



## **EVC submission to the AEMC relating to: NATIONAL ELECTRICITY AMENDMENT (UNLOCKING CER BENEFITS THROUGH FLEXIBLE TRADING) RULE**

**February 2023**

**With reference to:**

<https://www.aemc.gov.au/sites/default/files/2022-12/Consultation%20paper%20-%20Unlocking%20CER%20benefits.pdf>

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**Preamble:**

The Electric Vehicle Council (EVC) is the national body representing the electric vehicle industry in Australia. As the market is emerging in Australia, our work is particularly aimed at increasing certainty for investment through policy, knowledge sharing and education.

The Australian Energy Market Commission (AEMC) is the rule maker for Australian electricity and gas markets. They make and amend the National Electricity Rules, National Gas Rules and National Energy Retail Rules. They also provide market development advice to governments

This consultation relates to a proposed amendment to enable consumers to separate out 'CER' – Consumer Energy Resources – from the balance of the loads in the home, for the purpose of these 'CER' being able to participate in potential new services.

Electric Vehicles (EVs), their charging apparatus (EVSE), and the future potential of vehicle to grid (V2G), are relevant to this proposed rule change.

The EVC welcomes ongoing discussion on this matter, and can be reached at [office@evc.org.au](mailto:office@evc.org.au)

## Executive summary of EVC position:

The AEMC consultation paper runs to 90 pages and includes 16 main questions, each with multiple sub-questions. We are providing a brief response to this consultation. Individual EVC members will have a diverse range of views on this proposal.

The general position of the EVC is that consumers are unlikely to see significant benefit associated with their EVs from this proposal. In the context of the home, consumers already have access to variable pricing based on time of day and day of the week, and EVs, EVSE, and software solutions are available in the market to enable drivers to easily modify their charging times. An engaged consumer does not need a flexible trading arrangement as conceived in this paper in order to derive benefits (with concomitant delivery of benefits to the energy system), associated with exercising the flexibility associated with EV charging as a domestic load. This is unpacked in more detail in our 'home EV charging and the grid' report, here:

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

If the consideration is that the future may involve centralised orchestration of EV charging in a domestic context, that also does not require flexible trading arrangements. Multiple traditional electricity retailers have demonstrated, with ARENA support, the ability to orchestrate EV charging without the need for a flexible trading arrangement in place. This is described in the report linked above.

In the context of Vehicle to grid, we'd suggest that what works for solar export with regard to trading arrangements will probably work for V2G exports, but it is probably too early to make this call. V2G faces other hurdles, particularly with respect to technical standards and regulation, that need to be addressed first. More information on this here:

<https://electricvehiclecouncil.com.au/wp-content/uploads/2022/10/EM-001--4777-2-P-000142-comment.pdf>

These considerations go to questions 1 and 3 in the paper. While the full potential value of CER might be aided by a non-traditional connection arrangement, when it comes to EV charging (as distinct from V2G), the vast majority of the benefit to most consumers and the energy system is available with a smart meter at the premises and choice of retailer.

The above said, provided consumer protections are adequate, the EVC sees limited potential consumer harm arising from this approach, so does not oppose it in principle. We do note that the approach conceived has the potential to harm existing energy retailers through hollowing out of the total load at the premises – multiple sellers of electrical energy to a home, splitting the revenue between them, will logically mean that more administration will need to be done, and paid for, for the same amount of energy delivered.

On the other hand, the approach may be of benefit to organisations seeking to sell electricity in homes under non-traditional arrangements. An example could be an organisation selling the subsidised installation of EV charging equipment, subject to a take-or-pay contract over a period of time for energy delivered via the EV charging equipment – not unlike the model of buying a mobile phone handset with a data plan including a minimum monthly spend.

## Comments with respect to:

### Question 14:

#### QUESTION 14: METERING REQUIREMENTS FOR SECONDARY SETTLEMENT POINTS

- Are current NEM metering installation requirements likely to limit the uptake of secondary settlement points and the associated benefits?
- If changes are needed, what of the following minimum requirements need to be set in the NER for market participation and settlement at secondary settlement points?:
  - A physical display at the metering point
  - Minimum service specifications
  - Remote communications
  - Accuracy and data requirements
- Are there any other service or technical requirements that need to be specified for metering installations at secondary settlement points in the NER?
- Should changes be made to the accreditation and registration of metering providers and metering data providers for secondary settlement points?

We suggest that metering requirements associated with EV charging will need close consideration, if flexible trading arrangements are to work in the domestic context. The EVC has been in discussions with the National Measurement Institute for some time now on these topics:

<https://electricvehiclecouncil.com.au/submissions/submission-to-the-national-measurement-institute-on-electric-vehicle-charging-stations-october-2021/>

<https://electricvehiclecouncil.com.au/submissions/evc-submission-to-nmi-on-the-draft-oiml-guide/>

For secondary connection points in domestic homes to be viable for EV charging, cost will need to be minimised. In the case of EV charging, consideration should be given to the potential for the metering elements in the EVSE to be used for this purpose. These metrology elements should not be required to be compliant with unique Australian standards; rather they should align with international standards already in use by large multinational equipment manufacturers, in order to maximise consumer choice, minimise consumer cost, and encourage competition among suppliers.

Where a secondary point of connection is being applied for EV charging, consideration will need to be given to maintaining the ability of the consumer to self-consume their own rooftop solar. An obvious risk is the potential for the secondary metering arrangement to mean that the consumer cannot directly self-consume their own solar to charge their car, because their rooftop solar runs through a different energy meter managed by a different party. This would predictably result in higher costs to consumers and missed opportunity for grid-benefitting solar soak activity.

As an example of this type of failure mode, we can consider Queensland.

