

Submission to the Tasmanian Transport Emissions Reduction and Resilience Draft Plan

1. INTRODUCTION AND BACKGROUND

While renewable energy and changes in land use have enabled Tasmania to report zero net emissions, our underlying GHG emissions are rising, with transport being a major factor. Transport currently accounts for 22% of Tasmania's absolute GHG emissions, and The Tasmanian Policy Exchange estimates that Tasmania could once again be a net emitter by 2030 without significant efforts to reduce sector emissions.

This matters because the world is facing a polycrisis of social inequality, biodiversity loss, depletion of planetary resources, over-population, mass migrations and climate change. Tasmania is by no means immune with oceans and land resources being steadily depleted and iconic species driven to the brink of extinction, bushfires increasing in numbers and intensity, steadily increasing levels of wealth disparity, coastal erosion, and flooding.

Within the transport sector, the solution is not simply to electrify all private cars, but to greatly reduce our dependence on private cars. This dependency is a great source of inequality, congestion, noise, and particulate emissions. It requires continual expenditure on road infrastructure and parking facilities. An integrated public transport system that makes use of a much improved and regular fixed route service, along with extensive active transport options, professional car-pooling and on-demand services for home to node, would tick boxes in health, climate, opportunities in health education and the workplace and lead to more liveable townships and a healthier and more prosperous population.

2. LULUCF DISGUISES TASMANIA'S OTHERWISE HIGH EMISSIONS PROFILE

GHG drawdown via the Land Use, Land Use Change and Forestry (LULUCF) sector is currently the only way Tasmania is able to report net zero emissions, however, there is a limit to how long this can continue, plus there are significant concerns about the calculation of LULUCF emissions in Tasmania:

“Estimating LULUCF is very uncertain, the science being poorly understood and required observations being sparse. Historical estimates are therefore often recalculated as fresh data comes in, and as understanding improves. For example, as a result of re-calculation, this year's [2020] assessment of Tasmania's LULUCF for 2017 differs from last year's [2019] assessment by 1.8m tonnes - more than the annual emissions from our entire transport sector.” *From Talking Point, the Mercury by John Hunter (ex CSIRO) 31 July 2020*

<https://www.themercury.com.au/news/opinion/talking-point-unpicking-the-climate-forest-furphy/news-story/4bef942fdcfa2e2f86e7b315c73c537b>

Given LULUCF emissions are so variable and controversial most comparisons between countries exclude them. Sadly Tasmania's per capita without LULUCF emissions were at around 14.9tCO₂ equivalent, second only to Australia as a whole at 15.1tCO₂ equivalent (18.1 with LULUCF) and approximately equal to that of the United States. It's hard to get an exact handle on these figures given they are a little different according to every source consulted (*Tasmanian Greenhouse Gas Emissions Report 2023, OECD.stat, ourworldindata.org*). The Tasmanian Greenhouse Gas Emissions Report proudly announces that Tasmania's per capita emissions (with LULUCF) is negative (-8.5tCO₂ equivalent) but this is clearly disingenuous, given that we are coming off the back of years of large scale forest clearing, that is only now beginning to give back via regrowth of these forests.

As John Hunter in the Mercury article (quoted above) says, our Premier might advise other jurisdictions thus: “Firstly, do nothing to reduce your gross emissions over a quarter of a century. Secondly, heavily log your forests for a few decades (resulting in world-leading per-capita emissions), then substantially reduce logging and take credit for the drawdown of carbon dioxide from the atmosphere that will inevitably follow.”

Transport emissions account for roughly 22% of Tasmania’s absolute GHG emissions, despite having fallen almost 15% since 2008 to roughly 1990 levels. A preference for utes and federal tax incentives for 1tn light commercial vehicles for businesses, is offsetting the move to lower emissions vehicles in the remaining private car sector. Emissions from heavy-duty trucks and buses have increased steadily since 1990. From *Driving Net-Zero: Options for reducing Tasmania’s transport emissions, Technical Policy Paper, Tasmanian Policy Exchange, July 2023*

https://www.utas.edu.au/data/assets/pdf_file/0012/1667577/Transport-technical-policy-report_final-28072023.pdf

