



EVC response to Energex 2025-2030 draft plan

October 2023

With reference to:

<https://www.talkingenergy.com.au/rdp2025draftplans>

<https://www.talkingenergy.com.au/88810/widgets/416637/documents/268786>

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Preamble:

The Electric Vehicle Council (EVC), Australia's national representative body for the EV industry, appreciates the opportunity to provide feedback on the Energex's draft plan for the 2025-2030 regulatory reset period.

We note from the draft QECM published in July that Energy Queensland:

- Is inclined towards setting requirements for consumers to yield control of their EV charging at home to their energy network (Ergon or Energex),
- Is opposed to measures that would assist in the acceleration of deployment of public EV charging facilities, such as providing flexibility around second lines of supply to commercial premises for public EV charging stations,
- Is seeking to apply unique state-level requirements to vehicle to grid implementations.

The EVC and other stakeholders continue to engage with Energy Queensland on these matters. We note that the tariff setting process is separate, but parallel, and in some ways linked with elements covered in the QECM.

Executive summary of EVC position:

Energy Queensland has invested significant effort in understanding the impacts of EV charging in their networks, and in seeking to understand EV driver behaviour.

For example:

<https://ghes.com.au/queensland-household-energy-survey-2023/electric-vehicles-2023/>

<https://www.energex.com.au/manage-your-energy/smarter-energy/electric-vehicles-ev/ev-insights>

Regrettably, in its approach to setting technical requirements and tariffs, Energy Queensland tends to treat EVs as a threat to be managed, rather than as an enabler of a more robust, lower cost-to-operate energy system.

We address this in the 'clarifications' section below.

On tariff reform specifically, we draw distinction between residential tariffs (applicable when consumers are charging their cars at home, which will be about 80% of EV energy required), and commercial tariffs, applicable to the operators of high power public charging stations (CPOs)

For residential, there will be a need to ensure that the planned reward for peak time grid export is sufficiently available, such that the overall retail offer to the consumer stacks up. Pairing this reward with a monthly demand charge, for example, would be a poor choice. This will be key to the enablement of V2G in Queensland through the 2025-2030 regulatory period.

For commercial, the EVC would like to see the volumetric threshold below which consumers can opt out of demand/capacity charges lifted from the current 100MWh/annum to 160MWh/annum. This would be in keeping with the settings in WA, Vic, Tas, ACT, and NSW.

Finally, we touch on arrangements for the integration of batteries in public charging infrastructure.

Clarifications

Page 45 indicates the potential for up to 640,000 EVs on the road in South-East QLD by 2030. The Queensland State Government has a target in place of 50% of new vehicle sales being EV by 2030, which will correspond to roughly 10% of the on-road fleet. Achieving this target will require the effective implementation of a robust fuel efficiency standard at a federal level, which is being worked towards, but which is not yet in place.

It will also require that efforts being made to hamper the uptake of EVs in apartment complexes by QFES, and efforts to complicate the regulatory environment for maintenance of EVs in Queensland by Queensland's ESO, to be successfully resolved. Finally, we'll need to see a shift in approach by Energy Queensland in the QECM, to something which is supportive of consumers charging their vehicles when and how they wish to. Assuming these matters are effectively sorted out, and the state government's target is actually achieved:

- Queensland has a total of about 4.3 million registered road vehicles.
 - 10% of this is 430,000 vehicles.
- SEQ as defined by Energex contains about three quarters of the population of Queensland.
 - So, likely about three quarters of the vehicles.
- Three quarters of 430,000 is roughly 320,000 – about half of the Energex estimate provided.

Pages 63 and 86 represent EV load as occurring at peak time. Multiple Australian data sets exist which consistently indicate that while some EV charging happens at peak time (about 250W per EV), the majority of EV load turns up outside peak time, with consumers preferring to charge their cars from their own solar, or to charge over night in order to secure off-peak rates.

Energy Queensland's own research into EVs conclusively demonstrates this as well.

The presentation of EV charging being a significant contributor at peak time can be used to help justify a build-out of the RAB (per page 79, from \$15.6B to \$17.9B, a 15% uplift over 5 years), and it can be used to justify taking control of home EV charging away from consumers (as attempted in the recent QECM), but it is not grounded in fact.

Contribution of EVs to peak system demand is likely to be <1% at 2030, **not including** the positive benefits likely to come from V2G. See this for more detail:

<https://electricvehiclecouncil.com.au/wp-content/uploads/2022/08/Home-EV-charging-2030.pdf>

Detail on residential tariffs

In residential, the intent to continue to provide cost reflective options for consumers, using a demand-based network tariff as the default with the option to opt out to ToU (ie, retailers are not compelled to build on a kW or kVA based tariff for a residential plan, but they do not have access to a flat tariff), is welcome, and will encourage the offer to residential consumers of retail tariff products supportive of at home EV charging that delivers on environmental outcomes, grid security, and cost minimisation.

