

Some of the unintended consequences include the following.

- Providing an additional income stream for middle to upper income earners at the expense of those who couldn't afford the cap ex. Often dubbed as middle-class welfare.
- Provide the opportunity for electricity retailers to further exploit their position in the energy market. This to the clear detriment of the consumer.
- A climate for unethical PV retailers to exploit the subsidies available with incredibly poor quality installs. Today a substantial part of our business is replacing these now inferior and failing systems.
- A belief in the consumer sector that PV was all about feed in tariffs, and not what a PV system is really there for, which is for energy savings and self consumption. A consequence of the dramatic reduction in feed in tariffs from .60 to .06 was a substantial reduction in sales. It was a constant battle to attempt to make the end customer understand that a feed in tariff should not be the main driver in the decision making process. A continual comment was and to an extent still is "that PV is now no good as you only get .06 feed in"

An overall appraisal (my view) of the .60c tariff is that it was poor from the Financial and Social perspective but would get a pass in terms of environmental. It did assist in the creation of the PV industry which what I understand was the primary intention.

My understanding is that the .06 tariff decision was made entirely upon financial grounds and that was based upon the what was considered to be the average wholesale rate for electricity. From a pure financial perspective the decision was sound. I believe that decision did not take into consideration the following

- Environmental aspects.
- Social aspects
- Appropriate consideration in regards to the system losses that are avoided due to the short distances required for export energy to be consumed.

The increase to the .11c was a major turning point in terms of sales. Whilst it could be argued it was inadequate it did provide the basis of a return on investment (ROI) of around 8% to 11% if all power was returned to the grid. This was determined obviously by the final cap ex figure.

A typical 5.0 kw system producing a nominal 7500 kWhrs x .11c = \$825.00 min Revenue

\$7500.00 cap ex with a \$825.00 revenue min =11% ROI

The most recent initiative was the introduction of time of use (TOU) feed in tariffs. This was introduced as an option for electricity retailers and had a 3.00 pm till 9.00 pm of .29c per kWhr.

Whilst it has been optional it is my understanding that until very recently NO energy retailer chose to make the offer available for TOU rates. An example I believe of the conflict of interest that exists when the views of retailers are considered when determining issues such as FITs.

I am of the view that in fact the ESC got it partially right with the current TOU offer and from my understanding of the market the varying rates offer is responsible in terms of the Financial and Environmental perspective. From a social perspective it still will create middle class welfare but that can be offset with income specific programs if the Vic Govt choose to do so.

The main issue or failing with the current TOU offer is that there was no compulsion on retailers to actually make it available. I fully appreciate that the retailers would require some time to set up their billing systems. I was looking forward to July1 2019 when I understood that it was to be compulsory.

My professional advice to customers to date in planning their systems was to look forward to the .29 c offer which would be available as of 01/0/19. I concede that it has proven incorrect in giving that advice.

Sadly I read that the initial ESC proposal is to cut the peak feed in rate from .29c to .14c. This decision has been made without the previously nominated .29c offer even being market tested.

The drop from .29 to .14 is I would regards as dramatic.

Going back to my original core principle. (Which I am assuming is agreed upon).

To encourage the installation of PV systems in a financially, environmentally and socially responsible manner which will reimburse FIT generators accordingly.

Over the last 20 -30 years the energy load profile for Victoria has changed. I would assert that amongst others the major impacts have been.

- The introduction of natural gas taking away a large part of the base hot water off peak load away from the generators.
- The demise of manufacturing
- The introduction of energy efficient products

- The normality of air conditioning into the residential sector and the subsequent summer load distortion.
- The introduction of the National Energy Market. This in fact restored the value of off-peak power to the Victorian Generator sector.
- The relatively new critical mass of small scale generation such as PV

It is clearly evident that the new peak in consumption occurs typically between 3.00 pm and 9.00 pm on weekdays. The exception to this was that Sunday when we had extreme temperatures and the load profile reached high levels. This particular Sunday event is a clear indicator of the impact that residential air conditioning can have on the Victorian energy profile. The increased load would explain the spike in wholesale pricing during this period.

I would also assert that the propensity and extent of these extremes in that 3.00pm till 9.00 pm time slot will only increase due to both population growth and climate change.

There is no one solution in regards to how the distribution business's (DBs) and the generation sector manage and deal with these isolated peak events.

It is I believe accepted that it is now no longer appropriate to spend literally millions of dollars on infrastructure upgrades that will only be utilised effectively on 6-10 days annually.

