

Submission - Solar FiT Review

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Summary

My focus is more on the longer term than merely the 2022 goals.

Tasmania is likely to have a higher rate of population growth in future than in the last 20 years, particularly retirees. Electrification of transport will also add to demand. There is likely to be increased demand in a lot of small communities; encouraging increasing solar supply in each demand area should reduce peak demand for all those communities and reduce the number of transmission upgrades. Solar has the advantage of being installed in the same locations as there is demand. Allowing the offset of hot water tariff and other self use would encourage time shifting energy use, reducing particularly the evening peak – and with the current newer meters, this offset should be very easy to do.

Future Supply/Demand

Population:

Current boom in property prices in cities and coastal communities is an indication of more people coming to live in Tassie. Further warming of the world is likely to increase the tendency for people to retire in Tasmania. From China, the number of wealthy has grown rapidly in last few years – eg, Guangzhou property prices have increased (in A\$) 10 times since 2007. Many of the wealthier people have shown an interest in moving out of China, at least some of the time. Future climate change impacts may significantly increase the number of immigrants. The recent increased number of tourists should lead to more knowledge of and interest in Tasmania for either permanent residency, under the long term retiree visa scheme or just for holiday houses. Retirees are more likely to be interested in attractive small-medium sized and particularly coastal communities than the existing population.

Electrification:

There are currently around 400,000 private vehicles in Tasmania (as well as the commercial fleet). If each of those are driven 10,000km a year at 5km per kWh, that is 2MWh per vehicle or 800GWh per year. Without the encouragement for solar generation, this could add to the evening peak load, charging as people get home being the most convenient – whereas if people/businesses have solar, they are more likely to focus on self-using electricity. Self-driving vehicles are likely to have peak usage at commuting times so could be recharged in between when solar output highest. Alternately, encouraging people to install solar is likely to more rapidly look at buying electric vehicles and air conditioners – reducing air pollution from vehicles and from wood burning.

Hydro Power:

Although predicted climate scenarios do not indicate more than a small decline in future rainfall for Tasmania, increased temperatures will lead to higher evaporation. Hence, future hydro power is likely to be a little less than now – which does make the current practice of exporting power to Victoria at low prices (<\$80 Mwh) from Great Lake or Lake Gordon/Pedder (at 30%/40% capacity respectively) beyond minimum flow levels appear reckless (from <https://opennem.org.au/#/regions/tas>). Of course, another maybe 500 MW of wind power should meet current demand, and Bell Bay Aluminium may close down at some point – in either case Basslink could be used more as a balancing mechanism for Victoria, with exports at higher prices than happens now.

Encouraging solar supply/lowering peak demand:

Time tariffs may encourage more north west oriented systems and some time shifting of electricity

consumption. A perhaps better alternative is to fully allow the offset of self produced and consumed electricity. The newer metres with phone connections should make it easy to calculate offsets where owner has multiple meters (like some farms) or multiple tariffs (usually hot water + standard). The price differential has to be significant enough to encourage people to time shift demand – to install timers or smart applications or even just manually switch. Presumably automatic smart controllers will be cheaper and smarter in future.

Equity: Until everyone has a smarter meter, it would be inequitable to apply an offset to only those who do have a new meter. So, I suggest modelling a standard offset until a meter that can cope with offsets is installed. For example, 25% of the minimum of (1) HW tariff electricity consumed and (2) electricity exported over the life of a billing cycle could be treated as self consumption. This may be a little more accurate than incorporating a self consumption component into FiT and also allows for people having different meters.

Using distribution and transmission loss factors for calculating FiT on self consumed electricity does seem very inequitable! I expect that most solar exports are used very locally anyway, saving on transmission infrastructure.

Batteries:

I only have anecdotal info on outages where a few people living in small coastal villages seem to have maybe 10 times the outage times of larger communities. For equity reasons, it maybe useful to provide a subsidy for batteries in location that meet an unreliability standard.