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Queensland Competition Authority
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Regarding: Estimating a Fair and Reasonable Solar Feed-in Tariff for Queensland

Monday, 17 September 2012

Dear Queensland Competition Authority,

Please find enclosed SunWiz's submission to the QCA Queensland Solar Feed-in Tariff Issues Paper.

Kind regards,

Warwick Johnston M.Sc (Renewable). BE (Hons).

Managing Director
SunWiz

About SunWiz

SunWiz is an independent solar consultancy providing services to Australian solar businesses, associations, and to governments at all levels. SunWiz is a key provider of solar market intelligence and is the lead or contributing author of many reports produced by the Clean Energy Council and the Australian PV Association. Managing Director Warwick Johnston holds a masters degree in renewable energy, has designed multi-award-winning commercial PV systems, is the Chair of the Solar Energy Industries Association, and won the 2011 Industry Contribution Award from the Australian Solar Energy Society. At the federal level, SunWiz has recently been involved in an interim review of the National Solar Schools Program, in advising the Office of the Renewable Energy Regulator of the forecast creation levels of Small-scale Technology Certificates, and in providing a PV forecast for the Australian Energy Market Operator.

3.1 Defining Fair And Reasonable

A. How should the term fair and reasonable be interpreted? Should it be interpreted as a subsidy-free value that reflects the benefits to retailers of electricity generated from small-scale PV generators? If not, how should it be interpreted and why?

B. Should the Authority include the benefits associated with PV exports to other parties (all customers and distribution entities) in setting the fair and reasonable value? Why?

C. Are there any other issues that the Authority should consider in interpreting the term fair and reasonable value?

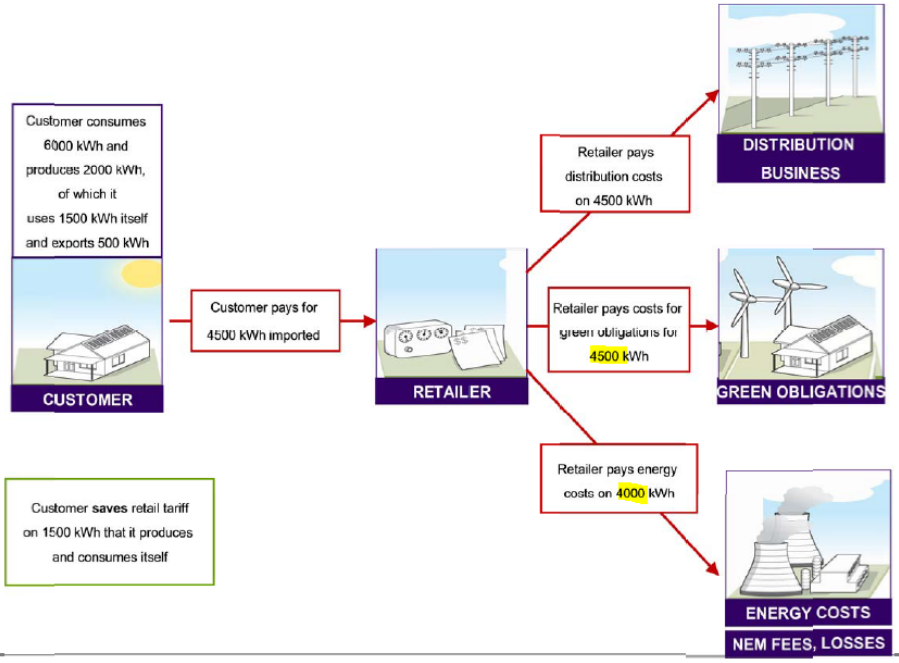
- The term 'fair and reasonable' should be interpreted as "the benefit created by installation of PV systems should be capture by PV owners, to the extent that PV owners to not materially increase electricity prices higher than they would be in the absence of PV". This recognises that reductions in electricity prices caused by PV due to reduced loss factors and the merit order effect offset price rises that may occur due to other factors.
    - The situation with air conditioning provides a parallel example of the market distortion that occurs when costs and benefits are not charged/paid to the party that caused them.
- As such, benefits associated with PV exports to other parties (all customers and distribution entities) should be included.
- IPART recognises that the current National Electricity Rules were written before distributed generation was material, and thus need review. So long as the National Electricity Rules' discrimination against distributed generation continues, provision to PV owners of 'fair and reasonable' value for solar exports is impossible without regulation.