Transport is therefore the low-hanging fruit for Tasmania to retain its net-zero status and reduce GHG emissions per capita. An option is simply to electrify the entire transport sector as is, ie to somehow ensure everyone’s next car purchase is electric and every new truck or bus is a zero emissions vehicle (ZEV). This is not only highly impractical, it will do nothing to reduce all the other problems that come with Tasmania’s high dependence on private cars, such as congestion, noise, roadkill, road safety, enormous cost of maintaining and building new roads, and inequality. This submission advocates for an urgent and wholesale commitment to mode-shifting from private cars to public and active transport, for the majority of journeys.

3. THE CASE FOR PUBLIC TRANSPORT (PT)

Social Justice

At present, our dependence on private cars is a source of inequality. The state government’s [Transport Access Strategy 2014](#), which drew on research by TasCOSS, noted that the overwhelming majority of public transport users hold concession cards and either cannot afford to run a private car or are ineligible to drive. Also, many outlying townships and suburbs are not well-served with alternatives to private cars.

At a recent meeting convened by Circular Economy Huon in Hobart, attended by representatives from State Growth, Jobs Tasmania, City of Hobart, Kingborough Council, UTAS, Metro and Tassielink, the Jobs Tasmania representative explained that of 150 job seekers surveyed in the Derwent Valley, only 3 had the legal combination of a driving licence, a registered vehicle and insurance for that vehicle.

“Access to PT is one driver of transport disadvantage. According to 2019 the Bureau of Infrastructure and Transport Research Economics (BITRE) only 13.5% of households in Hobart have access to PT (the lowest of all capital cities in Australia)”

Lisa Stafford, Isaac Tye, *“I have mentally cancelled a lot of trips”: Trips not made by disabled people due to public transport inequity in Lutruwita/Tasmania, Journal of Transport Geography, Volume 111, 2023* <https://www.sciencedirect.com/science/article/pii/S0966692323001400#bb0075>

The above paper states: “Public transport matters. It is an essential service in modern society, a key enabler of social and economic participation ([International Transport Forum \(ITF\), 2020, Infrastructure Australia, 2019, Infrastructure Australia, 2018b](#)); and a key social determinant of health ([World Health Organisation \(WHO\), 2011a](#)). The provision of PT helps tackle broader social

and environmental injustices, like climate change and poverty ([United Nations, 2022](#)); while being essential for disabled people to participate fully in all aspects of life ([United Nations Convention on the Rights of Persons with Disabilities, 2007, Article 9](#)).”

“Transport equity is a key target of the UN Sustainable Development Goals (11.2). By 2030, the aspirational goal is to provide access to safe, affordable, accessible, and sustainable transport systems for all, by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.”

Productivity and economic activity

Running a car is expensive, with 2022 research from Budget Direct revealing that: “Hobart residents paid the highest percentage (17.6%) of their income on [vehicle] costs” – an average of \$17,239/ year - including loan repayments, fuel, servicing and tyres, insurance and registration. This figure excludes depreciation (and therefore the losses incurred each time a car is replaced).

<https://www.budgetdirect.com.au/car-insurance/research/car-owner-cost-statistics.html>

This research is backed by numerous other studies including by the RACT, which concluded recently that Hobartians are spending almost 20% of their income on transport.

Dependence on the private car creates enormous expenditure on our road networks, by all levels of government, despite there being little evidence that more or larger roads reduce congestion:

<https://www.wired.com/2014/06/wuwt-traffic-induced-demand/>. Congestion also adds cost to freight transport and puts additional pressure on road networks. The more private cars there are, the more parking spaces are required in towns and townships, drawing resources from the already overstretched local government sector, and restricting land use options. Research by the Sydney-based Tourism and Transport Forum, consistently shows a high return on investment for improved mobility solutions. They state “economic benefits include:

- effective connection of wealth and labour to the marketplace;
- removal of productivity bottlenecks; and
- maximising opportunities for individuals, business and government to increase income and asset value.”

