

Currently mandated Feed in Tariffs should be retained.

Strong so-called power 'duck curve' is a necessary overflow of renewable electricity to harness power for the night period when the sun does not shine. We should see this problem as a major step forward rather than resort to knee-jerk reaction to reduce oversupply of electricity in the middle of the day by reducing mandated FIT (feed in tariffs) to zero. We need to store this excess power in a meaningful, robust, uncomplicated approach, without unnecessary pressure on small-scale solar electricity producers. The proposal to reduce tariffs to zero (or similar) sends the wrong message about renewables. It casts doubt for those wishing to install solar power. It presents renewables as chaos and uncertainty. Over the next few years, the deployment of BESS (battery energy storage systems), currently under construction, will dampen down much of the power duck curve problem, therefore, oversupply of power during daytime is precisely what we need to support BESS.

Current FIT is already so low that reducing it further is unlikely to make much difference to the duck curve. Solar panel owners already know that they could install batteries, fully electrify their homes, and use appliances in the middle of the day. It is a great idea to generate your own electricity, use it as much as possible in the middle of the day, and store more in batteries for the night period. Some people do this, and some are not even connected to the grid. But for most, it is impractical due to a variety of reasons, including additional costs and daily routine. People are not going to charge their EVs in the middle of the day using their panels when they are parked at their workplace, in a shopping centre, or somewhere on a street. Similarly, they will not vacuum when at work or cook their dinner. Nor will they soak up power through their air conditioners when away on holidays. I could keep going with many more examples. Home batteries are also expensive per kWh when compared to BESS or neighbourhood batteries.

To further elaborate, I would like to present my own system as an example. My house has a 12 panel, 5 kW system, which produces about as much power throughout the year as our overall use, but of course much of it flows into the network rather than our appliances. In summer, our system sends about 10 times more power into the network than the power we take from it. In winter, we take 2 to 4 times more power from the network than the amount we send out. At the same time, our home is not fully electrified and has no batteries. To fully electrify our house, we would need to spend up to \$10, 000. Just running a thicker cable to the kitchen would likely cost from \$3,000 to \$6,000. Purchasing a battery system for 10 kWh storage would double the costs of electrification to about \$20, 000. Yet at least half the power from the panels would still go into the network in summer period. Whereas in winter, half the battery system would be sitting idle. To offset this problem, I would have to spend even more money to install at least another 6 panels, ideally 12, which only brings us back to the duck curve problem outside the winter period since we now generate even more electricity.

Either way, I have not explained yet that our house is not particularly suitable for even a small battery installation, and it would be also difficult to add more solar panels. However, as I mentioned earlier, the system delivers about as much power on average in a year as our use, so it would be great if we could store power in a neighbourhood battery or BESS. We could then repurchase power through a suitable cost structure, essentially using our self-generated electricity day or night. Whether neighbourhood battery or BESS, both systems require no installations at home, and are cheaper per kWh due to economies of scale. Neighbourhood

batteries could be also privately owned, even retailers like Coles or Bunnings could run them and share the benefits through suitable arrangements.

To properly tackle the duck curve, we need a holistic approach rather than penalise rooftop solar producers. It is bad enough that we are required to pay for the fixed cost of the network. The network owners not only give us power but also take it from us, yet it hardly travels any further than our non-solar neighbours. Ultimately, market forces are likely to determine the best feed in tariffs between solar households and retailers. However, I do not think it is a good idea that FIT can be as low as zero or suggest that only solar producers with their own batteries deserve a good return. The original purpose of FIT was to promote solar power, now it seems like we are moving in the opposite direction. We are on the cusp of moving beyond 50% renewable electricity in Australia in the next couple of years, therefore, not the right time to send confusing messages about benefits of solar power instead of supporting rooftop solar generators.