SUSTAINABLE ENERGY ASSOCIATION OF AUSTRALIA

Submission:

Solar feed in tariffs
Setting a fair and reasonable price
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by the

Sustainable Energy Association of Australia

www.seaaus.com.au

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Setting a fair and reasonable price for distributed renewable energy generation

Overview

The Sustainable Energy Association of Australia (SEA) supports the payment of a fair price of energy for the domestic, distributed generation which exports energy to the grid. Whether the payment for distributed energy generation is at a premium or is merely cost reflective is a policy issue as much as one on pure economic grounds.

In terms of policy, the payment for exported energy as a 'feed in tariff' is a mechanism that:

- supports the development of the renewable energy industry including job creation and stimulation of business activity;
- reduced need for investment in additional generation capacity due to private investment in generation;
- improving domestic energy security for individual homes; and
- assists in displacing fossil fuel based generation.

Many economic commentaries in relation to feed-in tariffs only look at the greenhouse gas abatement issue in determining the relative merit of feed in tariffs, rather than the broader and more comprehensive policy outcomes. Furthermore, the specific goals of the NSW Solar Bonus scheme noted on page 10 of the Issues paper does not explicitly address the issue of greenhouse gas abatement as an intended outcome of the scheme.

Considering the scope of the IPART review in the setting of a future energy price for distributed energy, the following comments are made in light of the receipt of these payments by persons who would have been otherwise eligible for the Solar Bonus Scheme.

Financial gain to retailers or other parties

Electricity retailers have a number of direct and indirect financial benefits from a greater amount of distributed energy on the network which are clearly identified on pages 17 -20 of the issues paper. In respect of these direct financial gains through avoided costs, the retailer has a position of greater financial outcome at no cost to them.

SEA's position for the fair price for exported energy should be calculated as including:

- Cost- reflective energy prices based on time of day production;
- Avoided market costs;
- Avoided transmission losses;
- Avoided network charges (see below); and
- Any benefits from avoided future carbon or emission pricing.

In respect of indirect benefits, retailers are not the only parties in the supply chain to benefit from the generation and sale of distributed energy. Network operates whose fees for the network are charged at the point of exit bundle all fees (transmission, distribution and metering) regardless of the source of the energy which is generated. So for a purchaser of electricity, even if it is generated locally, pays an undifferentiated price for that energy including network fees which may not technically have been incurred (e.g. transmission system fees) where the transmission system has not been used. This is because local distributed generation is likely to be consumed locally on the grid, rather than entering the transmission system. By charging these fees where the system has not been utilised they are making a gain the cost of which is passed through the retailer to the end consumer.

SEA's view is that this is not a fair and reasonable situation but there is currently no mechanism for the transfer of this value between parties in the supply chain to account for this. Therefore the price that is paid by some consumers is not cost reflective in that it is effectively being a 'subsidy' paid to the network operator for transmission assets not being utilised in the transaction.

Wholesale market value of distributed energy

Overall SEA is in agreement with the proposed methodology for estimating the methodology in assessing value of exported energy at time of production, on the assumption that this pricing methodology accounts for the time of generation of the energy. The methodology should also account for seasonal variation for the amount of potential generation from solar PV systems i.e. the difference between hours for potential generation in summer and winter.

Implications of feed in tariff price points

The issue of the final price for exported distributed energy sold back to retailers should be a set minimum payment for exported energy. Through a minimum payment price this:

- Provides certainty for consumers that a minimum payment will be received per exported unit and paybacks can be calculated readily based on this minimum;
- Retailers have a competitive incentive to offer at or above this rate in a competitive market and the retailer can still sell this energy to other customers at a profit and potentially reduced spot-price risk; and
- Retailers can compete for customers through the development of products that suit home owners with PV systems, recognising that these consumers are likely to have lower consumption than consumers without PV systems;