The service and installation rules in Queensland (the QECM) currently forbid the installation of 32A single phase EVSE (EV chargers), except where they are installed on a controlled load

circuit. Where the EV charger is installed on the controlled load circuit, the consumer cannot use their own solar to charge their car – they instead export to the grid at a low (and falling) FiT, and then buy from the grid the electricity they need at a higher cost, during those hours when the controlled load circuit is energised. This has the dual effect of increasing the overall cost of energy to the consumer, and reducing the degree to which the consumer is incentivised to self-consume solar.

The installation of a 20A charger on the general power circuit is permitted in Queensland – but at this lower power level, fully recharging a typical EV overnight is not possible, and the global manufacturers generally don't manufacture 20A EV chargers anyway, so there's very little equipment to choose from. Our understanding is that these rules in Queensland are largely being ignored by installers, because these rules don't work for consumers. This is problematic – it would be far better to have well designed rules, and installers following them.

### Comments with respect to:

## Appendix A: CURRENT AND EMERGING CER PRODUCTS AND SERVICES

Missing from the list are simple ToU plans. As an example:

<https://www.powershop.com.au/electric-vehicle-tariff/>

The consumer can access their own rooftop solar for charging their car (forgoing ~7c/kWh), or set their car to charge from midnight to 4am (at ~9c/kWh). They also have access to energy at more typical pricing (20c-30c/kWh) at other times for charging their vehicle or general use.

The typical driver, who is able to do some charging during the day, and the balance of at-home charging scheduled in the middle of the night, can easily save hundreds of dollars per year, while avoiding contributing to peak demand, and assisting with solar soak. They do not require a flexible trading arrangement to derive and deliver these benefits... they don't even need to install an EV charger, as the timing can be set via the vehicle, plugged into a standard power point via an ICCPD cable.

Examples of the methods consumers are actually using to control the times at which the vehicle charges can be seen here, under 'controlled EV charging time':

<https://ghes.com.au/survey-results-2022/electric-vehicles-2022/>

The important takeaway is that flexible trading arrangements do not appear to be generally necessary to bring about the desired results of:

1. consumers paying less to charge their cars, provided they're willing to charge their cars at off-peak times,
2. excess solar being consumed in order to reduce the need for solar curtailment at a system level, and
3. presentation of EV load at peak times being generally avoided.

What's necessary is that the consumer is adequately incentivised.

## Comments with respect to:

### A.1 Emerging energy services: Mobile billing for EVs

A wide variety of business models are emerging globally with respect to EV charging.

In Australia, there are a relatively small number of operators of public charging networks, which consumers can use on-demand. Payment is typically mediated via an app at the time of supply, and consumers generally have their choice of providers, in much the same way that consumers can choose from a variety of different petrol station operators.

While more complex possibilities can be envisaged, such as a combined plan that ties together energy consumption in the home and energy consumption at public charging stations, it is not clear that this is actually better for the consumer, or that it requires flexible trading arrangements as a pre-condition to the model being enabled. For example, it would be possible for an existing retailer to offer a 'whole of home' electricity supply contract under existing rules, with the additional element of a certain amount of public charging at designated public charging facilities over a certain period of time for a certain price. FTA would not appear to be needed for this model to emerge.

The most relevant use case to EV in this context is vehicles operating in a lease arrangement, like company cars. In this context with a traditional petrol vehicle, the employer is paying for the fuel by way of a fuel card, which the employee presents at petrol stations when refuelling. In the new landscape of EVs, ideally, the employer wants the employee to charge their vehicle at home, so that the vehicle is fully charged and ready to go the next day. The consumption specifically associated with home charging of the vehicle therefore needs to be accounted for in some way, so that the employer can cover that new cost which turns up on the employee's domestic electricity bill.

Flexible trading arrangements could potentially have a role to play in that setting – but it's also possible for the energy consumption of the vehicle to be directly collected from the vehicle via a software platform, and the employee provided an allowance to cover the impost on their home electricity bill. For the dollar amounts concerned (typically <\$600/annum, assuming the consumer has access to off-peak pricing), it is also possible for the employer to provide an annual allowance to cover the estimated cost, potentially based on kilometres driven, and not measure the energy consumed at all. This has a parallel to taxation arrangements for existing vehicles, which use a c/km figure that is all inclusive of fuel, maintenance depreciation, etc.

## Comments with respect to:

### Part B: AEMO's proposal to introduce secondary settlement points

*"An alternative setup could see individual devices (such as an EV) with their own secondary settlement point, treated separately in wholesale markets"*

The EVC observes that making arrangements for an EVSE (the fixed installed EV charger) to be a separate settlement point in the home might have merit in some cases, and could potentially be executed. We note that treating the vehicle as the separate settlement point would be more complex and would likely take us well out of step with global practice in the EV and EVSE space.

It's important to bear in mind that good outcomes for consumers are at the heart of this. Under the current arrangements, the typical EV driving consumer can access energy for their electric vehicle at home under a standard retail arrangement, where they enjoy substantially greater consumer protections than a consumer of energy for a petrol vehicle, and at far lower cost per km travelled than the cost for petrol or diesel. They also have freedom to choose from a wide variety of public EV charging providers, paying at the time of energy consumption, in a manner comparable to the purchase of petrol or diesel today. This was unpacked in our recent submissions to the AER retailer exemption review process:

<https://electricvehiclecouncil.com.au/submissions/evc-response-to-the-aer-on-review-of-consumer-protections-for-future-energy-services-options-for-reform-of-the-national-energy-customer-framework/>

<https://electricvehiclecouncil.com.au/submissions/evc-response-to-aer-retailerauthorisation-and-exemption-reviewissues-paper/>

From the point of view of the average consumer, this element of the system isn't broken. Care needs to be exercised such that the enablement of new solutions leads to good consumer outcomes.