



27 September 2011

Essential Services Commission of SA
GPO Box 2605
Adelaide SA 5001

By email: escosa@escosa.sa.gov.au

Dear Chairman,

Determination of solar feed-in tariff premium – Issues Paper

AGL Energy welcomes the opportunity to comment on the Essential Services Commission of South Australia's (the **Commission**) Issues Paper *Determination of Solar Feed-in Tariff (FiT) Premium* (the **Issues Paper**).

As the leading investor in renewable energy and one of the largest energy retailers in Australia, AGL Energy (**AGL**) is well placed to comment on the Issues Paper. AGL operates across the supply chain and has investments in coal-fired, gas-fired, renewable and embedded electricity generation. AGL is Australia's largest private owner, operator and developer of renewable generation, with 1,073 MW of renewable capacity (at 30 June 2010). AGL is also a significant retailer of energy with over 3 million electricity and gas customers. AGL is able to provide perspectives in relation to solar feed-in tariffs as both: an entity that sells and installs solar PV units; and a large retailer of electricity and gas.

Value of electricity from residential solar PV systems

AGL note that there are a range of approaches the Commission could employ to determine the value of solar PV exports to retailers. In establishing the most appropriate approach to calculate the value of this electricity to retailers AGL is of the view that:

- The value of solar PV exports should be based upon the avoidance of direct costs by the retailer or other parties, that would otherwise be passed through to consumers, over the pricing period i.e. avoidance of wholesale energy costs associated with settlement process for retailers;
- Calculating the wholesale value of solar PV exports should have regard to:
 - o The timing of PV exports relative to a retailer's load profile; and
 - o The 'non-firm' nature of solar PV exports i.e. the value of the exports should be discounted relative to a 'firm' price set in the wholesale market.
- The regulated value of solar PV exports should be updated over time to reflect changes in market conditions. Without a mechanism to reflect the market value of the solar PV exports the FiT Premium could be set too high and this could undermine efforts to promote retail electricity competition in South Australia.

Due to the level of complexity of determining a value for PV export for different types of customers AGL consider that setting a single FiT premium would be most appropriate.

Public policy objectives of FiT Premium

Whilst AGL acknowledge that the Commission is seeking comments on how to set a 'fair and reasonable' value for solar PV exports, AGL also wish to note concern about the lack of overarching public policy objectives underpinning the development of FiT policies throughout Australia. AGL believe that the lack of underlying public policy objectives for

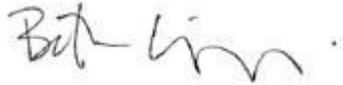
the implementation of FiT policy is a key driver in some of the poor outcomes experienced following the introduction of FiT schemes in a number of jurisdictions.

The vast majority of retail customers currently purchase energy from a retailer that voluntarily offers a 'solar tariff premium' for the energy exported, which reflects the retailer's assessment of the value of that energy. Retailers use this solar tariff premium as a marketing tool in order to increase the competitiveness of market contract offers for customers.

Our response to the specific questions raised in the Issues Paper is in Attachment A.

AGL is keen to work further with the Commission to investigate the most appropriate approach for setting the 'fair and reasonable' value to a retailer. Should you have any questions in relation to this submission, please contact Meng Goh at mgoh@agl.com.au or 02 9921 2221.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Beth Griggs".

Beth Griggs
Head of Energy Market Regulation

Attachment A

What is the most appropriate method to calculate the fair and reasonable value to a retailer of electricity fed into the network by solar PV systems?

AGL is of the view that the value of the energy exported by PV customers is best determined by competitive forces in the retail market. In the current context where the Commission is required to set a 'fair and reasonable' value of solar PV exports, AGL is of the view that any determination of the value of the energy from solar PV export to retailers should be based on the avoided direct costs.

How should the variability in the value of energy be reflected in the approach that the Commission takes in determining a FiT premium?

Should the value be linked to wholesale electricity prices? If so, how?

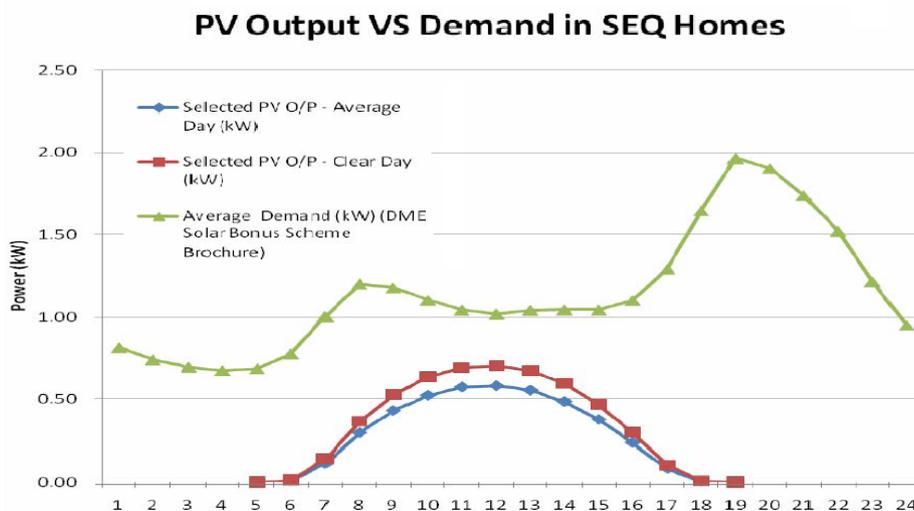
Are there any other approaches to determining the value of energy exported from solar PV systems?

