Clean Energy Council submission to the QCA Draft Report: Estimating a Fair and Reasonable Solar Feed-in Tariff for Queensland

Executive Summary

The Clean Energy Council (CEC) welcomes the decisions by the Queensland Government and the recommendations and acknowledgements made in the QCA's Draft Report that:

- Eligible customers should be able to retain benefits until the scheduled end date of the scheme through which they benefit;
- A net metering arrangement for feed-in tariffs is preferred over gross metering;
- There will be no fixed charge of any sort on people using solar; and
- The expected financial impact of the Solar Bonus Scheme on Queensland residential electricity consumers will be about half of previously published estimates.

There are aspects of the Draft Report that remain matters of concern for the CEC. They are primarily:

- The scope of QCA's considerations regarding a fair and reasonable feed-in tariff (FiT);
- The proposal for voluntary retailer tariffs in South East Queensland; and
- The recommendation for a FiT of 6.81 cents per kWh (c/kWh), which CEC will argue is too low and should be set closer to 11 c/kWh.

1. The Scope of the Review

The CEC's view is that the term 'fair and reasonable' should be interpreted as a subsidy-free value that reflects the benefits of electricity generated from small-scale PV generators to electricity retailers ***and to other parties*** (eg. distribution network service providers, other businesses and entities in the electricity supply value chain and other customers). It is fair and reasonable that the benefits brought by PV owners should be captured by PV owners.

The Authority takes a narrower view and recommends that, "any future feed-in tariff scheme should be funded by electricity retailers, based on the direct financial benefit they receive from onselling PV exports".

Restricting the consideration of payments to owners of PV systems in this way constrains the extent to which PV owners can be rewarded for benefits they provide to participants in the electricity market other than retailers.

We understand that the terms of reference for the QCA's investigation framed the consideration of FiTs in terms of, "the benefit to retailers of the energy produced by small scale solar PV generators connected to the grid". The CEC's concern therefore relates to the scope of the review, rather than the QCA's response per se.

It is worth noting that the Victorian Competition and Efficiency Commission (VCEC) has recommended that the value of network benefits should be returned to distributed generators, noting that the value is highly location specific.

Recommendation 1:

The term 'fair and reasonable' should be interpreted as a subsidy-free value that reflects the benefits of electricity generated from small-scale PV generators to electricity retailers ***and to other parties***. It should not be the financial benefits that owners of solar PV systems provide to electricity retailers.

2. Metering Arrangements

CEC strongly supports the QCA's recommendation that a net metering arrangement for FiTs is preferred over gross metering.

Net metering has formed the basis of Australia's PV industry. Gross metering would be neither fair nor reasonable. Gross metering would increase costs to householders and curtail their ability to reduce electricity bills by generating their own electricity.

Gross FiTs would have a severe negative impact on Queensland's residential PV sector, and cripple the commercial PV industry in Queensland just as it is getting off the ground.

Recommendation 2:

Feed-in tariffs should continue to be applied on a net metering basis.

3. New network tariffs for owners of solar PV systems

CEC strongly endorses the decision by the Energy Minister Mark McArdle (reported in the *Brisbane Courier-Mail* on 5 December 2012) that, "There will be no fixed charge of any sort on people using solar."

This is a sensible and commendable decision. Customers should be encouraged to reduce waste, generate zero emissions electricity and use it more efficiently. A fixed network charge on solar households would have blunted the incentives for doing so.

Recommendation 3:

The Energy Minister's statement that "there will be no fixed charge ***of any sort*** on people using solar" should be reflected in the final report of the QCA. Customers should be encouraged and rewarded for reducing waste, generating solar energy and using energy more efficiently.

4. The level of the FiT recommended

As outlined above, CEC is concerned by the scope of QCA's consideration of FiTs as it is limited to the benefits of electricity generated from small-scale PV generators to electricity retailers only and excludes consideration of the benefits to other parties. However, even if consideration is limited to the benefits of electricity generated from small-scale PV generators to electricity retailers only, CEC believes that the fair and reasonable FiT would be closer to 11 c/kWh.

