

Hon Peter Collier MLC
Minister for Energy; Training and Workforce Development; Indigenous Affairs

Your ref: Petition No 125
Our ref: 34-14991

Hon Brian Ellis MLC
Chair
Standing Committee on Environment and Public Affairs
Parliament House
PERTH WA 6000

Dear Mr Ellis

**PETITION NO 125: RESTORATION OF THE ELECTRICITY NET FEED-IN
TARIFF**

Thank you for your letter dated 29 September 2011 regarding a petition tabled in the Legislative Council on 10 August 2011 in relation to the suspension of the feed-in tariff scheme and the buyback rates offered by electricity retailers.

The issues raised in the petition are important but often misunderstood. One such misunderstanding relates to the concepts of feed-in tariff and buyback schemes. The petition refers to the feed-in tariff and buyback schemes as being interchangeable or identical concepts. However, these two arrangements are very different in nature.

The Renewable Energy Buyback Scheme (REBS) is a legislated requirement for retailers to purchase electricity exported to the grid by eligible customers at a fair and reasonable rate.

In contrast, the feed-in tariff is a Government subsidy designed to promote the uptake of small-scale renewable energy generation. In order to provide an incentive for electricity customers to install generation systems, the feed-in tariff rate was established at a level that was over and above the actual value of the energy and capacity produced by these systems.

While the petition makes reference to the provision of a feed-in tariff, its fundamental premise is that consumers should receive a fair rate for the electricity they export to the grid.

A fair rate should be based on the benefits that the electricity generated brings to retailers. The assessment of these benefits is another area of frequent misunderstanding and debate.

These and other issues relevant to the petition are explored in more detail in the attached document.

I am aware of the level of public interest in this matter, but I also note its complexity. In this regard, I have asked the staff at the Office of Energy to assist in responding to any further queries you may have. Please contact Mr Tony Stewart on 9420 5645 or tony.stewart@energy.wa.gov.au if you would like to discuss matters further.

I thank the Committee for this opportunity to respond to the petition.

Kind regards



Hon Peter Collier MLC
MINISTER FOR ENERGY
25 OCT 2011

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COMMENT ON PETITION NO 125 RESTORATION OF THE ELECTRICITY NET FEED-IN TARIFF

Background

The *Electricity Industry (Licence Conditions) Regulations 2005* require the Government-owned electricity retailers, Synergy and Horizon Power, to purchase renewable electricity from eligible customers.

The corporations meet this requirement through their Renewable Energy Buyback Schemes (REBS). The REBS contracts are assessed by the Coordinator of Energy, who is required to approve the contracts if in his/her opinion the terms and conditions (including the price) are "fair and reasonable".

On 1 August 2010, the Western Australian residential net feed-in tariff scheme commenced. The scheme provided a subsidy of 40 cents per kilowatt hour (c/kWh) to eligible households for energy they exported to the grid.

On 19 May 2011, the Government announced changes to the scheme, reducing the rate to 20 cents/kWh, and established a scheme cap of 150 megawatts (MW) on the amount of eligible generating capacity.

On 1 August 2011, the Government announced that the capacity cap had been exceeded and suspended the scheme to new applications immediately, noting that anyone with a pre-existing commitment would be allowed to apply.

REBS vs. feed-in tariff

The petition requests that the Committee seek a fair price for the electricity exported to the grid and for that fair price to be determined by an independent study. The petition then goes on to say that the price currently being offered, of 7 c/kWh, is not a fair price for this generation.

In responding to this view, it is important to note the difference between a premium feed-in tariff and a fair price for the electricity small renewable systems generate and export to the grid.

A premium feed-in tariff is a subsidy paid by Government, which is administered by Synergy and Horizon Power. The subsidy is paid to eligible customers on each unit of electricity exported to the grid.

The REBS is a legislated requirement for Government retailers to purchase electricity exported to the grid by eligible customers at a fair and reasonable rate that reflects its value to the retailer.

