Fact Sheet:

TasNetworks | Powering a Bright Future

2024-2029 Electric vehicles and network tariffs

Issue Date: December 2023

Effective for the 2024-2029 Regulatory Control Period (1 July 2024 – 30 June 2029)

Electric vehicle market poised for take-off

The global market for electric vehicles (EVs) has developed at a rapid rate in the last decade. Societal and political ambitions have led to goals to reduce carbon emissions, and the way we fuel our cars has been identified as an area for innovation. Due to this, internal combustion engine (ICE) manufacturers are transitioning to development of EVs with most of them phasing out fossil fuel powered vehicles in the 2030s.

While the 2030s are still years away, the transition from ICE to EVs has already started, and uptake of EVs is poised for growth.

Tasmanian's uptake of EV's and their charging preferences

During the 2024-2029 regulatory control period forecasts indicate that the rate of EV uptake will increase, and further accelerate beyond 2029. This is consistent with TasNetworks' Distributed Energy Resources (DER) survey, which suggested a growing desire by Tasmanians to purchase an EV over the next 5-10 years.

Respondents to our DER Survey, both EV owners and non-EV owners, stated that they if they owned an EV, customers would predominantly charge electric vehicles at home, mostly overnight. This is consistent with the EV ownership experience which is emerging in other parts of Australia and overseas.

What network tariffs could I consider if I have an EV?

Customers should consider existing household energy consumption patterns when selecting a residential network tariff, especially if it is intended that an electric vehicle will be charged on residential premises.

There are several residential network tariffs that could be suitable for EV owners:

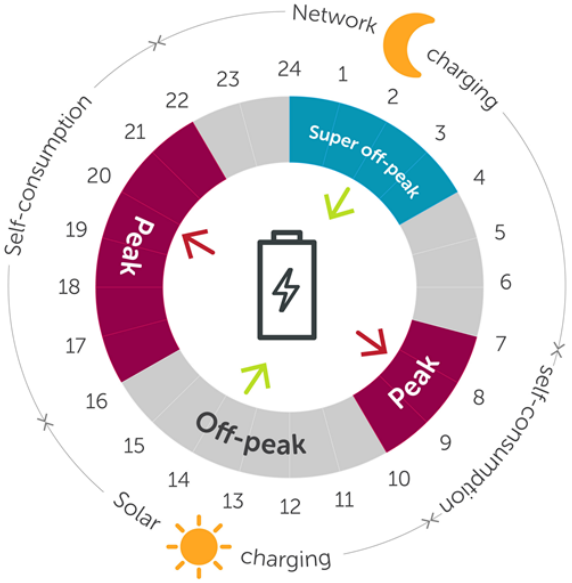
- Residential time of use consumption (TAS93)
- Residential time of use consumer energy resources (CER) (TAS97)
- Residential time of use demand (TAS87)

These tariffs all have time of use components, which include lower energy charging rates during the times of day where there is low network demand.

Residential time of use CER (TAS97)[1]

This is the only network tariff to offer a super off-peak period between midnight and 4am as depicted in Figure 1.

Figure 1. TAS97 weekday time of use windows



[1] Further information on TAS97 can be sound on the Residential Consumer Energy Resource Tariff factsheet.

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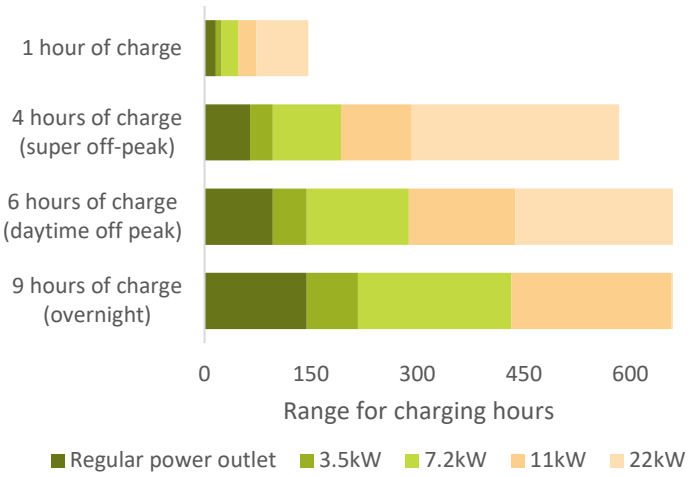
Figure 2. Estimated EV range for weekday off-peak or super-off-peak charging



How can I use TAS97 effectively?

Figure 2 provides an indication of the EV range that may be achieved over different time periods, depending on the type of charger that is being used[2].

The 4-hour super off-peak period from midnight until 4am on a regular power outlet should give most Tasmanians enough charge to get to and from work for the day. However, utilising more powerful EV chargers or choosing to charge during off-peak times in addition to the super off-peak will provide increased amounts of charge and potentially allow customers to charge their EV once or twice a week depending on the distance of their commutes.