The opportunity now exists for the ESC to have an impact in regards to energy management with the retention or increase of the present TOU tariffs and actually making it compulsory for the electricity retailers to offer them.

The Victorian DBs and generation businesses have got assets and generation capacity to easily handle the present Victorian load profile with the exception of about 6-10 days of the year. The Vic Govt have quite rightly rained in DBs "gold plating" assets.

I am of the view that the ESC has both a responsibility and the opportunity to contribute to the energy management conundrum that presently exists.

A long term commitment to a minimum .29 c or greater peak feed in tariff will I believe create the following.

- Additional incentives for businesses and residences to install PV systems
- A .29c or greater incentive will see designs swinging from the typical North orientation to a Westerly orientation.

- We will see a discernible drop in discretionary load by residences wanting to maximise the feed in opportunity. This will require positive messaging from the government.
- An opportunity for the Vic Government to re invest in themselves. Imagine every Secondary and Primary school in Victoria having 100 kw of PV on their roof all facing West. These micro generators will provide additional state wide generation during the critical peak periods at a time typically when the school load profile is falling. In some cases over summer the load profile is virtually non-existent. All while in conjunction benefitting the cash flow position of the school as well as avoiding large scale capital upgrades to DB infrastructure. This initiative clearly has Social, Environmental and Financial responsibility written all over it.
- Small to medium businesses (SMEs) would be incentivised to have early starts and early finishes. The typical hours for business is 7.30am to 4.00 pm. A 1 hour earlier summer start option would be appealing to many businesses A .29 c or better feed in would provide an additional incentive. The consequence being a double benefit of not only a reduction in load but the additional positive contribution to a reduction in the load peak by virtue of the additional export component.

In my sales discussions with prospective residential customers I often suggest that whilst a Northerly focussed PV system will generate more kWhrs the same system pointed West whilst it will generate less kWhrs will in fact create a greater ROI. This is due to the fact that the generation profile will better match the typical residential load profile. With a .29c peak load export value this will reinforce substantially this view.

The draft peak feed in proposal at only .14c per kWhr does not provide any incentive for the home or business owner. It is my understanding that the existing flat rate of .11 will remain as an option. To put this into some sort of perspective.

The following is an analysis for a typical 5.0 kw PV system generating around 7500 kWhrs per annum.

The analysis is also based upon 33% of generation is between 3.00 pm and 9.00 pm and that all of that energy is exported. The fact being that neither of these situations are realistic but the figures will demonstrate the futility of a .03c gap between the flat rate and the TOU peak rate.

$7500 \text{ kWhrs} \times 33\% = 2500 \times .03 = \75.00 absolute maximum increase in income

Deduct from that the reduced income during the shoulder and off peak period and the end result is a given.

As a retailer in PV systems there is no way would I be recommending any client adopt the TOU offer. It simply at .14c does not stack up.

If we do the same mathematics based upon a .29 peak feed in tariff

$$7500 \text{ kWhrs} \times 33\% = 2500 \times .18\text{c} = \$450.00$$

I appreciate fully that the above figures are not conclusive and would have enormous variation from site to site. They do though provide a strong indication though about the commercial nonsense that exists when presenting the public with a .03 benefit when they are considering choosing between flat rate at .11 and a TOU at .14 c per kWhr.

One of the primary roles of a TOU feed in tariff is to provide motivation to an exporter of power to actually create export at times when it is needed. I can assure you that at .14 c there is absolutely no incentive.

I can fully understand that the numbers people would have come up with a highly rationale and creditable argument to support the proposition of the .14 c peak offer.

Does that .14 figure from a commercial perspective provide any motivation for the exporter to “jump” at the opportunity? Clearly not.

Does it contribute to the decision making process for potential new solar customers to proceed to install solar. No it will not.

From my observations the peak .14c peak offer may pass the financial test but fails dismally in regards to the Social and Environmental aspects.

To conclude can I implore the ESC to broaden the focus and understand more fully the possible positive opportunities that a “brave” feed in tariff can provide the greater Victorian public.

It for me raises the following questions.

- What was the rationale to submit a .29 feed in tariff and then smash it to .14 without the .29 even getting a market opportunity?
- Why not consider a .35c peak feed in figure or bigger and then really stimulate the opportunity?

In my discussions with DBs one of the single biggest problems they face is dealing with those 6 -10 annual peak events.

With the current amount of PV in the market and the newly Vic Solar incentivised growth there now exists a real opportunity to contribute to the solution with a reasonable and sellable peak feed in tariff amount.



Please do not hesitate to contact me if you would like to discuss this or any other matter further.

Regards

John Cutler