These findings are reflected by research across the globe. The International Association of Public Transport identifies some of the benefits of public transport over individual transport modes, arguing it:

- “costs less to the community;
- needs less urban space;
- is less energy-intensive;
- pollutes less;
- is the safest mode;
- improves accessibility to jobs; and
- offers mobility for all.”

Given Tasmania’s poor road safety and roadkill record, PT would greatly mitigate these issues. PT also creates transport and mobility corridors along which land can be freed up for housing and other development, and creates opportunities for activating town centres as social and business centres.

In the 23-24 Tasmanian State Budget, \$2.2bn is committed over 4 years, to roads and bridges, far more than on health or education infrastructure or the building of public housing. Conversely, there

is no mention of investment in public transport, walking and cycling infrastructure or practical incentives for purchasing an EV.

A major research project by KPMG, published as *The Future of Public Transport, 2022*, repeatedly emphasises the high return on investment for public transit projects: “Public transport is a key enabler of sustainable economic growth and equitable opportunity ... agencies should look beyond whole of life ‘costs’, to consider the whole of life ‘value’, in investment decision-making”. For example, by enabling access to jobs and services, public transport creates value by “reducing road congestion, improving air quality, reducing noise pollution and improving public health and wellbeing”.

A study by the Universities of Sydney and Melbourne states: “governments are failing to fully calculate the flow-on financial benefits of ... public transport projects ... such as lower crime, increased employment, better health outcomes and improved social inclusion”. *Place-based disadvantage, social exclusion and the value of mobility*, John K. Stanley, David A. Hensher, Janet R. Stanley, 2022.

4. THE CASE FOR ACTIVE TRANSPORT

Active transport is an integral mobility mode within a comprehensive public transport system, helping especially to address the ‘first mile’ problem of how people get from home to a node on a fixed route bus/ tram/ ferry/ light rail service. Safe path networks also enable many shorter car trips to be replaced by walking, cycling or scooting. Building infrastructure for walking/ cycling and other ‘micro-mobility’ modes of travel, is inherently far cheaper than building new or larger roads, contains far less embodied carbon (eg in concrete), has a lower impact on the natural environment, creates more liveable environments, improves people’s health and has the potential to drastically cut transport emissions.

Polling consistently shows Australians from all states, want governments to invest less in car transport and more in public and active transport. Polling by The Australia Institute (2022) revealed that 80% supported modifying streets to encourage walking for all ages and abilities and 62% support a national subsidy for large rebates on the purchase of bikes, e-bikes or cargo bikes. Polling by the Climate Council and YouGov (2022) showed that 67% of respondents think governments should deliver more footpaths and bike paths across the country.

The provision of connected walk and cycleways leads to an uptick in all health factors: “Cities designed to encourage sustainable mobility, foster active and sustainable lifestyles and are therefore health promoting, reducing exposure to environmental stressors such as air and noise pollution and heat island effects. This has the potential to reduce non-communicable diseases, while enhancing mental health and mitigating climate change” (Giles-Corti et al., 2016, 2022).

There’s long been a feeling amongst policymakers that Tasmania is somehow different and doesn’t have the settlement density to support active (or public) transport. This simply isn’t the case in the modern era, with e-bikes and scooters greatly increasing the distances that can be travelled in a 20 minute neighbourhood for instance. The consultation document on transport emissions reduction assumes topography and weather are limiting factors, but this doesn’t appear to deter walkers and public transport users in Scandinavian countries, which face even worse issues. Countries such as the Netherlands and Denmark are markedly flatter than Tasmania, but have far colder winters.

The other argument used for not investing in public and active transport, is that people have become so dependent on private cars in Tasmania, that there will be resistance to mode-shifting.

This is clearly the case, and it requires a determined and concerted suite of policies by governments to effect culture change. Within the younger generation and many retirees, such policies will be pushing against an open door.