To assess the value of energy generated by PV customers, it is important to recognise that unlike conventional generation, solar PV output is non-firm or intermittent, varying significantly depending on location, season and other factors. The non-firm nature of this supply means that retailers cannot rely on this load as a hedge against volatile spot prices.

AGL understands the challenges that the Commission faces in setting prices in the future. AGL considers that wholesale prices will be useful to provide a guide to setting the FiT premium. This will provide transparency to the process. As solar PV generation takes place within the AEMO peak times (7am to 10pm), it is also appropriate that the value of energy from solar PV reflects the value when it is produced at different times of the day. AGL considers the use of forward contract prices to be limited without a significant adjustment to recognise the non-firm nature of supply.

The Commission has also raised for consideration the degree of correlation of peak solar PV generation and peak electricity demand. Figure 1 below outlines data provided by Energex which summaries conditions likely to be experienced in south east QLD and northern NSW. AGL note that the relationship between the demand profile and PV output will depend on geography and climatic conditions, therefore direct observations in other locations cannot necessarily be applied to South Australia. However, what Figure 1 does show is that while there is some coincidence of solar PV output and higher than average residential demand, the correlation is not absolute and the peakiness of the system load may be worsened. It can be assumed that this is also likely to be an issue in South Australia, and further investigation of the generation profile of PV and load profiles in SA should be examined.

Figure 1 – PV Output vs Demand in SEQ Homes



Source: Energex presentation to QLD Power and Gas, October 2010

Are there any other potential costs or benefits to retailers from solar PV exports?

How should the Commission quantify these costs or benefits in the derivation of a FiT premium?

AGL note that currently there are significant implementation and incremental ongoing costs in serving customers with embedded generation systems such as solar PV. Implementation costs include: changes to IT systems to cater for new retail and network tariffs; and training and related costs associated with changes in Federal and state policies affecting the PV market including communication with customers. The largest component of cost increases relates to customer service where dedicated teams have been created to manage enquiries, contracting, billing and processing of refunds relating to PV customers.

AGL considers it is reasonable that where there are specific direct benefits such as savings in market fees and renewable obligations, these should be assessed. However, AGL suggest that while indirect benefits, such as investment deferral and diversification of supply, may have impacts on the cost of electricity supply over time the uncertainty associated with calculating the amount of any such benefits means that the Commission should focus on the value of direct cost components over the pricing period. Again in this context it should be noted that it cannot be assumed that solar PV generation lessens the peak demand, and may in fact have the effect of making the load more peaky due to the lack of coincident peaks.

Should the FiT premium incorporate the benefits of any avoided loss factors?

Are there any extra costs and benefits that retailers may incur as a result of increased uptake of solar PV systems?

As noted earlier, AGL is of the view that any assessment of the benefit to retailers should be based on avoided direct costs.

Should some of the benefits to retailers be shared with all electricity customers or just those customers with a solar PV system?

On the basis that the benefit to retailers is the value of avoided direct costs over the pricing period and that the current feed-in tariff scheme will be closed to new participants from 1 October 2013 then the policy intent suggests that any value ascribed to solar PV exports should be assigned to the solar PV customer. AGL considers that the allocation of any broader benefits through the electricity supply chain from a program such as the current feed-in scheme should be guided by public policy objectives.

Does the level of the current voluntary FiT premium on offer from some retailers in SA accurately represent the value of energy to that retailer?

The development of a voluntary feed-in-tariff premium by retailers, in addition to the current distributor credit feed-in-tariff, is clear evidence that a value has been identified and attributed solar PV exports as a pricing response in a competitive market. As noted earlier in the submission, the value of these exports will vary amongst retailers as they compete to attract solar PV customers. Consequently, AGL suggest that the current voluntary FiT premium is not solely representative of the wholesale value of solar PV exports at a point in time, but includes 'competitive' premiums.

Should residential customers have a different FiT premium to business customers?

How should the feed in tariff be updated over time?

What are the implications of setting the FiT premium too high or too low? How would this impact on competition in the retail market, particularly competition for solar PV customers?

Under net metering arrangements, the demand profile of a customer will affect the export profile of a solar PV unit. Given the diversity of consumption patterns and the non-firm nature of solar PV generation, AGL are of the view that the relevant consideration should

be when energy is generated, rather than whether customers are categorised as residential or business. However, due to the level of complexity of determining a value for PV export for different types of customers AGL consider that setting a single FiT premium would be most appropriate.

AGL is of the view that the Commission should consider an approach that will allow the FiT premium value to be updated over time to reflect the changing nature of market conditions. If the FiT Premium was set too high this could reduce the ability of retailers to provide customers with competitive electricity supply offers. In light of the significant reforms made in recent years in the South Australian retail electricity market this issue poses a risk of undermining the efforts to date.