2025 consultation

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Response to Question 6

THE SPEED OF DEPLOYMENT OF ELECTRICITY GENERATION AND INFRASTRUCTURE IS A KEY RISK TO EMISSIONS REDUCTION TARGETS. WHAT MORE COULD BE DONE TO FAST- TRACK DEPLOYMENT?

Forty percent of dwellings have solar panels. It is quite possible this has reached saturation point. Installation of solar and batteries are likely to be affected by the following consumer perceptions:

- Cost of power is continually increasing. There are few alternatives
- The cost of solar panels can be recovered in around 3.5 years however, solar is mostly available durning the day when there is now a significant excess. Feed in tariffs are now of little value. We are heading to the situation where exporting solar may result in curtailment or a cost penalty.
- The cost of local energy storage is inefficient and prohibitive for individual consumers. Even with the new federal government subsidies, the payback period for a battery is at least 7 years with active trading much longer for passive installation.
- Disadvantaged consumers such as those who cannot afford power generating and time shifting assets are being asked to pay ever increasing charges for power. Some of this cost is to compensate for the effect of affluent peoples' power systems.
- Consumers who cannot install solar panels because their roofs are shaded to they live in apartment blocks with little facility to install solar are also subject to ever increasing cost beyond their control. They have no access to locally generated cheaper green power.
- Most consumers do not have the knowledge to assess, install, operate localised small scale power generation, storage and time shifting systems.
- Governments fail to shift loads such as hot water heating to midday in order to consume excess solar energy.

What consumers need to able to actively participate in the energy market.

- Fair access to markets that can increase the return in investment for the assets they have purchased to reduce the cost of electricity.
- Ability to generate and trade power locally without the unfair impost of paying national grid charges when no part of the national grid (TNSP) has been used. Local grid (DNSP) charges should represent the portion of the network used by the transaction.
- The ability to store then time-shift and trade power.
- The ability to govern the part of the power system they have funded and created, (ie Community owned or at least governed retailer).
- Genuine consumer representation on the governing bodies of our national power system such as AEMO, Transgrid, and our Local DNSP. The representatives need to be technically savvy in the industry but not currently employed by the industry.

- Removal of the now artificial artefacts of the legacy centralised power system such as DNSP not being allowed to generate.

- Genuine restructuring of the Charters of pseudo service delivery organisations such as DNSPs to recognise and facilitate actual customer orientation and service.

Properly designed and implemented Urban Energy Zones as announced by Minister for Planning

We personally presented the above concept to the Minister who was already ahead of the game.

General description of an Urban Energy Zone. A locally connected power system that links all consumers and includes a significant amount of storage in the form of Community Batteries, House Batteries and Connected Vehicles to Grid. This storage is to be combined into a Virtual Power Plan and made available to all consumers in the area. There are to be no grid charges for local power and reduced DNSP network charges a/c less of the network being utilised. The Community Batteries are to be Built, owned Operated and Maintained by contracted Power Companies and the retailer if not Community Owned be subject to significant and effective Community Governance. The UEZ is to be serviced by a Virtual Energy Network that facilitates trading between consumers and the storage.

UEZs should have the following properties:

- Consumers are storing their energy into local, accessible devices. Community Batteries, V2G, House Batteries.
- All consumers in the zone can purchase local power (from each other and storage)
- Generators of the power (PV or stored) get a fair price.
- Cost of the local power is comprised of generation, storage, **local** transmission and orchestration. (Low grid charges)
- Participating consumers can obtain value for supporting demand management.
- There is local orchestration of the power system to optimise price and supply. Can run independent of grid.
- Community can exercise a level of governance/control on running of the UEZ.
- Constraints should be removed to allow private companies to Build, Own, Operate and Maintain community batteries and trade with local consumers as a priority and secondarily on the NEM so they can optimise their value stack for economic operation of the asset and reduce costs to the consumer.

Conclusion

With appropriate implementation of a community/business owned Urban Energy Zone it would be feasible for urban areas to generate the majority of their own energy. Through prudent use of storage, consumers themselves could reduce the majority of the evening demand peak that requires huge expenditure of centralised assets to cater for.

What the NSW Government needs to do.

- Redevelop the constitutions of the three DNSPs so that their charter is centred around the public benefit of their service. Along with a set of matching KPIs. These are to facilitate local energy transmission and storage by third party asset owners such as the consumers and private power companies.
- Follow the lead of the Queensland Government and build an Urban Energy Zone. https://statements.qld.gov.au/statements/100608
- Facilitate, educate and incentivise the use of Virtual Energy Networks that allow localised trading of energy. (Generated and Stored)
- Facilitate, educate and incentivise the use of Vehicle to Grid systems. Provide guidelines as to the management of the system to preserve EV battery life and warranty.

Outcome.

Prudent implementation of the UEZ concept will dramatically increase the level of consumer participation. This will result in a significant reduction in GHG and cost to the State and Federal Governments.