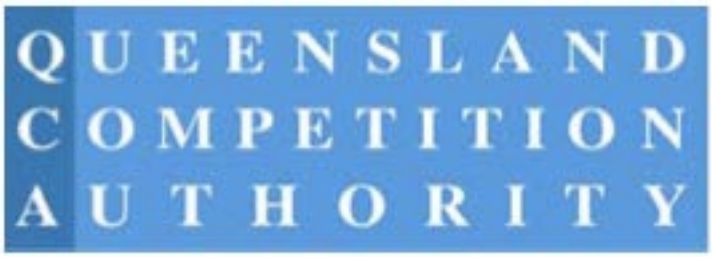
Solar Business Council Inc.

Submission to the



September 2012

Contents

Introduction

The Solar Business Council Inc. (SBC) appreciates the consultation process being undertaken by the Queensland Competition Authority (the Authority) and looks forward to actively participating in the discussion and the review process over coming months.

The SBC makes this submission having considered their extensive experience in the design, sale, installation and operation of many thousands of solar PV systems across a number of jurisdictions and over a period of time. The SBC and its members have long advocated for a fair and reasonable tariff – fair and reasonable for all stakeholders. We have advocated against tariffs that were too low and against tariffs that were too high.

We have focused our attention on 1 (a) and 1(b) of the issues paper, which relate to the setting of a FiT. We have not directly addressed 1 (c) and 1(d), which relate to the recovery of the costs of the solar bonus scheme but we point out that the Authority can avoid having to retrospectively ask such questions in the future with the right consideration today and the establishment of a FiT that encourages competition for electricity retailers and generators and is truly fair and reasonable to all stakeholders.

Executive Overview

Over the last few years more than $7 Billion has been invested in more than a million individually owned and operated small scale solar PV generation systems in Australia. This investment has enabled more than a million consumers to source their electricity from their own generation and put pressure on wholesale electricity prices and electricity retailers while reducing pressure on the electricity market and network - *good outcome.*

Some of the policy that has enabled this investment has been good, some of it has not.

Without the policy, structural barriers to competition in the electricity market would have prevented the investment. In the early days of these policies, they also overcame economic barriers for products that were descending in price but still out of reach – this latter barrier is much lower today and continues to shrink.

The SBC submits that in order to provide maximum value to the Queensland economy and to maximise the opportunities for competition in the production, distribution and sales of electricity in the Queensland market, the Authority should:

- Build on analysis that has been done to quantify the economic value of electricity produced by highly distributed embedded solar PV systems by applying the analysis specifically to the Queensland context;
- Establish the level of return required in order to encourage investment in small scale PV systems so as to produce the economic benefits;
- Provide owners of small scale PV systems with an adequate return by way of a net FiT that encourages them to focus on generating their own power while providing a mild reward for exported electricity;
- Ensure that retailers and distributors are neither out-of-pocket or unduly rewarded for their role in enabling the FiT to operate.
- Clearly articulate the benefits that accrue to the market and Queensland electricity consumers as a result of the fair and reasonable FiT.

Failure to implement a net FiT (versus a gross FiT) that enables potential solar PV system purchasers to benefit from generating and consuming their own power would be anti competitive and entrench the market power of the vertically integrated "gentailers". A gross FiT approach (unless priced unrealistically high) would be a barrier to the participation of individuals in this important market as it prevents investors in solar PV systems from receiving a reasonable share of the benefits that result. Further, a gross FiT does nothing to encourage energy efficiency.

A gross FiT would result in:

- *Less deployment of systems;*
- *Less energy efficiency in the market;*
- *Less downward pressure on wholesale electricity prices;*
- *Less reduction in losses;*
- *Less deferment of expensive investment in network infrastructure; and*
- *Less competition for energy generators and retailers.*

Minister McArdle's directive to the QCA states, "I now direct the QCA to conduct an investigation into the establishment of a fair and reasonable value for electricity generated

from small scale solar PV generators and exported to the Queensland electricity grid, as well as the mechanisms for its implementation." "Exported" should not be redefined to include power generated and consumed by the same householder.

Answers to Specific Questions

Section 3.1

3.1 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?

A: "Fair and Reasonable" should be applied to all stakeholders such that:

1. *The benefits of reduced wholesale electricity costs that result from the deployment of solar PV systems should flow to all consumers in the Queensland electricity market – a net benefit that is a fair and reasonable return on the costs of meeting 2 through 4 below*
2. *Investors in PV systems get a fair and reasonable return on that investment – not more or less than is reasonable.*
3. *Retailers should make a fair and reasonable margin on the power they acquire as a result of any FiT – not more or less than on power from other sources.*
4. *Distributing the exported power should not be a net cost to the distributors – it should not reduce their regulated return on assets.*

3.1 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?

A: Yes, this would be fair and reasonable.

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

A: The focus of energy industry lead debate has been on the cost of schemes aimed at encouraging the deployment of PV systems. The costs are only one component of fair and reasonable.