> *"Therefore, we recommend that the National Electricity Rules and guidelines be reviewed to ensure small-scale renewable generation is appropriately incorporated into the policy and regulatory framework. This review is warranted because the embedded generation provisions within the National Electricity Rules may not be well tailored to small-scale generation such as PV units (due to its rarity at the time that the National Electricity Rules were developed). However, since the National Electricity Rules were developed, there has been increasing penetration of PV across the NEM."*[1]

- For example, the QCA's proposed methodology will result in full DUOS fees being incurred, even though PV uses only a small amount of the network and reduces peak demand (to varying degrees). It is reasonable for solar power generators to contribute to network costs only to the extent that they use the network
- Another example is the double charging of green fees (RECs) on solar exports which was highlighted by IPART (Green fees are levied on gross imports, rather than net consumption), as shown in the figure below (my highlights).

[1] IPART, "Solar Feed-in Tariffs", Final Report, March 2012, p7

Figure 6.1 An illustrative example of financial flows under net metering arrangements if retailers pay no feed-in tariff



[2]

[2] [2] IPART, "Solar Feed-in Tariffs", Final Report, March 2012, p48

3.2 Estimating the fair and reasonable value of PV exports

A. ***Has the Authority correctly determined which costs a retailer can avoid when onselling PV exports?***

B. ***Is it reasonable to use cost estimates from notified prices to determine the feed-in tariff? If not, which cost estimates should the Authority consider using?***

C. ***What proportion of distribution losses are avoided when PV exports are on-sold?***

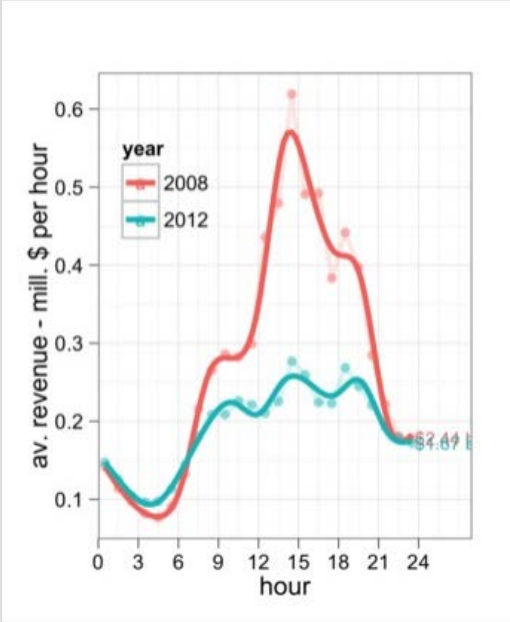
D. ***Is it reasonable to split retail margin and headroom between the retailer and the PV exporter? What are some of the considerations in providing a greater proportion of the costs to either party?***

E. ***Is it fair and/or reasonable to have different FIT based on geographical locations in a market with the Uniform Tariff Policy in place? What are some of the benefits or complications of creating geographically based FIT?***

F. ***What other issues should the Authority consider in determining the fair and reasonable value of PV exports?***

- Though the Net System Load Profile method may accurately reflect retailer costs, this is likely to understate the actual wholesale market benefit brought by solar due to its production of power during high-price periods. Thus it is likely to understate the fair value. The introduction of smart meters will affect the calculation methodology.
- The current National Electricity Rules prevent recognition of fact that PV exports only use a small portion of the grid, and that PV production reduces peak demand in some locations. Specific power flows of exported distributed generation are invariably over far smaller distances than for the centralised energy, thus having lower losses. PV generation (whether exported or consumed on site) also reduces the nodes' loss factor, a benefit for all customers on that node (and the retailers that service them).
- The double charging of green fees (RECs & Queensland Gas Scheme) on solar exports which was highlighted by IPART - (Green fees are levied on gross imports, rather than net consumption). The QCA should change the Queensland Gas Scheme to ensure that green fees are only charged on net consumption, in order to ensure that solar exports subtract from retailers' costs.
- The Authority should consider the extent to which PV reduces volatility in wholesale electricity prices, such as has occurred in the past three years (illustrated in the figure below). This reduction in volatility should reduce retailer's risk margin, therefore allowing the benefit brought by PV to be passed on. It is reasonable to split retail margin and headroom between retailer and PV exporter. It recognises the risk that PV owners take on when buying a PV system. It also reflects the reduced risk faced by the retailer

associated electricity price volatility.



