enabling better access to existing Tasmanian hydroelectric generators, as a lower cost alternative to the construction and operation of dispatchable gas on the mainland.

7. Treatment of emission reductions

An important change since the RIT-T update in April 2024 is that EY has modelled forecast emissions benefits that arise from avoided thermal generation unlocked by Project Marinus. EY has valued emissions savings in accordance with the AER's Valuing emissions reduction guidance[15] as a post-process to the optimisation modelling. While MLPL sets out further details on these benefits below, we have excluded them from the net market benefit assessment for the purposes of this RIT-T update to provide confidence to stakeholders that a conservative approach has been adopted.

Emissions benefits vary between scenarios due to differences in carbon budget and demand parameters. Table 4 shows EY's forecast gross emissions benefits for Project Marinus in the Step Change and Progressive Change scenarios in real 2024 prices and expressed as a present value discounted to 2025. Since emissions benefits were not assessed in EY's March 2024 report these benefits are not available for the Green Energy Exports scenario.

Table 4: EY July 2025 emissions benefits for Project Marinus, $million, real June 2024, discounted to July 2025

Marinus Link Capacity	Timing	Step Change	Progressive Change
1,500 MW	2030 & 2034	104	3,835
750 MW	2030	71	2,566

The average emissions benefits weighted across two scenarios is presented in Table 5 below.

Table 5: Weighted average emissions benefits for Project Marinus, $million, real June 2023, discounted to July 2025

Marinus Link Capacity	Emissions Benefits
1,500 MW	1,595
750 MW	1,068

As already noted, the inclusion of these benefits would increase the estimated net market benefits, which are explained in the next section. Further information on the emission reduction benefits, the scenarios and the gross benefit assessment is provided in EY's report, which is published alongside this report.

15 AER, Valuing emissions reduction AER guidance and explanatory statement, May 2024.

8. Net market benefit assessment

To calculate the net market benefit for a project option, the costs of that option must be deducted from the gross benefits, expressed in present value terms. The updated costs for Project Marinus reflect the latest available information from our 'early works' phase of the project, which commenced in July 2021. A key purpose of 'early works' is to obtain a better estimate of the project costs through extensive effort on the planning activities, including:

- Landowner and community engagement programs, including Traditional Owners, and stakeholder relations;
- Land and easement acquisition;
- Environmental impact assessments;
- Technical designs and specifications; and
- Procurement strategy and execution.

The costs adopted in this RIT-T update are the total costs of the project over the study period, which is shorter than the project life, and varies depending on the assumed timing of cable 2. It should be noted that the cost estimates used in the net market benefit assessment ensure that project costs and benefits are consistently measured over the same study period.[26]

The total project cost estimates used in this RIT-T update are set out below, expressed in June 2023 prices:

- The costs for Project Marinus are $5,035 million for the first stage (which includes facilitation for stage 2), and $2,535 million for completion of the second stage.
- The NWTD component is $1,144 million for the first stage, and $525 million for the second stage.

MLPL and TasNetworks will continue to refine the cost estimates as new information has become available from the tender process. This cost information, less expenditure already incurred, known as 'sunk costs', will be provided to AEMO through the feedback loop process, in accordance with clause 5.16A.5 of the Rules.

Figure 4 below shows the net market benefit for Project Marinus, assuming that the first cable is delivered in 2030 and the second cable in 2034. It presents the results for a single cable, i.e., a 750 MW option, and for two cables, i.e., a 1500 MW option across each of the three scenarios, noting that the Green Energy Exports scenario reflects the outcome from the RIT-T update in April 2024. The figure also shows the Delphi