4.1 Anomalies arising from use of Tariff 11

The Authority's estimate of a fair and reasonable value for electricity exported from a PV system in South East Queensland in 2012-13 is 6.81 c/kWh. It appears that the Authority has under-estimated the 'fair and reasonable' value by about 3 c/kWh due to the methodology used and as a result of the government's price freeze on residential tariffs.

The Authority has used a cost-reflective Tariff 11 for 2012-13 to estimate the benefit to the retailer. The key difference between the current (frozen) Tariff 11 and the cost reflective Tariff 11 that was used in the Authority's analysis is that the variable rate is lower under the cost reflective Tariff 11 (by 2.937 c/kWh). That lower starting point gives a lower FiT result than would otherwise be the case.

CEC understands that when the Queensland Government put a tariff freeze in place earlier this year, it did so by reducing the Network Use of System (NUOS) charge by about 3 c/kWh. The reduction applied to the 'Residential Flat 8400'. The impact of this decision is that residential customers pay

about 3 c/kWh less for electricity than would otherwise be the case, electricity retailers are not financially disadvantaged and the difference is funded by electricity distributors.

If a new FiT is based on a cost-reflective Tariff 11, solar households will be subsidising the tariff freeze. To calculate a fair and reasonable retailer contribution to the FiT we have used the 23.071 c/kWh variable charge under Tariff 11 rather than the cost reflective level of 20.134 c/kWh.

Recommendation 4:

To address the anomaly in tariffs created by the Government's tariff freeze, the proposed FiT should be calculated on the basis of the 23.071 c/kWh variable charge under Tariff 11, rather than the cost reflective level of 20.134 c/kWh.

4.2 Network Loss Factors

CEC welcomes the Authority's recognition that there are financial benefits arising from PV exports and subsequent changes in network loss factors due to electricity being consumed in close proximity to where it is generated. It is disappointing that the Authority has recommended against including this as part of the FiT calculations and instead has recommended continuation of the status quo, whereby this benefit is shared amongst all network customers. The QCA has not advanced any reason why the savings from reduced network loss factors should be shared with all customers. It would be appropriate to return this benefit to the PV owners who are responsible for it. Doing so would not raise electricity prices. If the benefit of reduced loss factors is not returned to PV households then they will cross-subsidising all other consumers.

The QCA has assumed that the value of the benefit is small, but this may not be the case. PV generation represents about 16% of residential electricity consumption in Queensland. This is material and ought to be assessed.

Even if the value of the benefit is small and difficult to calculate, that is not justification for overlooking it. The impact of PV electricity exports will increase as PV penetration increases, so this issue cannot be overlooked forever. At the very least, the Authority should provide an order-of-magnitude estimate of the financial benefit so that the industry does not need to rely on the distributors' judgement that it is "small" and therefore not worthy of calculation.

Recommendation 5:

The financial benefit of reductions in network loss factors due to PV exports should be calculated and included in a fair and reasonable FiT. At the very least, the Authority should provide an order-of-magnitude estimate of the financial benefit arising from PV exports and subsequent changes in network loss factors.

4.3 Capturing the Premium Value of Energy at the Time it is exported

The Network System Load Profile (NSLP) does not recognise the premium value of daytime generation from PV. CEC welcomes the Authority's recognition of the limitations of using the NSLP for the purpose of calculating wholesale energy costs and that this does not capture the premium value of energy at the time it is exported. We further note the Authority's acknowledgment that, "with the further introduction of remotely-read interval meters, there may be more flexibility to isolate or 'peel off' the PV export volumes from the NSLP [which] would be necessary before retailers could be charged by AEMO based on when they purchase energy from the NEM and the value of PV exports could be linked to the wholesale spot price throughout the day".

Owners of PV systems should be financially rewarded for the premium value of electricity from PV systems at the time that it is exported. If there is no financial incentive for generation at times of peak demand it should come as no surprise that PV systems are oriented to maximise the amount of electricity generated. It would be desirable to provide owners of solar PV systems with an incentive to orient their systems so that electricity generation coincides, as much as possible, with times of peak demand.

Recommendation 6:

Owners of PV systems should be financially rewarded for the premium value of electricity from PV systems at the time that it is exported.

