

29 April 2021

Tasmanian Climate Change Office
Department of Premier and Cabinet
GPO Box 123, HOBART TAS 7001
Via email: climatechange@dpac.tas.gov.au

Dear Director,

RE: Climate Change Action Plan

TasNetworks welcomes the opportunity to make a submission to the Tasmanian Climate Change Office (TCCO) on the *Climate Change Action Plan* (the Plan).

TasNetworks, the Tasmanian jurisdictional planner and operator of Tasmania's transmission network, agrees Tasmania has the opportunity to position itself as a climate change leader at both the national and global level. Tasmania is already 100% self-sufficient with renewable energy generation and, with Tasmania's world leading water and wind resources, Tasmania is well-placed to set a more ambitious target than net zero emissions by 2050. Tasmania also has very high potential to become a preferred site - at a national and global level - for green industry development including energy, manufacturing, transport, and agriculture.

Many ageing coal-fired generators have recently retired, existing coal-fired generators are forecast to begin closing from the early 2020s and all are projected to close before 2058. Progressing Marinus Link and its supporting transmission in a timely way will support ambitious net zero emissions targets not only in Tasmania but also on mainland Australia, by supporting stability, reliability and energy affordability as the NEM evolves from centralised coal-fired power generation to a highly diverse system dominated by renewable energy. Marinus Link has been named by the Australian Energy Market Operator (AEMO) as a critical and actionable project, which needs to continue through design and approvals processes so that it is ready for service as soon as the market requires it.

In the attachment to this letter (*Attachment A*) we provide feedback in relation to a number of matters, which we hope will assist TCCO's development of the Plan for coming years. These matters include:

- The role for the electricity sector in lowering Tasmania's emissions in the near-term;
- The role for interconnection, firming and long duration storage services to support energy security, reliability and affordability in a changing climate;
- Skills, workforce, and industry development for a lower carbon economy;
- The role for electric vehicles in supporting the transport industry transition; and
- Tasmania's hydrogen opportunity.

For more information or to discuss the views expressed in this submission, please contact Government Engagement Specialist, Erin Littlewood.

Yours faithfully

A handwritten signature in black ink that reads "Bess Clark". The signature is written in a cursive style with a large, looped initial "B".

Bess Clark
General Manager Project Marinus

ATTACHMENT A

The transmission opportunity

The electricity sector presents a key opportunity to lower Tasmania's emissions in the near-term. To achieve net zero emissions by 2050 or sooner, significant reduction in emissions needs to be made in this decade. The electricity sector is well-placed to do the 'heavy lifting' now as renewable technology and clean firming services are already available. Much of the national electricity grid was designed to deliver energy to customers in large load centres from coal-fired generators. As the generation mix changes, the transmission network needs to be modified to improve capacity, manage local congestion, and enable the benefits of significant renewable energy generation and storage resources in Tasmania, and in other parts of the National Electricity Market (NEM), to be efficiently shared.

Investment in transmission will support Tasmania's ambition to lower emissions and transition smoothly to a lower carbon economy. As existing transmission assets are nearly at capacity, North West Tasmania's electricity transmission network will require both the augmentation of existing corridors and the establishment of new corridors to unlock the energy potential identified by AEMO in the North West and Central Tasmanian Renewable Energy Zones, facilitate connection of additional energy generation and storage, and to support energy flows to and from Marinus Link. TasNetworks' North West Strategic Transmission Plan proposes a collector network for multiple projects from multiple parties to minimise the amount of transmission infrastructure that will ultimately be required to achieve these objectives. This will require significant investment in the region and proposed transmission developments for North West Tasmania – in the order of \$600 million (\$2020).

Further interconnection, firming and long duration storage services

Marinus Link, the proposed underground and undersea high voltage direct current interconnector between Victoria and Tasmania, presents a significant opportunity for Tasmania to achieve lower emissions on-island and facilitate more ambitious emissions targets across the NEM.

Our findings show that Marinus Link and supporting North West Transmission Developments will support increased variable renewable energy generation across the NEM and help to reduce the issues of energy reliability and security, and cost impacts, associated with the NEM's transition away from coal-fired generation by:

- providing access to firming services needed to support the pipeline of renewable energy projects proposed across the NEM through existing hydro resources and the suite of Battery of the Nation pumped hydro energy storage project proposals;
- enhancing access to Tasmania's complementary wind profile, and thereby improve energy reliability and stability for the mainland grid during the peak summer period;
- supporting NEM states' capacity to achieve their net zero greenhouse gas emissions targets; and

- exerting downward pressure on wholesale electricity prices by introducing additional dispatchable capacity that replaces the marginal gas-powered generators.

