Tasmanian Networks Pty Ltd
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06 December 2023

Climate Change Office
ReCFIT
Department of State Growth
GPO Box 536 HOBART TAS 7001

Dear Office of Renewables, Climate and Future Industries Tasmania

Submission Emission Reduction and Resilience Plan - Transport

We welcome the opportunity to submit on the development of an Emissions Reduction and Resilience Plan for Tasmania's transport sector. TasNetworks is a Government Business Enterprise (GBE) responsible for the poles and wires that provide safe, reliable, and affordable electricity to businesses and residents.

As acknowledged in the State of Play - Transport report, TasNetworks provides essential electricity infrastructure across the State and will play a key role in the low carbon transition, particularly through future ready electricity infrastructure and assets.

To support State and Federal Governments' renewable energy targets, we are leading Project Marinus, a proposed 1500 megawatt capacity undersea electricity connection between Tasmania and Victoria. Project Marinus supports transmission infrastructure that would allow Tasmania to export more of our renewable, reliable, and dispatchable energy into Australia's future electricity grid.

TasNetworks operations have a corporate greenhouse gas footprint that covers the delivery of electricity across the State, the release of greenhouse gases from electricity infrastructure equipment, and our fleet and buildings operations. We report annually to the Australian Government, National Greenhouse Emissions Reporting Scheme.

Climate change is increasing the severity and intensity of extreme events, such as bushfire, flooding, heatwaves, and storms. These impacts are felt across TasNetworks' assets, customer relations, and affects the environment for staff working outdoors. Assets we help manage include over 20,000 kilometres of high and low voltage powerlines, 232,000 poles, 50,000 streetlighting assets, 19 facilities and 1900 kilometres of telecommunications infrastructure.

TasNetworks has a range of initiatives to reduce emissions across our diverse field and office operations, these include:

- 52 TasNetworks electric vehicle charging stations across Tasmania
- a third of the light passenger pool vehicles are electric – 12 full electric and one hybrid electric vehicle option, two heavy vehicle fleet vehicles are also hybrid electric; a truck and Plug in Hybrid Electric Vehicle SUV

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- facilities have support services for those who walk or ride to work via shower facilities and undercover bike facilities
- work has been undertaken to identify options to reduce emissions across the vehicle fleet, as well as a climate hazard risk assessment on key infrastructure, and has committed to reporting via the Australian Government supported international Task Force on Climate-related Financial Disclosure
- investigating the viability of sulphur hexafluoride (SF6) alternatives for electrical switching equipment. SF6 is a very potent greenhouse gas and is an arc suppressant in electrical equipment.

One of the biggest challenges facing electricity networks worldwide is managing the impacts of climate change on assets to ensure safe and reliable service to customers. Some strategies we have already explored include:

- trialling non-burnable power poles at selected high-value pole locations
- trialling fire-resistant paint for selected power poles in high fire danger locations
- updating our overhead distribution powerline design and construction manual
- monitoring for any increase in weather extremes
- monitoring for any increase in occurrence of asset overloading failure rates

TasNetworks' submission focusses on:

- the exploration of flexible long term funding structures, particularly for projects with multiple stakeholders such as councils, essential service providers, and government
- access to best practice climate modelling and impacts information
- increasing opportunities for government and research partnerships to trial emerging technologies.

In response to the consultation questions, TasNetworks provides an **attached** submission. TasNetworks would like to extend the invite to workshop any part of this submission.

If you have any further questions, please do not hesitate to contact Sarah McDonald, Leader Corporate Affairs.

Yours sincerely

Seán Mc Goldrick
CEO TasNetworks

Att.1

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Attachment A – TasNetworks' response - Emission Reduction and Resilience Plan for Tasmania's transport sector

It is clear there are considerable benefits to Tasmania, Australia, and across the globe from transport emission reductions. Reducing corporate transport emissions helps us all to do our part to reduce the impacts of climate change.

Question 1: How can we build on the work already underway to reduce emissions and build resilience in the transport sector?

As the transport sector electrifies, it becomes intertwined with electricity network resilience. Ensuring that load connection occurs in a planned manner will optimise the cost of this transition.