4.4 Green Scheme Costs

CEC welcomes the Authority's acknowledgement that some green scheme costs are levied on gross energy sales, which means that retailers do not avoid these costs when they on-sell exported PV energy. This would appear to be inconsistent with the intent of the schemes. Moreover, if green scheme costs were not levied on exported PV energy there would be a reduction in costs passed on to the consumer.

We understand that this issue is beyond the scope of this review. We encourage the Authority to address this issue in future determinations of regulated retail electricity prices for Queensland.

We also wish to point out that green scheme costs as calculated in the regulated retail tariff are based on an assumed STC price of $40 per certificate. This price has not eventuated, with certificate prices averaging below $30 for the first half year. The actual cost of SRES compliance for electricity retailers is therefore 25% lower than the QCA assumes. By this logic, only 75% of the calculated SRES cost of 0.638 c/kWh are unavoidable. The remaining 25% is avoided simply by the risk-free purchase of STCs on the spot market.

If the QCA wishes to calculate the financial windfall provided by assuming a $40 STC price, weekly STC trading volumes by liable entities can be provided upon request.

Recommendation 7:

Green scheme costs should not be levied on retailers when they on-sell exported PV energy. This would potentially add an additional 1.133 c/kWh to the fair and reasonable estimate of the FiT.

Even if there is no change to the way in which green scheme costs are levied on retailers when they on-sell exported energy, the estimated cost of SRES compliance by electricity retailers should be reduced by 25% (or 0.16 c/kWh) to recognise that an assumed STC price of $40 per certificate overestimates the SRES compliance cost by about 25%.

4.5 Retail margin and head room

It is puzzling that the Authority has recommended that electricity retailers be allowed to retain the retail margin and head room on costs that the Authority itself has acknowledged are avoided when PV energy is exported. It is all the more puzzling, given that the Authority notes that it is not convinced by the retailers' arguments that to do otherwise would jeopardise competition and dissuade retailers from accepting new solar PV customers. Where PV energy exports enable retailers to avoid costs, the margin associated with them also forms part of the direct financial benefit to the retailer. The 10.7% margin and head room on the QCA's proposed FiT of 6.81 c/kWh would equate to about 0.73 c/kWh. On a 10.941 c/kWh FiT advocated by CEC, the 5.7% margin and 5% head room equate to 0.624 c/kWh and 0.547 c/kWh respectively.

In order to clarify CEC's position on the fair and reasonable value for PV exports in SE Queensland, we have replicated Table 4.6 of the QCA report as Table 1 (below) and have added a second table (Table 2), which explains where CEC has taken issue with the QCA's assumptions and methodology.

Table 1 – QCA calculation of fair and reasonable value for PV exports in SE Queensland

Cost component	Retail cost (c/kWh)	Unavoidable costs (c/kWh)
Wholesale electricity costs	6.149	-
Green scheme costs	1.133	1.133
NEM fees	0.040	-
Ancillary service fees	0.046	-
Subtotal	7.367	1.133
Plus losses (7.2%)	0.575	-
Plus network costs	10.200	10.200
Plus margin (5.7%)	1.034	1.034
Subtotal	19.176	12.367
Plus head room (5%)	0.958	0.958
TOTAL (excl. GST)	20.134	13.326
less unavoidable costs	(13.326)	
Direct financial benefit to retailer	6.81 c/kWh	

Table 2 – CEC calculation of fair and reasonable contribution by electricity retailers to a FiT in SE Qld

Cost component	Retail cost (c/kWh)	Unavoidable costs (c/kWh)	Comments
Wholesale electricity costs	6.149	-	
Green scheme costs	1.133	0.973	0.16 c/kWh is avoided by risk-free purchase of STCs on the spot market.
NEM fees	0.040	-	
Ancillary service fees	0.046	-	
Subtotal	7.367	0.973	
Plus losses (7.2%)	0.575	-	
Plus network costs	10.200	10.200	
Plus margin (5.7%)	1.034	0.410	Assumes no margin on FiT, which reduces unavoidable costs.
Subtotal	19.176	11.583	
Plus head room (5%)	0.958	0.547	Assumes no head room on FiT, which reduces unavoidable costs.
TOTAL (excl. GST)	23.071	12.130	Using the variable charge under Tariff 11 so that solar households are not penalised by the tariff freeze.
less unavoidable costs	(12.130)		
Direct financial benefit to retailer	10.941		