Independent analysis shows that, with Marinus Link and other interconnector projects in service (including Humelink, VNI West and Project EnergyConnect), better sharing of renewable and dispatchable resources (including deep storage from Battery of the Nation and Snowy 2.0) will be possible between the three southern NEM states. This not only supports emissions reduction across Australia but also assists in lowering wholesale energy costs for consumers. Without this, the mainland NEM states will rely more on gas-powered generators, with higher prices.

Skills, workforce, and industry development for a lower carbon economy

Skills and workforce development is an important part of transitioning to a lower carbon economy. Investing in transmission now will signal to developers locally and overseas that Tasmania is preparing for a renewable energy future, attracting investor confidence, jobs and employment in renewable energy. Marinus Link and the supporting North West Transmission Developments present a significant opportunity to help Tasmania with this transition. Our findings show that Marinus Link can support Tasmania's workforce participation by fostering the development of skills related to the energy industry as the NEM transitions from coal-fired power generation to a greater mix of renewables and dispatchable capacity by 2035. Our findings also show that Marinus Link would stimulate the following economic opportunities in Tasmania:

- \$1.4 billion in economic stimulus in the form of increased employment and economic value added to regional Tasmanian communities, particularly in the North West region;
- 1400 direct and indirect jobs at peak construction, including a range of roles in the project management, engineering, science, trades, and professional services sectors and further supporting roles including education and training, accommodation and food services, hospitality and transport; and
- Further development of Tasmania's renewable energy resources, unlocking approximately 2,350 jobs, and adding a further estimated value of \$5.7 billion to the Tasmanian economy.

Electric vehicles

Electric Vehicles are a key opportunity for a more sustainable future for Tasmanians; they are cheaper to run, quieter to drive, and have zero emissions when powered from the State's renewable electricity sources. Electric vehicles are a rapidly developing technology and their increased uptake will challenge Tasmania's current energy network. TasNetworks plays a critical role in this transition, by ensuring the energy network is prepared for the changing behaviours of the community.

TasNetworks' current focus is to better understand the expectations and changing needs of customers to determine the best way to integrate electric vehicles and emerging technology into the network and provide convenient and affordable access to electric vehicle charging in Tasmania. TasNetworks established the Fast Charger Support Scheme (FCSS) which supported the installation of Tasmania's first direct current (DC) EV fast charger in October 2018. Planned

installations of EV charging infrastructure extend state-wide through 2020 and 2021, supported by the FCSS, Tasmanian Climate Change Office (TCCO) and market-based installations.

TasNetworks is currently working in partnership with other Distribution Network Service Providers (DNSPs) and technology partners on the EV Grid Trial; a Dynamic EV Charging project to better understand residential EV charging behaviours and network impacts, and demonstrate the role of technology in managing smart (controlled) charging. Other activities include:

- Participation in the Tasmanian Government Electric Vehicle Working Group;
- Delivering on the DC Fast Charger Support Scheme;
- Quarterly updates with Department of Premier & Cabinet (DPAC) and State Growth (Transport) to increase visibility of EV activity, develop an EV data repository, and sharing of knowledge; and
- Participation in an industry working group and collaboration initiative on EV integration and flexible export.

The hydrogen opportunity

As the world looks to decarbonise, renewable hydrogen is emerging as a significant energy source of the future. It is increasingly being discussed as a promising fuel that could reduce the amount of fossil fuels burned in several sectors, including transportation and heavy industry. Australia's National Hydrogen Strategy identifies Tasmania as having very high potential for the production of renewable hydrogen and TasNetworks notes that the Tasmanian Renewable Hydrogen Action Plan sets out the State Government's vision to capitalise on the State's many advantages and become a world-leader in large-scale renewable hydrogen production.

Meaningful, tangible information about the hydrogen opportunity in Tasmania will attract investor confidence and support Tasmania's position as a preferred site for emissions-intensive industries to adopt greener practices and thrive in a lower carbon economy. TasNetworks is currently working with potential proponents of renewable hydrogen production to ensure they have access to comprehensive and consistent information about the Tasmanian power system and its ability to supply the loads involved with producing hydrogen.

A Renewable Hydrogen Connections document has been developed for those seeking more information on opportunities, network pricing guidelines and attributes of the Tasmanian power system. TasNetworks is also exploring the interactions of hydrogen in the power system including where to locate and use hydrogen electrolyzers to maximise system efficiency, and understanding the impact on the development of generation and transmission. For example, our analysis in the Regulatory Investment Test for Transmission (RIT-T) Supplementary Report, released in November 2020, shows that Marinus Link and the supporting North West Tasmanian transmission upgrades can support significant hydrogen load growth in Tasmania of up to 1,000 MW. These findings are consistent with the decarbonisation objectives needed for the growth of the hydrogen industry.