The transport transition to electrification is expected to create demand for electricity, putting pressure on the existing system. Transport energy use is 25,600,000 Gigajoules a year in Tasmania [1]. If half this energy use is switched over to electric options, then there will be an estimated equivalent of adding 240,000 new households, increasing demand on the existing system [2]. Timing will be a key issue, for example, increasing peak load when people return home. Peak electricity use is generally more expensive to provide, potentially increasing consumer bill costs. Improved planning for disruptive technologies will work to make energy bills more affordable.

There has been an increase in the use of private infrastructure, through home charging, with standard power point connections. TasNetworks considers these factors as part of system strength assessments through strategic review processes.

There is likely to be increasing consumer pressure to provide options for optimal home charging, involving possible meter upgrades, tariff arrangements and the installation of new electrical equipment, which will require ongoing planning considerations for a range of stakeholders.

Question 2: What future opportunities do you think will have the most impact?

Electric vehicle expansion. Tasmania, and Australia are making headway in the electric vehicle race; we watch this gap with interest. Currently, electric vehicles are less than 1% of all vehicles registered in Tasmania[1]. While this represents low penetration into the market, the number of vehicles has doubled in the last couple of years. Tasmania has a high portion of renewable electricity and shorter travel distances, than other states and territories, making it a prime destination to demonstrate the transition to a low carbon economy.

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[1] Australian Energy Statistics, Table E7 Tasmania total Transport energy use. Accessed 2023: www.energy.gov.au/publications/australian-energy-update-2022

[2] Table E7 Tasmania total Transport energy use is 25.6PJ = 7,111,111,111kWh (per year), divided by 14,600 kWh (for example, 40 kWh on average consumption per day per household x 365 days) = 487,062 households, half of this demand is the equivalent of an additional 243,531 household customers. There are an existing 295,000 residential, business, commercial and industrial customers.

[1] Estimated 1,000 EV's registered out of 250,000 for the Southern region, as outlined by the ABS 2020 Census registered vehicle results, accessed 2023: Data by region | Australian Bureau of Statistics (abs.gov.au), and across Tasmania 2,500 EV's out of 700,000 as per ABC article: Electric car sales almost double in Tasmania in a year, to about 1 in 10 car purchases - ABC News, Rising petrol prices fuel electric vehicle market growth in Tasmania - ABC News

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Mechanisms for trialling innovative electricity network solutions. Ensuring the network is ready for a significant increase in electricity demand, and alterations to power quality, for emerging technologies such as electric vehicles will require research and development. TasNetworks welcomes opportunities to learn from practical onsite home and business charging trials locally and throughout Australia.

A review into the rollout of electric vehicle chargers. TasNetworks acknowledges the potential for electric vehicle charger governance and finance arrangements to interfere with quick, reliable charging. A review into the rollout of chargers and user experiences highlights ways to address potential barriers, facilitating expansion of the market.

Social awareness raising campaigns. As with any new technology, there are several social barriers to electric vehicle use. We look forward to all levels of government providing greater assurances on the reliability of batteries, disposal options, and life cycle analysis to address these concerns.

Question 3: Are there any priorities or future opportunities missing from this draft Plan?

Improved electric vehicle data collection. Access to electric vehicle statistics helps organisations such as TasNetworks promote any work undertaken in this space. Case studies, as well as the number of electric vehicles, and types of vehicles, and the growth over time, helps show the impact of TasNetworks contribution within the context of different Tasmanian regions.

Question 4: Are there other ways we can collaborate to reduce emissions and build resilience in the transport sector?

Access to best practice climate modelling and impacts information. The State Government is updating Climate Futures climate impacts modelling. Ensuring any modelling has specific examples of the outputs in the various industrial sectors, including electricity provision, helps make the modelling more applicable in energy industry asset management planning.

Increasing opportunities for government and research partnerships to trial emerging technologies. There are a range of smart technologies and power management technology options; however, cost and reliability drivers make it challenging to include these trials in day-to-day operations. TasNetworks welcomes opportunities to work with leading research organisations, for example, the University of Tasmania and CSIRO.