FiT price points

The issue of setting the price for either 'too low' or 'too high' for a FiT assume that there is a price point which is acceptable to all parties as being fair and reasonable. This point will be covered below but in considering the issue of seating the price lower or higher than the theoretical optimum:

- If too low then:
    - Consumers are not realizing the benefits of their capital investment and these benefits are accruing to other market participants who did not make the investment;
    - Consumers will have a reduced incentive to purchase solar PV systems leading to the continued negative impact on solar PV suppliers' business as seen after the closure of the Solar Bonus scheme in April 2011; and
    -
- If the FiT price is set too high then:
    - Retailers may not wish to offer any solar PV buyback as they are potentially required to buy energy and sell at a loss;
    - Under a net export FiT, consumers can have export oriented behaviour thereby shifting energy use to peak periods which may have long term impacts on network costs; and
    - There is uncertainty how this excess might be funded if a FiT is required to be paid at a rate above a fair market price that can be recovered by the retailer.

One of the key issues with the payment of a 'fair and reasonable price' is that if the price is not perceive as fair by one party (albeit subjectively) then arguments such as economic efficiency etc. are irrelevant to them as this perception of unfairness generally leads to a rejection of the conclusion that the price is fair to all parties. The single greatest barrier in this is the knowledge and understanding of the consumer in how energy pricing works and the different costs incurred, who

incurs them and the degree to which they influence the final price paid. This lack of information on how the market is structured will lead to sub-optimal outcomes overall because the sellers of distributed electricity may not accept the fair price determination due to a lack of understanding of the price and cost comments and therefore the market value for their energy sales. For example:

> In discussions with consumers and solar PV retailers the common argument appears to be that "I, as a retail consumer and small generator, sell my power at $0.07 (to take an average value) and the retailer sells it at over $0.21 to the person next door (the nearest load source). They are making 200% profit for moving it 20 meters. That is not fair"

In this case, the consumer does not see the network costs or how they are set out or the point at which the retailer must pay them. *These costs are essentially invisible to the consumer*.

Without the appropriate understanding of how energy prices are constructed the consumer is highly unlikely to accept such apparent pricing discrepancies as a valid or fair market price.

Market implementation

Requirement for a retailer to pay a feed in tariff

The requirement for a retailer to pay a FiT, is a difficult one in a competitive market as all retailers should have the choice of accepting a customer or not based on their business needs. As such, retailers should not be forced to offer a feed-in tariff, however, if they do choose to do so, then they should be required to offer a minimum FiT rate to consumers which is approved by a regulatory body based on the value of the exported energy to the retailer according to the mechanism noted above.

A comparable example for this in Western Australia where the payments under the Renewable Energy Buyback Scheme (REBS) are calculated by the relevant retailer and are approved by an the Coordinator of Energy, an independent government position within the Office of Energy.

SEA's position is that the rate for any fair and reasonable price paid for exported energy should be subject to independent review and approval to ensure that the position that the payment is 'fair and reasonable' is protected and that consumer are not disadvantaged.

Metering

In the implementation of a FiT, particularly a net metering based scheme, it is necessary to accurately meter the bidirectional flows of electricity. As such, the use of digital bidirectional meters is a necessity for the implementation of any such scheme.

The risk in respect of an analog meter is that accurate bidirectional metering is not possible and therefore residences with these meters should not be able to access any net feed-in tariff scheme.

Form of regulation

Gross vs. net export FiT models

There are advantages to both net and gross FiT models, however, it must be recognised that a gross FiT must be paid at a lower rate than an net export model otherwise it will be difficult to sustain in the longer term. The $0.60 gross export model of the Solar Bonus Scheme was overly generous and would never have been sustainable in the long term.

The advantage that a gross generation FiT has is that it does not encourage export oriented behaviour in consumers where export pricing is higher than retail consumption costs. That is, shifting energy consumption to periods when there is no solar production and export and then

typically falling within the evening peak but maximizing energy exports during the day. A gross FiT does not encourage this behaviour, unlike a net export model which has the incentives for export maximizing behaviour. Obviously in the longer term, one can argue that export maximizing behaviour, without mechanisms to counter it can significantly impact the system peak needs.