The residential CER network tariff provides customers the ability to choose the method and frequency of charging that suits their personal preferences.

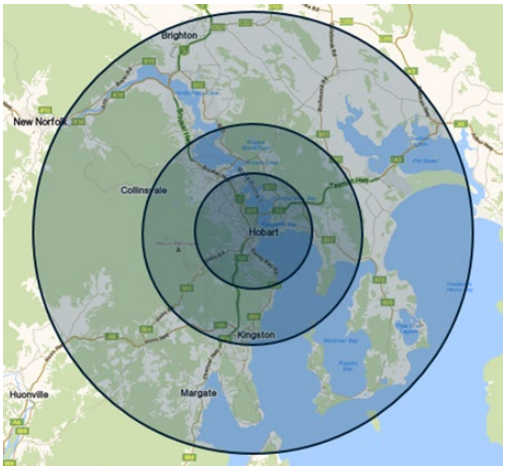
Range anxiety in Tasmania

While much is made of range anxiety and the maximum range of different EV models, the reality for many people is that they infrequently travel distances approaching their vehicle's maximum range. Regular travel by private vehicle is likely to be limited to commuting and some incidental journeys.

Amongst Australian states and territories, Tasmania has a relatively disaggregated population and travel distances vary across the state. However, the majority of the population (approximately 70 per cent) reside in urban areas. The following maps show examples of population centres in Tasmania illustrating the sort of distances that commuters might travel in a day.

Hobart and surrounds

The inner suburbs of Hobart (represented by the inner circle) involve commutes of up to 10 km each way into central Hobart, and encompass suburbs like Glenorchy, Mt. Nelson and Lindisfarne.



[2] Dependent on the state of the battery, temperature, vehicle type, etc.

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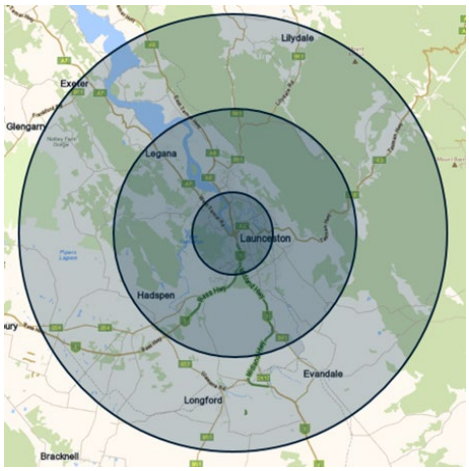
The outer suburbs involve commutes of up to 15 km, one-way, into central Hobart, a distance which takes in areas like Austins Ferry, Kingston, Cambridge and the Hobart Airport.

Several suburbs and towns in the greater Hobart area involve commutes of between 25-35 km, one-way, to reach central Hobart, including towns like Sorell, New Norfolk and Brighton.

Launceston and surrounds

Launceston's inner suburbs (the inner circle) within 10-15 km of the city centre include the suburbs of Prospect Vale, Kings Meadows, Rocherlea and Riverside.

Launceston's surrounds, including the towns of Legana and Hadspen, are less than 25 km from the Launceston centre, with larger commutes of between 25 and 35 km including locations such as Evandale, Longford and Exeter.

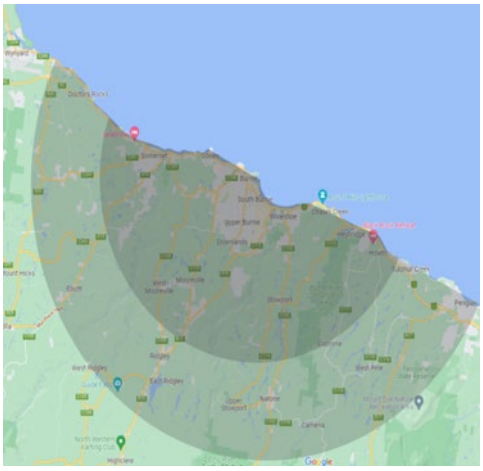


Burnie and surrounds

The City of Burnie occupies an area that can be described within a 10 km arc of the city's central business district. The communities of Cooee, Somerset, Stowport and Heybridge all fall within a 10 km radius of Burnie's centre.

Commutes of up to 15 km, one-way, would add the townships of Ridgley and Natone, with Penguin and Wynyard falling just outside a 15 km zone from Burnie's centre.

Devonport, the other city on the North West Coast is around 40 km from Burnie. For an EV which uses 18 kWh per 100 km, without making allowances for terrain etc., a round trip of 80 km between the two cities would consume in the order of 14-15 kWh, or about the amount of energy that a 7 kW Level 2 home charging station could add to an EV battery in about two hours.



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