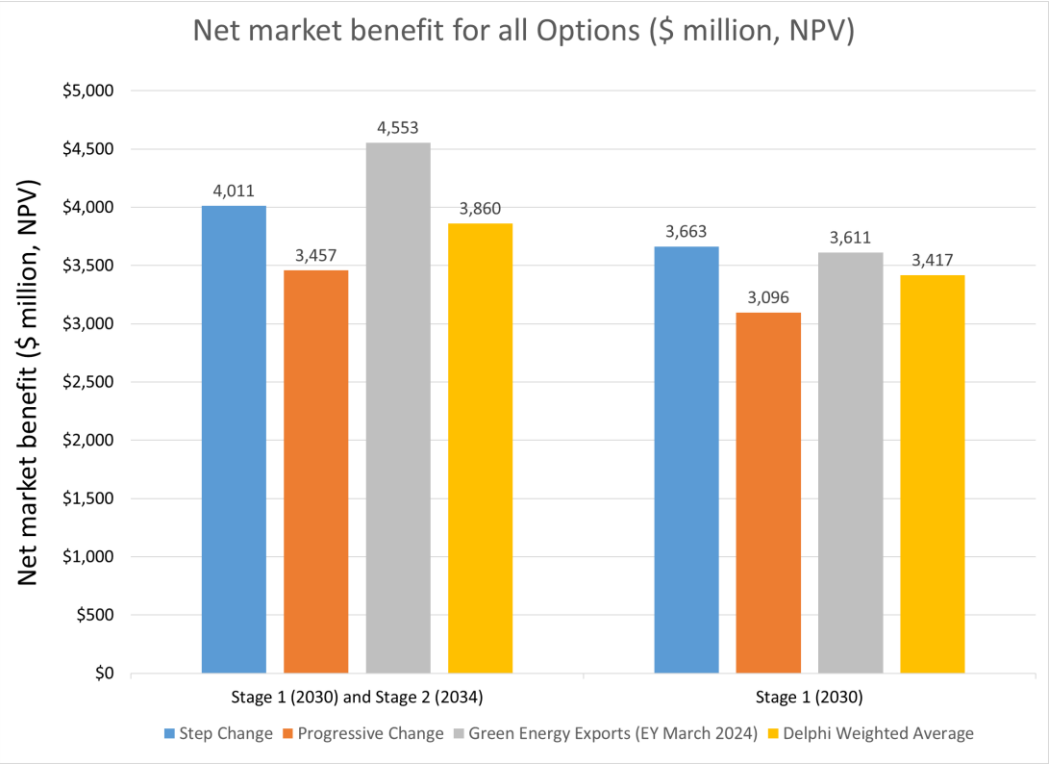
---

26 As the study period is truncated (i.e., it is shorter than the life of the project), it is necessary to capture an appropriate portion of the total project costs to calculate the net economic benefit. In the case of Project Marinus, this approach is likely to understate the net economic benefit over the life of the project because the annual benefits exceed the annual costs towards the end of the study period. On the reasonable assumption that this situation persists beyond the study period, the net economic benefit over the life of the project will exceed the net economic benefit calculated over the truncated study period.

weighted average, which reflects the views of a panel of experts on the likelihood of the various scenarios eventuating.

The total project cost used in the net market benefit figure below has been reduced by approximately $534m of sunk costs in accordance with the AER's Cost Benefit Analysis Guidelines. As already noted, the net market benefits exclude the expected benefits from emission reductions, which would further enhance the economic case for Project Marinus (and for both stages).

Figure 4: Project Marinus net market benefits by scenario, for Stage 1 + 2 and Stage 1 only, real June 2023, discounted to July 2025



Source: Marinus Link

Figure 4 shows that Marinus Link provides material net market benefit across all scenarios in both the 1500 MW and 750 MW options. The Delphi weighted average shows that the second cable provides an incremental net market benefit of $443 million[16] compared to the single cable option. It follows that the two cable option is superior to a single cable. At this stage, however, it is important to note that no decision has been made to proceed with the second cable.

EY's previous report that accompanied the RIT-T update in April 2024 included a range of sensitivity analysis to test the robustness of the gross benefit assessment. EY's sensitivity analysis explained that there are highly credible circumstances that would significantly enhance the economic case for the two cable option, at the time of the RIT-T update in April 2024. In particular, EY's sensitivity analysis showed that a reduction in the hydrogen load assumptions in Tasmania would substantially enhance the case for Project Marinus.

16 The incremental net economic benefit of $443 million is $3,860 million for two cables minus $3,417 million for a single cable, assuming the Delphi weighted average.

Subsequently, AEMO's draft 2025 IASR has modified its assumptions regarding hydrogen load as anticipated by EY.

Given the strength of the findings in this RIT-T update, MLPL does not consider it necessary to conduct further sensitivity analysis. In making this assessment, MLPL notes that the analysis presented does not include the value of emission reduction which would further increase the net market benefits. In addition, the modelled costs for Project Marinus do not exclude cancellation fees even though these costs are unavoidable and, therefore, should be regarded as a sunk cost for modelling purposes. Accordingly, the estimated net market benefits are considered conservative.

9. Conclusion and next steps

The conclusion to draw from this RIT-T update is clear – the preferred option, which is to proceed with the first cable as soon as practicable and to keep the timing of the second cable under review, remains unchanged from the PACR in June 2021 and the RIT-T update in April 2024. The timing of the first and second cables is slightly later than originally indicated in the PACR, with the timing of the second cable continuing to be informed by AEMO's 2026 ISP and subsequent ISPs. While the timing has changed slightly, the preferred option has not.