As is now widely acknowledged (including by AEMO and the Australian Minister for Energy), the deployment of roof top PV systems has, and continues to suppress apparent demand – demand through the market. This has the effect of reducing both the volatility and level of wholesale electricity prices. These reductions flow through to all stakeholders in the market. For the Tariff to be fair and reasonable, it needs to recognise this value and adequately reward those that invested to create it – with a fair and reasonable share of the savings.

3.2 D: Has the Authority correctly determined which costs a retailer can avoid when on-selling PV exports?

A: The SBC is not best positioned to comment on this specific issue.

3.2 E: 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?

A: The Authority should consider the analysis of the Merit Order Effect that results from the deployment of distributed solar PV systems on whole of electricity market costs. This analysis can be refined to focus on the Queensland context and would determine the pool from which savings can be distributed. Analysis of the national context shows that it would be in excess of the costs.

3.2 F: What proportion of distribution losses are avoided when PV exports are on-sold?

A: This can only be answered in generalisations because losses are location dependent. In general, most losses from highly distributed small scale generation are avoided. This is because the specific power flows of exported distributed generation are invariably over far smaller distances than that from centralised generation, thus having much 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).

3.2 G: 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?

A: 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.

3.2 H: 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?

A: It is both fair and reasonable to have geographic variations so as to reward (and incent) investment in locations that will provide the most benefit. Such an approach can maximise network benefits such as avoided losses and investment deferment. In order to be practical, the geographic areas need to be reasonably broad brush and simple to operate as being too granular will incur administration complications that will dilute the benefits.

3.2 I: What other issues should the Authority consider in determining the fair and reasonable value of PV exports?

A: The Authority should consider the extent to which PV reduces volatility in wholesale electricity prices, such as has occurred in the past three years. This reduction in volatility should reduce retailer's risk margin, therefore allowing the benefit brought by PV to be passed on.

The Authority should also consider the real difference between the total power generated and the exported power.

- *A net FiT allows consumers to generate and use their own power, and benefit from this – in effect, sourcing power from themselves.*

- *A gross FiT treats all power as being exported (whether or not the power is consumed on the generation premises) which effectively prevents a user from generating and using their own power. This is clearly providing existing generators and retailers with an unfair advantage and is a barrier to increased competition for their products and services.*

Section 4.1

4.1 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?

A: *A regulated minimum net FiT is the only way to ensure that a fair and reasonable tariff is provided because:*

- *Small individual consumers do not have the market power to negotiate a fair and reasonable outcome with a large vertically integrated energy companies.*
- *A fair and reasonable FiT needs to take into consideration the costs and benefits of the scheme and distribute the net benefit in a fair and reasonable way. The retailer is not able to represent the interest of the broader stakeholders.*
- *It enables system owners to source (at least some of) their own power from themselves.*
- *It rewards systems owners for energy efficiency initiatives they undertake.*
- *A gross FiT:*
  - *Prevents solar PV system owners from accessing a reasonable value for the power they produce*
  - *Prevents individual consumers from self sourcing at least some of their own electricity*
  - *Discourages the broadening of the ownership of the electricity generation base*
  - *Protects electricity retailers from competition from self generators*
  - *Is anti competitive*

The value of the FiT should be regularly reviewed (in a transparent and predictable way) to ensure the FiT continues to support the objectives of the scheme.

Note that the revised prices (and conditions) should apply to new PV connection approvals only and not be retrospective for existing PV connection approvals in place at the date of the changes.

4.1 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?

A: *The strongest way to support competition in the Queensland electricity market is to encourage the deployment of independently owned distributed*

and embedded electricity generation as this approach decentralises the ownership and location of power generation in the state and apply downward pressure to wholesale electricity prices.

The only effective approach to encourage solar PV deployment (and add competitive pressure to the market) is to have a simple and well managed, regulated net FiT. The use of a gross FiT would actively discourage competition, protect electricity retailers market by preventing consumers from generating some of their own electricity and prevent Queensland consumers from benefiting from lower wholesale electricity prices and lower network costs.

The objective of those advocating approaches that will effectively limit the deployment of small PV systems is to limit the amount of competing generation and electricity supply – to maximise their market control.

4.1 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?

A: There is insufficient clear data available due to the fact that the market has operated under the Solar Bonus Scheme until very recently.

4.1 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?

A: There need not be network operator specific differences. Rather, the Authority should consider the benefits of broad locational variations in the FiT so as to further encourage investment in solar PV systems in specific areas where maximum benefit can be achieved.

4.1 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?

A: The Authority should consider that the electricity market and the electricity network structure are no longer ideally structured to produce the best value outcomes for Queensland (and Australian) consumers. Instead they reflect the needs of the market at the time of their original design – in the 2nd and 3rd quarters of last century. Since this time, there have been major changes to market conditions; the nature of consumers and demand; and generation, distribution and consumption technology.

The Authority should promote and participate in a strategic review of the electricity sector across the national electricity market so as to remove barriers to competition, increase market efficiency, maintain downward pressure on the energy prices and maximise the cost effectiveness of investments in network infrastructure.