Recommendation 8:

Owners of PV systems should receive as part of the FiT the margin and head room on costs that retailers avoid when PV energy is exported. This equates to around 1.17 c/kWh, comprising 0.624 cents/kWh for the margin on the FiT and 0.547 cents/kWh for the head room on the FiT.

Recommendation 9:

Owners of PV systems should receive a retailer payment of 10.94 cents for each kWh exported.

5. Implementation of the FiT

CEC welcomes the Authority's recommendation to mandate a FiT outside of South East Queensland, where competition between electricity retailers is extremely limited. CEC advocates that a minimum FiT should be mandated for all PV exports across all of Queensland. A mandated minimum FiT is needed because:

- A regulated framework provides the most appropriate basis for a future move to a time of use methodology;
- The experience to date of the NSW approach to voluntary retailer payments is not promising;
- Market structure may pose a barrier to competition. The vertical integration of gentailers means that additional PV generation reduces the profitability of generators, and retailers are therefore unlikely to encourage PV generation with a voluntary FiT of true value; and
- The policy implications of retailers' current voluntary offers to PV owners need to be interpreted with caution.

CEC supports cost-reflective pricing for use and generation of electricity. This includes capturing the premium value of energy at the time that it is exported. As Energex has acknowledged, if a time of use methodology is adopted then a regulated approach may be required to ensure that time of use pricing signals are passed on. This is a desirable outcome and the Authority should put in place the framework that would enable this to occur. Retaining a regulated approach to FiTs is an important part of the framework required.

The NSW FiT experience has not been successful. The NSW Government has decided to allow FiTs to be set by market competition alone. A number of retailers in NSW do not offer any financial reward for electricity exported by PV systems and the number making such offers is declining. In addition the information needed to promote competitive offers for PV exports has been withdrawn from the myenergyoffers website. This removes transparency and effectively requires customers to negotiate on a one-on-one basis with electricity retailers. This places consumers in an extraordinarily weak negotiating position.

In contrast to NSW, the Victorian Government recently decided to set FiTs by regulation until 2017, at which time it will review feed-in tariff arrangements, including a review of the success or otherwise of the NSW approach. CEC would recommend a similarly cautious approach be taken by the Authority. The vertically integrated nature of the electricity industry means that competition against generation assets could be stifled by retailers. A mandated minimum FiT would at least prevent market 'capture' by the retailers, while still allowing them to offer a higher value.

Even though there are several electricity retailers in Queensland offering a premium tariff to customers who export surplus PV electricity, this should not be taken as evidence of the desirability of allowing retailers to determine the FiTs on offer. As the Authority has acknowledged, "these tariff premiums should be interpreted carefully as they may be accompanied by additional contract terms and conditions potentially affecting the real new value to the customer of the tariff order".

In making the case for light-handed regulation, the QCA notes that PV customers are perhaps more likely than other customers to be well informed and to actively seek out competitive market offers. This is highly disputable. They are not interested in trying to understand the mire of electricity price offers. They simply want to do something simple to reduce their electricity bills.

6. Next steps

The Authority's report has identified some useful next steps in solar policy. These should include:

- Quantifying the impact that solar PV can have on network expenditure requirements and ensuring that owners of solar PV systems are rewarded for the financial benefits to which they contribute;
- Quantifying the benefits of PV generation on network loss factors and ensuring that owners of solar PV systems are rewarded for these benefits;
- Quantifying the benefits and costs of energy efficiency to the network;
- Developing a feed-in tariff that captures the value of the exported electricity at the time of day it is generated; and
- Removing green scheme obligations upon retailers as they relate to the on-selling of exported PV energy.

We understand that these initiatives are outside the scope of the current review. CEC looks forward to engaging with the QCA and with state and federal governments to address these areas for market reform.