5. BARRIERS TO CHANGING BEHAVIOURS TO REDUCE TRANSPORT EMISSIONS

Results from 864 responses to a survey conducted by the Tasmanian Policy Exchange, in partnership with the RACT and the Mercury, published September 2023 (Driving Net-Zero: Survey of Tasmanians's attitudes towards reducing transport emissions):

- 62% want ambitious transport emissions reduction targets
- 50.8% are likely to purchase a zero-emissions vehicle (ZEV) as their next vehicle
- 72% said the **biggest barrier to purchasing a ZEV is price**
- 74% said a **better charging infrastructure** would encourage them to purchase a ZEV
- Over half of those aged between 16 and 64 said they would consider using a car sharing program
- 58% are willing to increase public and/ or active transport, but 81% cited **safety concerns as a barrier, plus poor quality infrastructure and the lack of convenience of public transport (waiting times, reliability and travel time)**

6. TRANSPORT INTEGRATION IS KEY TO OVERCOMING BARRIERS TO MODE-SHIFTING FROM PRIVATE CARS

Our research of global best practice has identified five areas of integration for successful transport delivery:

- Institutional Integration – to ensure the right transport choices are made for commuters;
- Physical Integration – to ensure commuters can enjoy the most convenient travel experience possible;
- Network Integration – to ensure commuters can make a joined up journey from origin to destination;
- Information Integration – to ensure commuters can make informed decisions before and during their journey; and
- Fare Integration – to ensure commuters aren't penalised for making the most efficient use of an integrated transport system.

From: *Integrating Australia's Transport Systems*, Infrastructure Partnerships Australia and Booz & Co. January 2014, provided as submission 37 to the Australian Parliamentary Inquiry into the Role of Public Transport in Delivering Productivity Outcomes

https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/Public_transport/Submissions

There are tremendous examples around the world of integrated transport schemes, aided by technology which has progressed by leaps and bounds in the last decade. Sydney, London, Barcelona, Amsterdam and other cities and regions have recognised the need for:

- Easy route-planning/ way-finding for all, including online, by phone and in person.
- Integrated routes and timetables between different modes of fixed route public transport (buses, trams, light rail, trackless trams, ferries etc) and, on-demand options (eg CTST and LAC in Tassie and other ride-hailing services).
- Open loop ticketing that covers all journeys regardless of mode, either on a time-limited or subscription basis.

- Pricing that incentivises the use of multi-occupancy vehicles and ride-sharing/ car-pooling, and provides concessions for lower income earners, students, the disabled, elderly and job-seekers.
- Reliable, clean, safe, accessible and comprehensive services that give people a great experience and thereby encourage continual re-use.
- Prioritisation of multi-occupancy vehicles and active transport users over low occupancy private cars (except for emergency vehicles and those requiring a private car such as disabled persons) on all road infrastructure, via rights of way and dedicated lanes.
- Active transport networks that provide safe linkages between suburbs and neighbourhoods, between services and residential areas, and to different public transport nodes, including safe and sheltered places to await transport, and to park bikes/ scooters.

Applicable examples include:

- A demand-responsive service in Lincolnshire, UK, a large regional area with a dispersed population, close to other urban centres: <https://www.justgonorthlincs.co.uk/> which is now being repeated in East Yorkshire (a similar region) and the West Midlands (more urban).
- <https://www.liftango.com/resources> - multiple examples.
- <https://ridewithvia.com/resources/case-studies/> - multiple examples.
- Suburbs in NSW, SA and WA are all successfully running on-demand minibuses: <https://www.keolisdowner.com.au/keoride-on-demand-transport-celebrates-its-four-year-anniversary-and-introduces-new-fully-accessible-vehicles-in-the-northern-beaches/>
- Victoria has an Integrated Transport Act (2010) and the people of Greater Bendigo rejected new roads in favour of the development of an Integrated Transport and Land Use Strategy, which sets out the steps for ensuring greater connectivity and equality of mobility across the city.
- Griffith in NSW is currently developing an Integrated Transport Plan and Sydney already operates an integrated ferry, bus and train service, with the more recent addition of on-demand buses serving the Northern Beaches.
- Tasmania is working on new legislation for the regulation of on-demand vehicles in recognition of their importance in mobility and WA has recently ended its levy on on-demand operators, having finished paying for its buy-back of taxi plates.
- Multiple examples in Europe.