Section 4.2

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

A: *A net metering system is appropriate because:*

- The most efficient and best value approach to embedded electricity generation is to encourage users to generate and consume their own power. This outcome reduces the pressure on networks, reduces peaks and increases competition in the electricity market.
  A lower than retail price based net FiT provides the best incentive for consumers to meet their power needs with their own generation.
- A gross FiT that is significantly below the retail price would be anti competitive in that it would:
  - *Would prevent individual consumers from self sourcing at least some of their own electricity;*
  - *Discourage the broadening of the ownership of the electricity generation base;*
  - *Protect electricity retailers from competition from self generators; and*
  - *Prevent solar PV system owners from accessing a reasonable value for the power they produce – while allowing centralised generators to access the full value of their generation.*
- A gross FiT that is around or above the retail price of electricity would provide the solar PV system owner with a level of return that is unreasonably high and create an unreasonable burden on the broader community.

4.2 B: Are the benefits to retailers different under net and gross metering arrangements?

A: *The Qld FiT currently provides "free" energy to the retailers. Retailers may argue that they buy the energy via a voluntary premium (of 6 to 8 cents per kWh) It is much more plausible that the premium is a customer retention strategy as the premium keeps customers "sticky" and is much cheaper than most other customer retention strategies.*

A gross FiT operating under the same mechanism provides electricity retailers with the potential for much larger windfall profits at the expense of solar PV system owners and at the exclusion of other stakeholders in the electricity market. This approach is clearly not fair and reasonable.

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

A: *The choice between net and gross metering is clear. A rationally priced net FiT promotes competition and distributes value to all electricity market stakeholders. A gross FiT does not encourage the best value deployment of embedded solar PV generation; does not encourage more competition in the electricity market; and rewards electricity retailers for investments made by others.*

The Authority should consider the potential for incentivising the combination

of emerging storage technology with embedded solar PV technology to further reduce peak consumption and the need for network enhancement.

Section 4.3

4.3 A: How often should the fair and reasonable value be reviewed or updated?

A: An annual review that used a set of published criteria to calculate changes to the FiT is the most effective approach. It provides stability, predictability, objectivity and transparency. Note that the revised prices (and conditions) should apply to new PV connection approvals only and not be retrospective for existing PV connection approvals in place at the date of the changes.

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

A: Yes, as per the answer to question 4.3 A above.

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

A: The simplest and most effective approach is to link changes to the net FiT to average wholesale prices. This means establishing the level of the net FiT and then maintaining it as a multiple of the wholesale price. This ensures that the return to the system owner comes predominantly from offsetting their own usage but gives them some market related return for power they export to the market (i.e. pays them for the value of their exports).

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

A: If a fair and reasonable FiT is established nationally as well as in Queensland, the transition will be minimal and support the growth of competition in the electricity market through a broadening ownership of distributed and embedded power generation.

Section 5.2

5.2 A: What factors should the Authority consider to ensure the costs of the Solar Bonus Scheme are equitably distributed?

A: Historically, solar PV FiTs have been set without sufficient (if any) consideration of the economic benefits to be derived from the (widely distributed) deployment of the technology. As a result, FiTs have been tactical; sometimes too high; sometimes too low; and have rarely been "fair and reasonable".

The SBC believes it is inappropriate to comment on who should pay how much for the previous scheme until such a time as work has been done to establish which stakeholders have benefited and by how much. Key to understanding the net costs is considering the Merit Order Effect which looks at the economic impact of distributed unscheduled renewable energy generation. Independent work has been done on the Australian and international markets. This work could and should be reviewed and refined to provide an accurate picture of

the economic impacts in Queensland. This would be an invaluable tool to assist the Government in determining the distribution of costs and communicating such determinations.

Considering the benefits/net costs of highly distributed and embedded generation is key to ensuring that there is not a need to retrospectively decide how they should be funded throughout their life.

About the Solar Business Council Inc.

The Solar Business Council (the Business Council) is the incorporated body formed by the members of the Australian Solar Round Table (the Round Table) – it effectively replaces the Round Table.

The Solar Business Council is a group of Senior Executives of Australia's largest and most commercial Solar Energy Companies and has been formed to provide industry leadership, stakeholder education and to earn market confidence for the Residential and Commercial Solar market in Australia. The Round Table was formed in August 2011 and incorporated into the Business Council in April 2012. Its membership will continue to expand as likeminded CEOs are invited to join.

Currently, the Round Table membership is:

- Jeremy Rich, CEO, Energy Matters
- Simon Schauble, CEO, Nu Energy
- Jenny Lu, CEO, Suntech Power Australia
- Steve McRae, CEO, Ingenero
- Richard Turner, CEO, ZEN Energy Systems
- Phillip Butterworth, Country Manager, Power One

The Business Council uses objective, fact-based data to develop and communicate industry strategies and policies that are empathic to the needs of the stakeholders in the industry, Governments and the broader community. Members contribute their resources and experience to establish critical mass and a strong voice.

Contact Details:

Dave Holland
Solar Business Council Inc.
48 Dover Street
Cremorne VIC 3121
phone: 0408 055 171
email: dholland@rangle.com.au