The fundamental premise of the petition is that consumers should receive a fair rate for the electricity they export to the grid.

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Determining a “fair and reasonable” price using independent studies

To determine a fair buyback rate, it is first necessary to understand what benefits small distributed generation provides, to whom that benefit accrues and whether the market allows that benefit to be recognised.

It is generally agreed that the benefits these systems provide include:

- avoided purchases of energy;
- avoided line losses;
- lowered network charges; and
- deferred network investment.

The first three of these benefits accrue to the electricity retailer, while the network operator receives any network investment deferral benefits. The retailer may also benefit from reduced capacity requirements that it would normally have to purchase from conventional generation sources.

The petition refers to the findings of an Australian Photovoltaic Association report for the Office of Energy as the basis for having the rate determined by an independent study. It is assumed this is the report undertaken by the Centre for Energy and Environmental Markets (CEEM) for the then Sustainable Energy Development Office.

There are a number of reasons why caution should be exercised in using the results from this report as the basis for setting a value for electricity retailers to pay for electricity generated from small-scale renewable energy systems. The reasons are as follows:

- In its assessment of the value of electricity generated from small-scale renewable energy systems, the CEEM report includes benefits associated with avoided network augmentation costs, which are benefits that accrue to the network operator. The retailer is unable to pass these benefits through to customers.
- Claims on the extent to which small-scale solar photovoltaic (PV) systems reduce investment in network infrastructure are likely to be overstated.
 - Preliminary Western Power analysis indicates that solar PV systems installed in predominantly residential parts of the network do not reduce local peak demand and associated requirements for infrastructure investment.
 - Western Power has also advised that, in some cases, solar PV systems can cause negative impacts on the network, increasing costs to consumers.
- The CEEM report used Short Term Energy Market (STEM) prices as the basis for determining the avoided energy purchase benefit in the Western Australian Wholesale Electricity Market (WEM).
 - At the time the report was prepared, there was an undersupply of generation in the market and STEM prices were consequently higher than they are now.

- Most energy trading in the WEM is through bilateral contracts between retailers and generators. As less than 5% of sales in the WEM occur through the STEM, STEM prices are not believed to be truly representative of the value of electricity to a retailer.
- Analysis by the Office of Energy using 2010 STEM data gave a wholesale energy value of less than 4 cents/kWh.
- The upper value of 16 cents/kWh noted in the report is for a solar PV system with a west facing orientation. West facing systems tend to generate more electricity during peak demand periods than systems facing in other directions¹. However, systems produce the most electricity when oriented in a northerly aspect.
 - Residential electricity tariffs are based on average costs and the majority of these customers do not see time of use signals. They aim to maximise the benefit they receive through orienting their system to produce the most generation – that is, north facing.
 - Retailers would under-recover their costs if they used marginal pricing to buy energy but charged using average pricing (residential tariffs are averages).

1:1 buyback rate

The petition suggests that paying for the electricity on a 1:1 basis (pay customer the same rate as what the customer pays) is sustainable. However, the retail price that customers pay Synergy includes the generation component of the retail tariff, as well as network, environmental and retailing costs.

