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Submission: Solar Feed-In Tariff Review

[Climate Tasmania](#) seeks to provide timely, independent and authoritative advice to Tasmanian business, government and community leaders on climate change issues and appropriate policy responses. The group comprises specialists from a range of fields.

We appreciate that this review is being conducted as the attractive legacy tariff for many of Tasmania's 32,000 solar installations comes to an end in January 2019 and in the absence of any other deliberation those householders will thenceforward be receiving approximately eight cents per unit for exported solar power. This will have a number of flow-on impacts that need to be understood and managed.

Broadly speaking, solar power is (and will remain) a relatively minor player in the Tasmanian overall generation system but its deployment does offer obvious advantages to householders and businesses and also to the generation system.

Systemic advantages to the generation system

In relation to the latter, Tasmania's electrical generation system has been specifically developed and configured to cater for sustained output through Summer months when both hydro-electric and wind generated energy output tends to be lowest. The power system thus suffers maximum stress during Summer months when dam storages run low, especially when less-than-average rainfall conditions prevail. Hydro-electric energy output peaks very strongly in Winter months whilst wind generators tend to peak at variable times of year. By contrast, solar output peaks absolutely in mid Summer – insolation values for Summer being five times that during Winter months. This time-of-year advantage needs to be recognized as both a risk abatement

and financial value.

In addition, the Tasmanian hydro-electric generation matrix renders it unique in Australia – in its ability to easily buffer intermittent generation sources, including both solar and wind. This places Tasmania at a distinct advantage in that our energy security at a macro scale is enhanced, rather than disadvantaged by the incorporation of wind, solar and other intermittent sources. Tasmania is the only state jurisdiction that can legitimately attain 100 percent renewable energy self sufficiency, but to reach that goal requires that both solar and wind should not be discouraged as a result of them being seen merely as commercial competitors in the retail network system. We appreciate that these benefits accrue at the macro scale and are of little value to the distribution / retail TasNetworks business.

True cost-reflective pricing

In relation to the TasNetworks business, the solar export tariff has been calculated on a reductionist basis in an attempt to render solar input cost reflective at the retail end. Though the background aim is to remove any incentivisation from the state for renewable energy, we have concerns that these calculations understate the true value of solar contributions to the system.

Our principal concern is that the derived export tariff rate incorporates negative values for distribution and transmission costs relating to that exported power. In reality, any exported power from one solar premises would be invariably used locally by neighbouring consumers and therefore reduces overall network transmission. In this respect we believe the cost reflective price is calculated incorrectly and unfairly. We support the industry's contention in this regard ⁽¹⁾. An export tariff that's stripped of incentive should at least reflect true value and not discriminate negatively. We support the industry's contention that the real value of exported energy to the system should therefore be in the range 10 – 13 cents per unit.

A larger concern is that in Tasmania households are financially penalised in the way metering is done here, whereby Tasmanians household are unable to utilise surplus solar power within the household because their solar system must be wired into only one household circuit. We understand that this metering disadvantage only applies in Tasmania and this problem renders a significant disadvantage to Tasmanian solar owners, who must therefore export significantly more energy than they need to. Ideally this metering problem should be remedied by technology change. Otherwise, a suitable (averaged) rebate should be offered to compensate for the disadvantage.

Trends and new technologies

In reducing export tariff rate, the state government and TasNetworks in particular, will need to be mindful of consequences. Appreciating that retail energy utilities tend to

see rooftop solar as a disrupting influence to business as usual, discouraging footloose generation of energy will not not necessarily be in their long-term business interest.

One consequence will be a desire to go off-grid by some households, though this trend is retarded by cost and inconvenience. Meanwhile, a much more real risk will be the inevitable onset of battery technology and switching devices, enabling households to direct their solar output in-house and quite cheaply. Another trend will see rooftop solar being preferably wired into the hot water / heating household circuitry (since there will no longer be an advantage in wiring into the Tariff 31 circuit) where a greater proportion of solar power can be fed into the hot water or space heating systems.

We are suggesting here that with a continued reduction in solar manufacturing costs, the affordability of solar is likely to keep dropping and enable more low-income households to reduce their power bills. In Tasmania this slice of the energy pie does not threaten energy security or grid stability, so this decentralised industry should be embraced through innovative relationships rather than discouraged.

