

# Submission to IPart

## Solar feed-in tariffs 2017/18

By

Michael E. J. Parker

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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## Overview

This is a submission from Michael Parker, [REDACTED] based on his experience as a household with a roof top solar system.

This submission looks at a number of issues impacting the cost of electricity and makes a number of recommendations related to the Solar Feed-in Tariff and other factors impacting the cost and reliability of the electricity system.

The following recommendations are made in this submission and each recommendation is explained in detail in the remainder of this submission.

RECOMMENDATION:

### **IPART INSTRUCT SUPPLIERS TO USE VIRTUAL NET METERING FOR ANY HOUSHOLDS ON GROSS METERS**

Reason: To continue to provide a benefit to households that install PV systems without the need to change meters.

RECOMMENDATION:

### **IPART IMPLEMENT VIRTUAL NET METERING FOR PV SYSTEMS USING GROSS METERS AND SET THE FEED-IN TARRIF AT 6c KWh FOR THE PAYMENT TO THE CUSTOMER WHERE THE CUSTOMER GENERATES MORE ELECTRICITY THAN USES IN TOTAL.**

Reason: To continue to provide a benefit to households that install PV systems and slow down the risk of moving to "Off Grid" systems.

RECOMMENDATION:

### **IPART IMPLEMENT THE FEED-IN TARIFF RANGE AS PROPOSED FOR NET METERING ONLY**

Reason: To provide a benefit to households that have installed Net Meters and to slow down the risk of moving to "Off Grid" systems.

RECOMMENDATION:

**IPART DEVELOP A LONG TERM PLAN FOR THE UNDERGROUNDING OF ALL POWER LINES STARTING WITH RESIDENTIAL AND CO-ORDINATING WITH INFRASTRUCTURE UPGRADING**

Reason: To improve the Australian economy and provide a better, safer and more reliable environment.

RECOMMENDATION:

**IPART INVESTIGATE WHY THERE IS SUCH AN INCREASE IN THE WHOLESALE PRICE OF ELECTRICITY AND MAKE RECOMMENDATIONS TO THE GOVERNMENT TO REDUCE THE WHOLESALE PRICE BACK TO AROUND \$60 MWh**

Reason: To reduce the risk of an increase in retail usage charges.

## **Introduction**

The electricity production supply and distribution in Australia is going through a significant transition period. There are competing priorities and commercial interests along with an underlying aim to reduce carbon dioxide emissions.

The NSW government introduced a subsidised feed-in tariff to encourage households to install rooftop solar and the aim was to provide an incentive that enabled households to justify installing such a system with a payback period of around 7 years.

Unfortunately, the initial feed-in tariff was set too high and as with any government initiative that provides too generous an incentive, there was a rush by some installation businesses to cash in on the opportunity.

Never-the-less the outcome of this scheme is that there are a lot of households that have taken up this opportunity.

## **Climate Change/Global Warming**

The issue of climate change is very political and this submission does not wish to make any comments in this regard other than this issue has been a driving force to investing in “renewable energy” and also a driving force in closing down a source of low cost energy production (coal).

## **Underground Powerlines**

In 2002 there was an investigation of undergrounding power lines by IPart. The conclusion was that it would have too much of a cost impact on Power Prices.

However, as can be seen by the current power prices and instability of the power system IPart and other State and Commonwealth Governments have been instrumental in causing high prices and less reliability without any significant benefits in regard to safety or economic benefit.

Without the long term aim of undergrounding ALL POWER LINES continual problems including power outages, bush fires, loss of homes deaths in car accidents and significant impact on the economy will occur. While undergrounding power lines is not a single magic bullet for all the problems it will be a significant contributor to a better economy, and a better and safer environment.

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## **Vested Interests**

It is very important that independent advice is given to the government based on the best information and facts at the time.

In particular, long term point of view so businesses and households can plan for the future.

It is not acceptable to have large changes either up or down in prices without clear justification.

It is also not acceptable to continue with an outdated power distribution system based on an overhead distribution subject to storm and other environmental factors just because it is cheaper to install while the overall life cost is significantly more due to the continuing maintenance required.

## **Smart Meters**

From a household perspective, electricity usage is not a resource that can easily change to enable a cost benefit.

In the past telephone charges enabled a change of use so households could use the phone when the price was lower in the evening to their cost benefit.

In general, electricity usage is not optional; you need power when you need it. You can not put off the evening meal to midnight. You need heat when the house is cold and you need cooling when the house is hot.

From my perspective smart meters are only a benefit to the electricity suppliers who can remotely read the meter, cut the service off remotely and in some cases remotely cut off appliances such as air conditioning. There appears to be no cost benefit in the time of use tariff and in fact anecdotal evidence indicates a significant rise in households cost when on a time of use tariff.

## **Battery Storage**

One of the problems with PV (Photo Voltaic Solar Cell) systems is that it can only supply power when the sun shines. Battery Storage provides a solution to this issue.

This is in its early stages but looking back at the horse drawn carriages and the motor car one can see how quickly an environment can change.