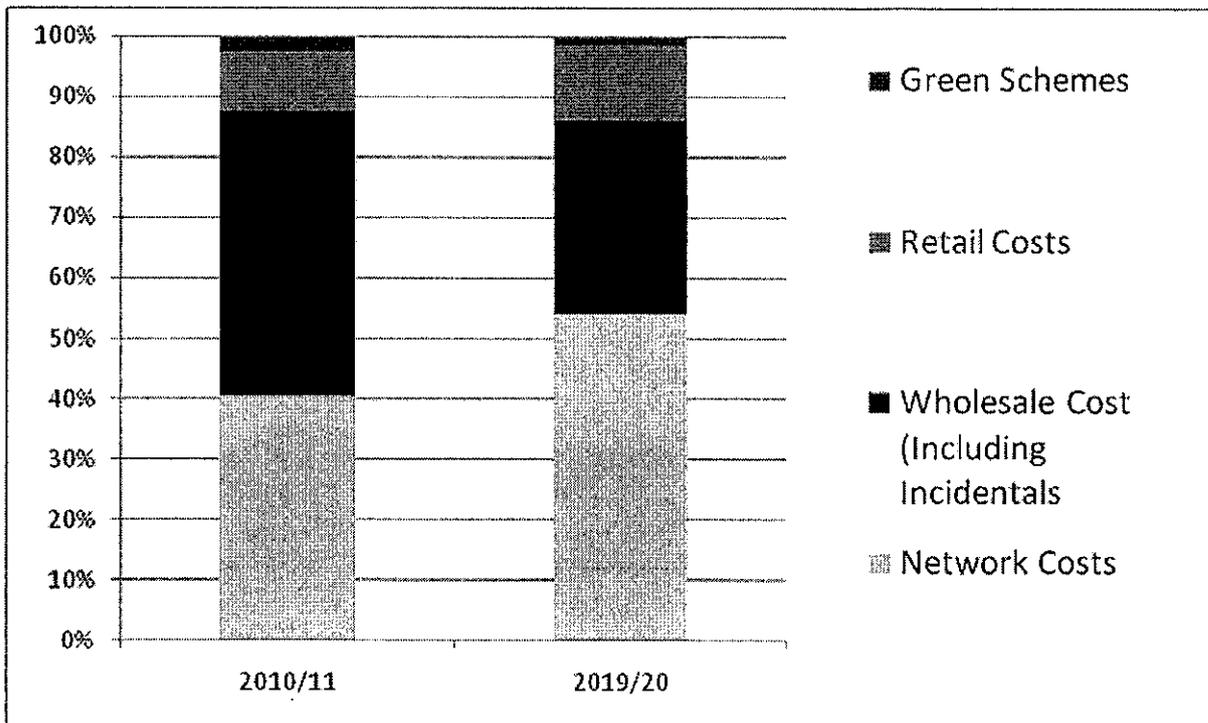
The rate paid under the REBS reflects the value of exported generation to the retailer. Synergy has advised that the rate of 7 cents/kWh represents the wholesale cost at which it can purchase electricity from other sources.

Prior to 2008, Synergy had less than 1,000 residential customers with solar PV systems installed. Consequently, its losses from purchasing the electricity at the same price as it charged customers (minus GST) were minor. However, as the number of systems grew, so did the losses Synergy incurred from its 1:1 product. In 2009, Synergy advised the Office of Energy of these losses.

In 2010, the corporation proposed to change its REBS rate to 7 cents/kWh to more accurately reflect the wholesale value of the energy. This amended rate was approved by the Coordinator of Energy, who accepted Synergy's arguments that the previous rate significantly overstated the benefits that Synergy received from the exported generation.

¹ Networks are designed to meet peak (maximum) demand on the system. The extent to which these systems contribute to reducing network investment requirements is determined by their ability to generate during peak demand periods.

The figure below shows the proportional components that make up the residential retail tariff. It shows that the wholesale cost, which is the benefit that retailers receive, makes up around 45% (reducing over time), noting that this needs to be further broken down into energy and capacity components².



A 1:1 rate would result in the retailer:

- having to pay for network costs twice (once to the network operator and once to the system owner) but only recovering the costs once through the on-sale of the electricity;
- incurring the administration cost twice (once for administering the renewable energy customer and another when resupplying it to another customer), but not recovering it; and
- incurring a loss on each unit of electricity it on-sold from small renewable energy systems, requiring it to be compensated via payments from other electricity users or from consolidated revenue.

It is the view of the Office of Energy that the buyback rate paid by the retailer should:

- only incorporate benefits to the retailer and not include any benefits that accrue to other parties; and

² The payments that generators in the WEM receive have two components: one for the energy they generate and another for their contribution to system stability and security through the provision of firm capacity. Capacity payments are based on the generator's availability when electricity demand is high and the system is at most risk of failure.