There is a problem in that the energy utilities themselves are prohibited to engage themselves in this industry or have not availed themselves of opportunities to do so. We are at present at a cutting edge where by embracing change the utilities are starting to see that there are operational and financial opportunities, as is demonstrated by the Bruny Island venture.

In addition to attending to fair tariffs, the state government can do much to advantage low income households by changing building regulations to render future households more suitable for solar, or by supporting mechanisms to facilitate third party rooftop leasing for solar.

Solar hot water

Value for money, many households would benefit more by installing solar hot water than solar photovoltaics. The advantage being that intermittency is not an issue, all of the solar being stored directly. The state's 180,000 hot water cylinders can be thought of as a sizeable energy battery.

The state government has never sought to apply incentives to solar hot water installation, yet owners of these systems help to reduce loads on the local grid. Coupled with timers, solar hot water systems can also be helpful in mitigating peak loads on local grid hardware, by allowing for electrical boosting only in off-peak times. Time-of-day metering plus solar hot water can eliminate nearly all peak time hot water heating.

Policies framed for the farming sector

The abolition of incentives for rooftop solar has been done mainly on grounds that the

renewables industry has matured and no longer needs such governmental incentives in order to flourish. At this point, discreet policies designed for the farm sector would serve to demonstrate that the government is not totally abandoning the renewable industry while at the same time providing valuable support to farming businesses.

- On farm energy generation will not be encouraged by lowering the feed in tariff. In fact, it will have the unintended consequence of removing the incentive for farmers to invest in renewable energy technology and create a diversified income stream that would improve their resilience.
- Farms in Tasmania can aspire to a unique marketing advantage if they are carbon neutral overall in their operation. It will take time to conduct and enable proposed R&D investment into mitigating the impacts of climate change. In the interim, renewable energy production on-farm would reduce the net amount of CO₂ released from farming enterprises.
- The production of energy during drought conditions would provide struggling farmers some financial income when they most need it and act as a risk management strategy to mitigate the impact of drought.
- Rural communities that have been struggling to provide sufficient employment opportunities, could benefit from a beneficial feed-in tariff to encourage sustained growth in the renewable energy sector and result in increased rural employment to service the industry.

Carbon mitigation

So long as Tasmania is a net importer of electricity from the mainland, every unit of energy that is generated here by genuine renewable technologies is a unit of fossil-fuelled power that does not need to be imported. In the event that Tasmania becomes a net power exporter, every unit of power that is generated by renewable equates to a unit of power that will be exported and thus displace fossil-fuelled energy.

In the case of rooftop solar, these private investments (to date amounting to over \$100 million) in energy generation in Tasmania have been willingly made by community members, either to reduce their carbon footprint or to lower their cost of living. It is politically prudent to recognise this community effort and also recognise the social amenity that it provides.

Climate change risk analysis

Since the determination of feed-in rates, new directives require agencies, including government agencies, to adequately assess climate risk in their decision making. This directive will have far reaching ramifications on climate adaptation policies ⁽²⁾.

In summary

- In determining appropriate renewable energy fiscal policy in relation to climate change, take on board recent directives on financial disclosures relating to climate risk.
- Accept the principle that ***all*** renewable energy inputs help Tasmania to achieve energy self sufficiency and energy security.
- Export tariff arrangement for rooftop solar should be reviewed so as to more accurately reflect true value of solar input.
- Recognise that footloose energy plus associated emerging new technologies can not be kept at bay and should be embraced rather than held back.
- Recognise that rooftop solar provides a level of generation without capital cost to government.
- Recognise that affordable rooftop solar is already helping the bottom line of many businesses and lower income households.
- As the legacy feed-in tariff comes to an end in January, we submit that discreet tariff policies designed to support the farm sector would be opportune at this point. Such initiatives would simultaneously allay concerns that state government is abandoning support for the small-scale renewables industry.
- Recognise the role that solar hot water can play in ameliorating loads on distribution infrastructure during peak times.

References

- (1) Determining a fair value for distributed generation
<http://www.backroad.com.au/wp-content/uploads/2017/07/fair-value-dg-report.pdf>
- (2) Climate related financial disclosures
[https://www.cpaaustralia.com.au/~media/corporate/allfiles/document/professional-resources/sustainability/fsb-task-force-climate-related-financial-disclosures.pdf?la=en](https://www.cpaaustralia.com.au/~/media/corporate/allfiles/document/professional-resources/sustainability/fsb-task-force-climate-related-financial-disclosures.pdf?la=en)