This type of offer is already becoming common, with multiple retailers offering deep discounts (>50%) for off-peak energy use. Residential consumers with solar already have very low cost electricity available during the middle part of the day, due to falling feed-in tariffs.

Page 96, figure 44, presents a plan to reward export between 4pm to 9pm. This is a very good idea, and will support home battery export and VPPs, as well as V2G. There is a need to ensure that this element is **not** forcibly paired with elements undesirable to consumers.

For example, the car won't always be available for export. If access to the reward is conditional on a monthly peak demand charge for consumption from the grid, then participation in this arrangement may not represent a good deal for the customer, because there is likely to be a day or two each month when the car won't be present on a hot afternoon.

For the avoidance of doubt, the reward for export from 4pm to 9pm should be available whether the customer is on the default tariff structure (which incorporates kW-based cost components) or the ToU tariff structure (which does not incorporate kW-based components). It should also be significant enough in terms of \$/kWh to actually be an effective driver of the desired behaviour.

Detail on commercial tariffs

We note that under this proposed arrangement, public DC charging sites consuming <100MWh / annum should remain able to opt out of kW-based network tariffs, continuing the status quo enabled by access to tariff code 6800 (Small Business Time of Use Energy). Unfortunately, this has the effect of creating a very steep cost increase for the charging equipment operator at the threshold when the usage of the site rises above 100MWh/annum.

If we consider a location with 4 x ultrafast chargers (nominally a 500kVA supply, which will be used to full capacity from time to time), at 100kWh/annum on tariff 6800, the network cost component is on the order of \$10k/annum, or ~10c/kWh delivered. Above the threshold, the appropriate tariff under the existing arrangement is LV Demand Time of Use (Tariff code: 7200), which creates an annual network cost component of about \$89k/annum, or ~89c/kWh delivered. **The ~9x increase in network charges, if passed through to the drivers, is enough to more than double the total cost to the end user – equivalent to taking petrol from \$2 per litre to \$5 per litre.**

The EVC does not object in principle to kW or kVA based charges but contends that using a threshold of 100kWh/annum is too low. In WA, Victoria, NSW, ACT, and Tasmania, the same principle of a volumetric threshold is used, above which customers are mandatorily assigned to network tariffs with kW or kVA based components, but it is applied at **160MWh/annum level instead**. This gives low utilisation DC charging locations a significantly larger operational envelope under a less punitive tariff regime, and a smaller 'step change' when they cross the threshold into a tariff class where kW or kVA-based charges apply.

Retaining the exist settings will commercially incentivise DC charging station operators to:

- reduce the power level of charging available at locations, which will mean longer times for drivers to charge, and
- reduce the number of chargers at each location, which will reduce availability and increase the incidence of queueing.

This will particularly be an issue in the more remote parts of the country, where there can be expected to be less options for public EV charging anyway. This type of rational commercial response from the charging network operators (CPOs) to the energy network operator's (Energex's) tariff policy would predictably negatively impact EV uptake, by delivering sub optimal public charging to the drivers who make the switch.

As a first step in this regulatory reset period, the EVC calls on Energex to align with the majority of the rest of the country and apply a 160MWh/annum volumetric threshold. If there is concern around the number of customers potentially re-assigned in the band between 100MWh/annum and 160MWh/annum, the ability to opt out of kW or KVA based cost components for sites consuming 160MWh/annum could be limited to sites with connections above 100kVA. The EVC has successfully worked this approach through with Ausgrid and has made a submission to SAPN's 2025-2030 regulatory reset along the same lines.

The EVC considers that maintaining the status quo in Queensland in this respect fails to improve support for the deployment of public EV charging infrastructure, which will lead to reduction in potential uptake of EVs by Queenslanders. It is not a position that is compatible with the emissions reduction objective recently added to the NEO by the energy ministers, or one well aligned with the Qld state government or federal government goals to accelerate EV uptake.

Integration of batteries into public DC charging stations

Noting from Page 102:

“we expect to introduce a tariff that will be specific to customers that connect storage to the grid solely for later dispatch back to the grid”

We expect that some CPOs will seek to deploy batteries as a means to limit their exposure to demand charges. The economics of this approach, which will benefit all stakeholders, will be significantly improved if CPOs are able to derive a benefit from utilising these batteries for feed-in to the grid in addition to supporting EV charging. The EVC’s position here is that if storage is being connected to the grid, and sometimes used for export at times when it’s valuable to the energy system, then that export should be able to be rewarded – it should not be necessary for the storage asset to be ***solely*** used for later dispatch to the grid, or for a limit of 30kW to be applied in such a situation.