- be based on average costs, consistent with the approach used for the setting of retail tariffs.

Any network benefits would need to be considered against any costs that connecting small generation units may impose on the electricity grid. If the benefits outweigh the costs, adjustment of network tariffs may be the appropriate method to pass any benefits through to customers.

Capacity value of renewable energy

Work is currently underway to assess the contribution of small-scale renewable energy generators to the electricity generation capacity market and the extent to which retailers are the beneficiaries of the capacity provided by these generators.

If this work finds that the capacity benefit is realised by the retailer, the next step will be to place a value on it. This may potentially increase the buyback rate. This work is due to be finalised by the end of this year.

The Office of Energy has commenced discussions with the Independent Market Operator (the administrator of the WEM) on the way the capacity provided by small solar PV systems should be treated by the WEM.

Changes to the feed-in tariff rate

Mr Ryan raises a number of other points to support his argument for a fair rate, including that consumers should receive the same rate regardless of when the systems were installed. Here, he appears to be confusing the premium feed in tariff subsidy with a buyback scheme, referring to 40 cents/kWh, 20 cents/kwh and 7 cents/kWh rates.

The 40 cents/kWh and 20 cents/kWh rates are the subsidy the Government pays under its premium feed-in tariff. The Government announced the premium rate would reduce from 40 cents/kWh to 20 cents/kWh in May 2011 to account for an almost halving of system costs. It would have been irresponsible of Government to continue to pay consumers the higher rate when the costs they faced had reduced by that order.

Mr Ryan also makes reference to a lack of consultation by the Office of Energy on the changes to the premium feed-in tariff scheme and the establishment of a scheme cap.

The Office of Energy consulted broadly on the original development of the scheme. During the review, which was triggered soon after the scheme commenced due to much higher than forecast uptake, consultation was limited to peak industry bodies, the Sustainable Energy Association of Australia and the Clean Energy Council, which together represent the majority of the solar PV industry.

The outcomes of the review, including the reduction of the rate to 20 cents/kWh and the imposition of the 150 MW cap, were communicated directly to system suppliers and installers and through printed media.

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The scheme capacity cap was put in place to provide a clear indication to industry and consumers of the finite duration of the scheme and to cap the Government's financial commitment. Once the Government became aware that the scheme cap had been exceeded, it had no choice but to close the scheme.

Impact of the feed-in tariff scheme closure on industry

The petition notes that the ceasing of the premium feed-in tariff is likely to have a significant impact on solar PV businesses and their feeder industries.

The PV industry has grown significantly over the term of this Government, particularly since the introduction of the feed-in tariff. However, no private industry should be permanently sustained with public subsidies. Given that solar PV system costs have reduced significantly, and with many important areas requiring public funding, it was appropriate for Government to reassess the need to continue to provide assistance to the solar PV industry.

The State Government understands that a rationalisation of the solar PV industry is taking place. However, the Government has confidence that the industry will continue to operate successfully albeit at a more modest, but nonetheless sustainable scale.

Funding for the feed-in tariff is expected to be in the order of \$47 million for 2011/12 rising to around \$50 million per year for the next nine years. This is a substantial commitment by the Government in support of renewable energy.

Benefits of small-scale renewable energy systems for electricity consumers

Office of Energy analysis suggests that, even in the absence of the feed-in tariff, solar PV systems should remain an attractive proposition for householders.

Since the commencement of the Government's premium feed-in tariff scheme, the cost of the solar PV systems that are most suited to offset residential usage have fallen dramatically.

Systems can still pay for themselves within ten years, consistent with the original intent of the feed-in tariff scheme. However, the benefit system owners receive will now be driven by avoiding buying electricity, rather than by exporting electricity to the grid.

The ongoing subsidy for renewable energy systems available under the Commonwealth Government's Small-Scale Renewable Energy Scheme (SRES) will also continue to benefit purchasers and the solar PV industry.

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