7. ELECTRIFICATION VERSUS HYDROGEN AND BIOFUELS

In his book *Electrify*, Saul Griffith (engineer, materials scientist and science communicator), provides a convincing argument for electrifying transport (and all other sectors) rather than transitioning through or depending on different fuels. He gives stark warnings: “Green hydrogen is not going to temper any domestic emissions this decade,” the MIT-educated Griffith told energy and climate summit sponsored by the Australian Financial Review on Tuesday. I can’t say it harshly enough,” he said. “We have drunk the Kool-Aid and we’re about to squander a decade.” His calculations show that green hydrogen on average is between 4 and 6 times more expensive than simply producing energy directly from a renewable source. <https://reneweconomy.com.au/griffith-warns-against-drinking-the-kool-aid-on-renewable-hydrogen/>

Hydrogen is a distraction that Tasmania simply can’t afford at present. Trucks can run just as well on batteries. Tasmania could be investing in cassette-type battery changeover stations, to avoid freight vehicles waiting on charging times. To create energy from hydrogen means losing efficiency at every

stage, plus transporting hydrogen is fraught given its capacity to infiltrate and eventually crack steel. It requires highly expensive specialist materials and its high volume to energy ratio requires very large storage tanks. It's highly flammable and indeed explosive. Hydrogen only makes sense as potential energy storage for excess renewable energy, but even then, other forms of storage make far more economic sense (pumped hydrogen, salt, standard lithium batteries).

Incat is currently building an electric ferry, which is something Tasmania must invest in for the next iteration of the Spirit of Tasmania ships. If it is economic to create electric ships, it must similarly be cost-effective to build and use electric trucks. Electric trucks are already commonplace in mining and other hazardous situations, so the technology is already well-advanced.

Biofuels is likewise a distraction from what should be our primary goal - a fully electrified comprehensive integrated transport system incorporated with excellent active transport networks. It is a long-held myth that biofuels are carbon neutral. The view is that biofuels (eg soy, maize etc) sequester as much carbon as is released in their use, however this does not factor in the making of fertiliser and other inputs added to encourage growth, the fossil fuels used for their harvest or their processing and freight. <https://theconversation.com/biofuels-turn-out-to-be-a-climate-mistake-heres-why-64463> calculates that the growing of crops for biofuels only offsets 37% of the carbon and other pollutants that the biofuels will have produced during their lifecycle when burnt.

There are many other concerns raised by researchers and environmentalists, including the growing of monocultures to produce biofuel crops, the increased need for fertiliser and herbicides, conversion of otherwise carbon-rich forests and wetlands into monoculture plantations, and the use of productive land that would be better used to produce food for local populations.

<https://news.mongabay.com/2023/03/a-liquid-biofuels-primer-carbon-cutting-hopes-vs-real-world-impacts/>

There will be limited cases for which biofuels will be the best option, eg in long-haul aviation and perhaps for some very heavy duty shipping, but as a climate-friendly option for Tasmania's domestic transport system, it seems a non-starter.

8. POLICY RECOMMENDATIONS

General

- Create an overarching single Transport Authority within state government. Currently, responsibility for buses, roads, community transport, and travel for jobs, are all in separate agencies or departments. This hugely restricts the joined-up integrated thinking needed to create a close to net zero transport sector.
- Set ambitious targets for reducing climate emissions from transport, mode-shifting to PT and active transport, and EVs as a percentage of different categories of the entire state's vehicle fleet. Currently the targets are either non-existent or lacking in ambition. The excellent *Climate Council* report "Shifting Gear: The Path to Cleaner Transport", proposes targets that Tasmania should embrace.
- Divert expenditure currently earmarked for major road projects (eg the Southern Outlet 5th lane and the Huon Link Road – together amounting to around \$85m) to development of an **integrated transport system (ITS) for Tasmania**, in conjunction with a technology-based transport logistics partner, such as Liftango or Via. ITS to include open-loop ticketing across all

modes, and online and phone-based route planning. There is no need to reinvent the wheel - use the expertise of companies and jurisdictions that have already achieved this successfully.

- Promote battery and EV manufacturing and research in Tasmania, in preference to hydrogen or biofuels projects.
- Review Tasmania's rail network with a view to introducing passenger trains between Hobart and Launceston/ Devonport and activating currently unused lines. Incentivise for more freight to be transferred by rail rather than truck.
- Electrify the rail network, using lessons and technologies from the mainland and overseas.
- Encourage the uptake of grid-connect vehicles that can be used (in time) for balancing the renewable-driven electricity network, including household solar, and providing mains storage capacity.