A net export FiT has the advantage when prices paid for exported energy are below the price paid to purchase energy from retailers. In this case, consumers benefit much more from consumption during daytime periods to offset energy costs and have incentive shift consumption away from peak periods. Where there is a 'premium' component to a FiT, which makes it more advantageous to export than to self-generate and consume, this can cause problem with shifting consumption to the peak period and creating longer term problems. Other measures such as time of use tariffs can moderate problematic overly- export oriented behaviour.

Ultimately, the decision is one for the Market Regulator taking these factors into account, with the net-FiT model, combined with a time of use tariff to disincentivise overly export oriented behaviour, being in line with the position put forward by COAG and also adopted within other states.

Incremental increase or indexation of the FiT

SEA's view on the indexation or an increase over time for any FiT model is that such a process should be part of the design of the scheme. Without a mechanism to reflect the increased value of energy over time, consumers will see an erosion of the value of the FiT and furthermore, if payments are to be 'cost-reflective' when introduced, they should remain so over the period of their payment. It is arguable that as power prices increase, if there is no reflection of these increases in the payments for exported energy then they will no longer be 'fair and reasonable' rather they will come to reflect a consumer subsidy of businesses, who already are operating profitably.

Locational basis for FiT

SEA supports the potential for FiT prices paid to reflect the cost savings and avoidance related to rural and regional consumers providing locally generated electricity to the grid. Often these consumers can see higher costs of power at an individual level as well as through community service obligation (CSO) payments. Furthermore, it more likely that the benefits of distributed energy can be realized by the supply side of the industry in rural and regional areas

An example of this model is already operating in Western Australia through the REBS payments received by customers of Horizon Power who are often in small isolated grids with high cost of generation. The REBS payments between Synergy (SWIS) and Horizon (regional / remote) customers can be significant and reflect the differing value of energy based on the location at which power is generated and consumed.

Retailer contributions

Contributions by retailers to a FiT should be entirely dependent on the value that the retailer derives from the different FiT model that is chosen, either net or gross. Obviously with both net and gross feed-in tariffs, any export of electricity from the premises of the generator will be able to be on-sold by the retailer at a profit to other consumers, and as such they benefit from this. In this case the value of electricity exported by the consumer should be paid for by the retailer as they would otherwise be selling this electricity at a zero marginal cost to another consumer. In addition to this, the other avoided costs noted should also be contributed by the retailer as these are a direct result of the consumer's capital investment.

About the Sustainable Energy Association of Australia (SEA)

The peak body for sustainable energy

SEA promotes the development and adoption of sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA 2030 VISION

'On behalf of the people of Australia, the Association will vigorously promote the development and adoption of sustainable energy so that by the year 2030 more than 30% of Australia's energy use in and across all states and territories is displaced by sustainable energy practices so that energy demand is more than 30% below that measured in the year 2000, and that more than 30% of energy use is derived from sustainable sources.'

About SEA

SEA is a chamber of businesses variously promoting, developing and/or adopting sustainable energy technologies and services that minimise the use of energy through sustainable energy practices and maximise the use of energy from sustainable sources.

SEA is building relationships with businesses that aspire to be more sustainable in their own energy use, are providing the commercial solution to climate change through their products and services, or indirectly through their actions adopting more sustainable energy practices in their own business. Many businesses are acting to support the development of the best policy outcomes for the industry by becoming SEA members.

The role of governments is to build frameworks of governance that establish clear market signals for change and growth, and allow Australia's innovative businesses to respond and deliver market-based solutions.

A key role of SEA is to offer policy options to governments building those frameworks.

SEA supports action on sustainable energy in every region and in all sectors of Australia's economy.

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