[3]

- Location-based feed-in tariffs are reasonable. The solar industry is sophisticated enough to handle the complications of geographically-varying Feed-in Tariffs, so long as there is sufficient difference (i.e. benefit) to warrant the additional complication.

[3] http://reneweconomy.com.au/2012/whos-afraid-of-solar-pv-38844

4.1 Form of regulation

A. ***What form of regulation should be applied when implementing a fair and reasonable feed-in tariff in Queensland? Alternatively, should the fair and reasonable tariff be determined by market competition alone, without regulatory intervention?***

B. ***Which regulatory approach is most appropriate to support competition in the Queensland electricity market, while recognising the need for certainty for small PV system owners?***

C. ***What evidence is available of the number of solar PV customers receiving voluntary feed-in tariff premiums in Queensland? Does the level of these tariffs represent a fair and reasonable value for the electricity exported by solar PV customers?***

D. ***What, if any, specific arrangements might be required when implementing the fair and reasonable feed-in tariff in the Ergon Energy distribution area? In particular, should different forms of regulation be used in the Energex and Ergon Energy network areas?***

E. ***Are there any other factors (besides the competitiveness of the retail electricity market) that the Authority should consider in determining an appropriate form of regulation to apply in Queensland?***

- FiTs should be set by regulation. The NSW experiment has shown that retail competitiveness alone is insufficient to warrant delivery of a fair and reasonable tariff. Under retailer pressure, IPART removed the list of retailers PV export offerings from the myenergyoffers website[4], the very information that underpinned their argument about the sufficiency of a competitive market (which requires transparency of information).
- A regulated mandatory minimum payment is preferred, of which a contribution comes from the distributors for consumer-benefits (with contribution amortised across all customers to an equivalent amount of hidden benefit they receive)
- An unregulated price limits the ability for the price to include contribution for factors not otherwise directly captured by retailers – e.g. reduced network losses, merit order effect. The retailers' current voluntary offerings will exclude all of uncapturable factors, so do not represent fair and reasonable tariffs.
- The QCA has not considered the market structure may pose a barrier to competition. The vertical integration of gentailers means that additional PV generation reduces the profitability of generators, thus retailers are unlikely to encourage PV generation with a voluntary feed-in tariff of true value.
- 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 less interested in trying to understand the mire of electricity price offers, just wanting to do something simple and guaranteed to reduce their electricity bill

[4] http://reneweconomy.com.au/2012/the-strange-case-of-nsws-disappearing-solar-tariff-rates-46957

4.2 Metering Arrangements

A. ***Is a net or gross metering arrangement most appropriate in Queensland, and why?***

B. ***Are the benefits to retailers different under net and gross metering arrangements?***

C. ***Are there any other factors the Authority should consider when recommending an appropriate metering arrangement?***

- A net metering arrangement is most appropriate.
- Similar pricing reviews in other jurisdictions have all favoured net metering. Any move towards a national feed-in tariff would be impeded by the hundreds of thousands of net metered systems in existence
- A net feed-in tariff with lower-than-retail export value is the best method for incentivising reductions in peak demand.
- Gross feed-in tariffs will be a major barrier for consumers being able to reduce their electricity bills.
- Gross feed-in tariffs will reduce the ability for consumers to supply their own power needs, thereby reducing competition from the electricity network operators (who are exercising a monopoly position) and retailers
- The people who are making greater use of the poles and wires by consuming more energy should be paying more for this usage. Concerns about recovery of fixed costs in the face of decreased volume of consumption (as is occurring even without PV) should be addressed by market reform.
- There are other health and environmental benefits (externalities) associated with solar power that are not reflected in current electricity pricing.
- A fair and reasonable return will not be available to Queenslanders if a gross metering scheme is implemented. This would lead to the demise of the Queensland solar industry, leaving nobody to service and maintain the millions of PV panels currently on roofs.

4.3 Review of the fair and reasonable value

A. ***How often should the fair and reasonable value be reviewed or updated?***

B. ***Should the Authority recommend a flexible review mechanism which allows updating the value in response to relevant changes and developments?***

C. ***If a flexible review mechanism is recommended, what criteria should be applied when deciding if an update to the value is necessary?***

D. ***What are the implications for the current review of a potential transition to a national feed-in tariff established through COAG processes?***

- Similar pricing reviews in other jurisdictions have all favoured net metering. Any move towards a national feed-in tariff would be impeded by the hundreds of thousands of net metered systems in existence