Disincentives for private car use

- Introduce a progressive and ambitious vehicle registration scheme based on emissions and tare weight.
- Gradually increase the levy on fossil fuels over years.
- Mandate all employment sites of more than 50 employees, to introduce professional car-share/ car-pooling schemes, using an IT platform provided by govt (with chosen integrated transport technology partner).
- Restrict bus and vehicle idling times outside schools and in car parks.
- Do not increase the number of car parking spaces where places/ services can be accessed (by all) by public and active transport. Convert to bus-parking, park and rides, scooter/ cycle parking etc, while being mindful of those who are unable to use public or active transport.
- Increase car-parking charges gradually.
- Pedestrianise shopping precincts and/or create mixed use zones where cars are reduced to 20 or 30km/ hour.
- Consider congestion charges for the most congested areas eg centre of Hobart.
- Introduce an ambitious vehicle emissions standard for different classes of vehicle, enforced through yearly vehicle fitness checks.

Incentives for public and active transport use/ less use of transport overall/ ZEVs

- Buses to be equipped with USB ports, WiFi and workstations.
- Incentivise employers to offer home-working options and shorter working weeks, to reduce travel overall.
- Work with schools to encourage parents to not take children to school in private cars.
- Limit the number and type of cruise ships docking in Tasmanian ports and facilitate land-based renewable power for ships while in port.
- Introduce a Tasmanian-wide pedal-assist e-bike bulk-buy scheme.

- Mandate councils to produce cycling and walking strategies, facilitate collaboration between councils and with the community to develop plans, and provide grants to bring plans to fruition. Amend the Tasmanian Standard Drawings to enable cheaper gravel-surfaced shared paths, especially for rural areas, which can be adopted and kept weed and litter-free by community groups.
- Legislate to grant 8m riparian leases on both sides of all major waterways to the Crown or local government, and excise such from private titles, so as to enable shared paths along these routes, and thus remove conflict between motorised vehicles and active transport users, for a great many regional areas which are largely serviced currently by narrow unsealed roads.
- Incorporate CTST and Local Area Connect into an integrated transport plan to provide home to node transport for those unable to use active transport.
- State Growth to provide adequate cycling and pedestrian routes alongside all new roads or road lanes, or alternative (similar distance) routes away from the road, plus add these to existing important arterial roads.
- Work with community and schools to encourage the use of ‘walking and cycling buses’ to bus stops.
- Undertake a major marketing campaign to promote the benefits of public transport and active transport, and to promote awareness of cyclists and pedestrians (the recent 1.5m advertising campaign was fun and effective).
- Set the public transport fares price point to be attractive to current private car users.
- Create rapid transit routes for buses, and enforce right of way access for buses.
- Reduce parking availability outside schools, along with ensuring convenient bus availability for all school routes (including out of area – at a price).
- Incentivise the purchase of small ZEVs (and EV utes for farmers and tradies), through first ZEV buyer grants and zero registration and stamp duty for a period of 10 years.
- Instigate research into battery cassette changeout depots for commercial vehicles and trucks. This is far more climate-efficient than hydrogen fuel cells or biofuels.
- All public transport to be accessible to disabled persons.
- Safe, sheltered bus stops with seating and lighting, to be provided at all primary PT nodes, together with parking for bikes, scooters and e-bikes.
- Buses to have facility to transport bikes on front and rear racks.
- Reduce the number of tourist kms travelled through the encouragement of regenerative tourism (similar to the concepts developed via the Islanderway project on Flinders Island – <https://www.islanderway.co>) such that tourists stay longer in one area.
- Provide buy-back schemes for older ICE vehicles, which are then recycled.
- Update the State Planning Provisions in line with the Tasmanian Planning Policies, in particular ensure new housing developments are equipped with charging points and access to public and active transport routes. Land use planning is crucial to the development of an effective transport system. Denser 15-min neighbourhoods should be a goal.