Australian

PV Association

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Comparing Gross and Net Feed-in Tariffs

An APVA Briefing Paper

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After defining gross and net feed-in tariffs (FiTs), this Briefing Paper addresses the following misconceptions regarding gross and net FiTs:

1. Don't gross FiTs mean that people get paid for the electricity they use?
2. Aren't gross FiTs too generous?
3. Aren't gross FiTs less equitable than net FiTs?
4. Don't net FiTs better reflect the value that PV systems provide to the grid

Gross FiT

Under a gross FiT the system owner is paid the FiT for all the electricity they generate – which is all exported to the grid. Because it is relatively straightforward to estimate the electricity that will be generated from a particular PV system, it is easier to calculate the lifetime value of a PV system under a gross FiT.

Net FiT[1]

Under a net FiT the system owner is only paid the FiT on the electricity they export to the grid. The electricity they generate, but then use immediately on-site, is effectively valued at whatever retail tariff applies at that time – because it avoids electricity being imported from the grid. It is more difficult to estimate lifetime PV system value to the customer under a net FiT because it is difficult to forecast household electricity use by time of day for the next 20 or so years.

1: Don't gross FiTs mean that people get paid for the electricity they use?

No. Under a gross FiT, the system owner is paid for all the electricity they generate. This electricity is then fed into the grid, and whoever uses that electricity, whether it is the system owner or their neighbour, then pays their normal retail tariff to use that electricity. This of course means that the actual cost to the retailer is the difference between the FiT and the retail tariff, not the entire FiT.

2: Aren't gross FiTs too generous?

Not necessarily. A gross FiT can simply be smaller so that the average system receives the same amount of revenue that it would from a larger net FiT.

[1] The term net metering (or net billing) is used when PV electricity is sold to the grid at the same rate as the prevailing retail tariff.

3: Aren't gross FiTs less equitable than net FiTs?

No. Gross FiTs are in fact more equitable than net FiTs. This is because, with a net FiT, households receive the FiT only on what they export. For households that can only afford a small system, this will only be a relatively small proportion of what the PV system produces. In contrast, households that can afford a large system will receive the FiT on a much greater proportion of what their system produces. Thus, with a net FiT, wealthier households will receive a disproportionately greater income from the FiT than less wealthy households. In addition, households that do not use electricity during the day because they are at work benefit disproportionately under the net scheme compared to young families and pensioners who would typically be home more often during the day.

Figure 1 below compares the financial outcomes of gross and net FiTs that have been sized to provide the same income for a 2.5kW system.[2] It can be seen that, as the system size increases, under a net FiT, larger systems have a disproportionate increase in the amount of revenue earned.

Of course on a gross FiT, wealthier households that can afford a larger system will receive more FiT income, but their system will also cost more, especially since the Renewable Energy Target Solar Credits multiplier only applies to the first 1.5kW, and will be scaled down over time.

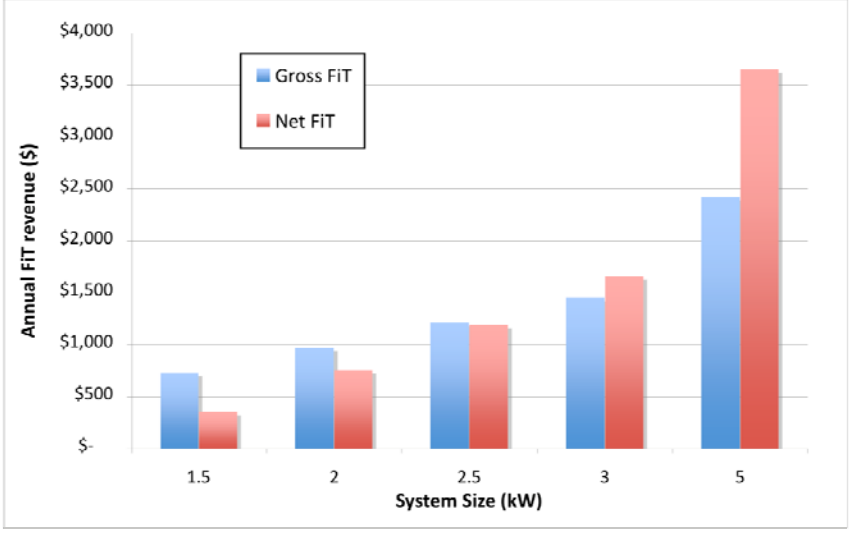

Figure 1 Comparing the financial impacts of gross and net FiTs

4: Don't net FiTs better reflect the value that PV systems provide to the grid?

No. These values include offsetting conventional generation and so reducing greenhouse emissions, reducing line losses on the network and providing network support. Whether the electricity produced by a PV system is used by the system owner or by their neighbour, the values that PV provides are the same.

[2] A gross FiT of 35c/kWh, a net FiT of 80c/kWh, 3.79 kWh/day/kW generation from Office of the Renewable Energy Regulator figures for NSW, percentage export from AECOM (2010) *Solar Bonus Scheme: Forecast NSW PV Capacity and Tariff Payments*, by AECOM Australia for Industry & Investment NSW, NSW Government.