Individual PV with battery storage could result in significant "Off Grid" movement. Currently this is not viable but as soon as it becomes more cost effective to install such a system it will have a significant effect on the whole power grid.

## **Net Metering/Gross Metering**

Using a Feed-in Tariff of 60c on Gross Metering along with other government incentives made installing a PV system cost effective and viable.

Now that the subsidised feed in tariff has ended all our power from our PV system is exported to the grid and we are receiving a 6c feed-in tariff. However, we are being charged around 25c for using electricity.

One solution is to install a smart meter with net metering or replace the gross meter with a net meter.

Having spent over \$400 to install the gross meter changing to a net meter appears to be a waste of money.

One solution is for IPart to instruct the electricity suppliers to provide a virtual net meter. That is the amount of electricity generated by the household PV is subtracted from the amount of electricity used starting with the highest tariff and working down such that only if the household generates more electricity than used would an amount be actually paid.

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## **Off Peak Supply**

We have a hot water system supplied by off peak power. The off peak power system enables the electricity supply to have a substantial load during times of natural low usage.

Off peak supply is very cost effective for a household.

This is an item that reduces the chance of a household moving “Off Grid”. However, if a household is not getting a benefit from Net Metering such as most of the power during the day is exported on a low tariff when they are at work and most of the usage is in the evening on a high tariff then removing off peak usage to use the power during the day may occur. This will start to occur if the off peak tariff is significantly greater than the net tariff.

This is not the case at this time and is unlikely to be the case in the future.

## **Base Load Supply**

It is very important to get a base load supply at a low cost to provide stability to the power supply and a level of stability to power prices.

Nuclear Power takes too long to develop and there is not an appetite in Australia for nuclear power, the costs are not significantly cheaper than traditional energy generation and the cost to decommission can be very substantial. Currently there is not a satisfactory location even to store the current radioactive waste.

If Australia was to develop a nuclear industry that can reprocess nuclear fuel and store the nuclear waste then one or more nuclear power stations are a real possibility.

Given the time frame required it is important that Australia have an immediate plan to continue to provide base load power at a low cost while continuing to move to a renewable energy future of stable and low cost power.

## **Low Energy Usage**

As we move to a low energy usage environment including LED lighting, low power TV and appliances our individual energy will decline. There are a few high energy usage appliances such as Air Conditioning units. However, as energy efficiency and insulation improve the household will start to use less electricity.

## Potential Future Problems

Cost is a very effective motivator in the economy. If it becomes more cost effective to install batteries and PV to supply a household's needs then there is a significant risk to the whole grid if that happens.

There are many examples of technology having massive destructive effects on industries when the impacts have not been realised.

If the cost of electricity becomes too high too fast then there will be greater pressure on households reducing their bills by different methods. There are three parts to a typical bill, the service charge, the usage charge and the feed-in offset.

If the feed-in offset does not provide any incentive then there will be higher pressures to install batteries and move off grid altogether.

If the service charge is too high this will provide a real incentive to move off grid. The proposal to use a part of the service charge to underground power was made in submissions to the Undergrounding Power investigation in 2002 and was rejected. This is something that should be investigated as providing a real tangible benefit for staying on the grid.

The usage charge can be at a fixed rate or a time of use charge. In either case if the charge is too high it will provide the real incentive to do something about it. The usage charge is based on the power used and thus the power generated. In a normal profit business you try and reduce the cost of generating the power while maximizing the charge to the consumer.

In general, the current electricity market has not benefited consumers.

Figure 4.2 in the IPart Draft Recommendations show that there are significant increases in Base Load electricity contract prices from less than \$60 MWh in September 2016 to \$120 MWh in March 2017. This doubling of Base Load prices is extremely worrying.

In addition, the South Australia State-Wide power outage on the 28<sup>th</sup> September 2017 shows that the current grid is at significant risk. Getting the balance right with Base Load power, peak power and resilience is very important.

Individual households only use a very small amount of electricity each. However, if it becomes cost effective to move "off grid" then as more and more households move "off grid" the costs of maintaining the grid increase for the remaining users. This then has the potential to have a cascading effect similar to the rapid installation of PV systems over the last 7 years.

In addition, if there are significant power outages then there will be even more incentive to be self sufficient.

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## **Conclusion**

The electricity distribution system is facing a lot of complex and difficult issues. The writer of this submission is a householder who is concerned for the future in regard to cost, safety and reliability.

This submission only touches lightly on a few of the issues.

The writer of this submission was very disappointed with the outcome from IPart in regard to undergrounding of power lines. If IPart would have taken the initiative in 2002 then approximately 25% of the remaining urban overhead power line would be now underground and about 10% of those people killed when hitting power poles would now be still alive without any significant difference in power prices.

Had the power lines in Springwood been part of that 25% then we would not have lost over 200 houses in the Winmalee 2013 bush fire.

While the main focus is on the draft recommendations of the Solar feed-in tariffs every recommendation has an impact on the whole system and that is why this submission is making recommendations in other areas directly related to the cost and reliability of the electricity system.