

Towards Fixed Price Retail Electricity Contracts

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It would be very attractive to residential consumers if they could buy electricity like they buy telephony and data – on a fixed price contract with known boundaries. Even more attractive would be a contract that provided unlimited energy (kWh) perhaps with some form of cap or control on peak demand (kW). These types of arrangements may well now be within reach.

The components that may make this possible are the combination of:

- Larger scale rooftop solar PV,
- Battery storage,
- Introduction of a fixed price for network usage that has a nominal cap on capacity available from the grid, and
- Fixed NEM power charges for residual use.

Some initial (published December 2015) usage analysis by Ergon Energy of a small sample of residential customers on its network has shown that for many of them if limited to say a 2 to 3 kW peak demand supply cap (in this case energy from the grid) the size of battery required to carry them through above these limits is actually very small – maybe 2 to 3 kWh – less than half the 7 to 10 kWh systems currently being sold.

This mix of limited or capped grid support at a fixed cost being coupled with larger scale rooftop solar PV and battery optimisation for energy supply shows huge promise for customers, networks, retailers and base load power generators, and needs to be better understood and explored.

For the network, this would essentially provide a limit on the cost of serving the customer and make the offer of a fixed price on an annual or longer term basis a lot more practical.

The exciting prospect for many customers is the potential to access long term, fixed cost contracts for electricity supply – supplied primarily from on-site generation systems during the day with access to top-up power if needed from the grid (within capped boundaries), and sufficient grid delivered power for household needs in non-daylight hours.

Of course this product would not be universally applicable as not all dwellings have access for solar PV systems. Therefore, base load and mid merit generators would still be providing day time load that may well also be heavily supported by grid deployed renewables and battery storage systems – again a form of hybrid generation and battery storage optimisation, but grid side.

For a retailer, these arrangements provide a means for addressing the customer's desire to control their electricity costs, while also helping to reduce carbon emissions. It would also increase the average term of the retailer's contracts with its customers, thereby reducing costly churn. The grid-supplied electricity consumed by the customer would entail some volume risk for the retailer, though probably relatively little price risk. This could be addressed by including a likely level of this consumption in the monthly fixed charge with a variable rate kicking in above such levels.

In simple terms a customer would sign on with a retailer for the installation of solar PV and battery storage systems on their property - bundled with a fixed price grid support arrangement and marginal energy costs - and remote (or automatic) management of these systems for optimisation. Costs for installation of the PV and battery could either be amortized in the monthly charge

minimising upfront costs, or charged upfront. The customer would then “buy” this packaged product at a fixed monthly fee and use essentially what they like – only being limited by peak demand requirements that would be sorted out by battery size and control, and any excess grid energy use if relevant.

This would be a very interesting choice for customers, and it mimics things like buying data (the NBN being a good example) – where the customer makes a choice about the speed and total download capacity they want based on the packages available at different prices – the customer makes the trade-offs.

The arrangement would need to include a contract period -- something like 5 or 10-years in order to recoup the costs of the PV and battery equipment if bundled in the offer -- possibly with upgrades or rollovers available at those times, and a buy-out formula allowing the customer to terminate the contract early and take ownership of the equipment. The product could also include just the battery being added to an existing PV system (or customised to allow upsizing of an existing PV system).

The innovation here is the bundling to allow customers to know with more certainty what their monthly power bill will be – no more surprises and second guessing network or NEM price hikes. This may well be the way to re-engage customers with the value that grids and the NEM can provide while giving them access to the new technologies that are and will find a home in any case in the grid system. More analysis and trials could potentially develop this product rapidly.