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Eamonn Corrigan  
Australian Energy Market Commission  
PO Box A2449  
Sydney NSW 1235

Dear Mr Corrigan 

### **AEMC Draft advice – Energy Market Frameworks for Electric and Natural Gas Vehicles**

The Australian Energy Regulator (AER) welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC) draft advice paper on its review into energy market frameworks for electric and natural gas vehicles. The AER responds to a number of issues raised in the AEMC's draft advice paper. These principally concern the following:

- the nature of service of vehicle battery charging and its relationship with the National Energy Retail Law (NERL, or Retail Law)
- measures to manage the electric vehicle load in an attempt to mitigate any exacerbation of peak demand in the National Electricity Market (NEM), including:
  - appropriate price signalling
  - electric vehicle (EV) load separation and identification.

#### **Battery charging and the National Energy Retail Law**

The Retail Law governs the sale of energy 'to persons for premises'. The AEMC's draft advice further states that:

- the 'consumption' of electricity refers to the act of charging an EV battery. It does not refer to the depletion of the EV battery when the EV is in use
- the 'premises' refers to all locations of EV charging and the EV itself is not a 'premise'.

On this basis, the draft advice concludes that electricity supply for EV charging would generally constitute a legal sale of electricity under the Retail Law. However, the draft advice accepts that there may be divergent views on the interpretation of s. 88 of the Retail Law. It notes that:

For example, it could be argued that the NERL does not apply because EV charging is not 'for premises', but rather is for the purposes of the transport sector, which would therefore be outside the ambit of the NERL. This position would be based on a view that the NERL was designed for the essential services nature of electricity supply and consequently it would not be appropriate for the NERL to cover commercial EV charging stations.

The AER considers that there is merit to the divergent position as outlined above.

The term ‘for premises’ in section 88 implies that for a sale of energy to be governed by the Retail Law it must be used for consumption within the confines of a particular premises (e.g. consumption within a household or business). The AER considers that EV charging does not constitute consumption ‘for premises’, as the energy sale is for an external, mobile purpose.

The AER also considers that the acceptance of any interpretation that broadens the sale of energy to ‘at premises’ rather than ‘for premises’ would create precedent under which a range of activities which are beyond the scope of the Retail Law, e.g. mobile charging stations at shopping centres and airports, may become subject to that law. The AER considers this an important distinction in the legal definition of ‘a sale of energy’. The terminology in the Retail Law, for example, does not refer to energy being consumed ‘at premises’. Such a definition would capture the supply of energy for EV charging, in the AER’s view.

Further, the AER agrees that the charging of an EV station relates to the transport sector. As such, regulation under the Retail Law may not be necessary nor appropriate, given that protections afforded to customers under the Retail Law are not available to other transport users who do not use EVs (and that the outcome of regulating EV charging as a sale of energy would result in more extensive protection being afforded to EV users than to users of other types of cars, which creates an inequitable outcome). EV customers are entitled to a range of consumer protections under the Australian Consumer Law and various other legislative instruments which align with those afforded to other transport users, but no more.

The draft advice also seeks views on whether the AER should be required to specify how it will determine whether a bundled service provider is selling a good or service that constitutes a legal sale of electricity. The AER does not see merit in developing a specific guideline on this issue, however, has provided guidance in its exempt selling guideline as to what constitutes the sale of energy. We also note that the sale of energy under the Retail Law is predicated on any such sale being ‘to persons for premises’. As a general proposition, in relation to bundling, the AER considers a sale of energy takes place where there is a separate charge for energy consumed and where that charge is based on consumption. Where any value added services are provided, for example, maintenance and servicing, and energy is one component of a broader charge, it is the AER’s view that no sale of energy is taking place.

### **Managing the electric vehicle load**

The AER notes that a key concern for the AEMC’s review has been to seek to mitigate any potential exacerbation of peak demand resulting from EVs by considering what should be the appropriate mix of price signals and other activities that could encourage efficient electric vehicle charging (i.e. away from peak times). A key theme emerging from the AEMC’s review has been the extent to which specific market arrangements need to be developed for EV’s. That is, the extent to which EV loads need to be identified or separated from other customer loads on the network, to facilitate the:

- the provision of electric vehicle specific tariffs; and
- the provision of electric vehicle specific demand management, including direct control battery charging (time controlled charging) and measures to enable use of the storage capabilities of batteries for the network.

To this end, the AER supports the AEMC's position that energy market arrangements should attempt to be technology neutral, and that price signals are the key (but not necessarily the exclusive) means by which to encourage efficient EV charging behaviour. The AER notes that the AEMC's draft recommendations to its power of choice review propose a greater availability of time varying network tariffs and the metering technologies required to enable such tariffs. The AER supports the AEMC's recommendations as they aim to provide for efficient price signals of the underlying cost of supplying electricity and thereby encourage the shifting of loads from peak to off peak times, regardless of the type of load.

However, the AER also recognises that there are a range of network tariff structures that can be categorised as time varying, or time-of-use (TOU). The AEMC itself has provided a range of flexible tariff approaches in its draft Power of Choice report.<sup>1</sup> The AER also recognises the significant forecast impact of EV's on peak demand presented by the AEMC. In this context, any TOU network tariff will need to send a sufficiently strong signal of the underlying cost of electricity usage at peak times to elicit a strong consumer response in battery charging behaviour. In other words, consumers are likely to need a significant change in their network tariff structure to alter their EV charging away from peak times. The AER will respond more fully to the AEMC's recommendation in this regard as part of its submission to the Power of Choice Review, but notes that the exact form of the time varying tariffs that the AEMC envisages for classes of consumers is still under consideration.

In general, while the AER's preference is for price signals where these are sufficiently cost reflective to provide a strong signal of peak time usage costs, the AER acknowledges that there could be circumstances where specific arrangements might be desired by consumers exercising their preferences.<sup>2</sup> These circumstances can arise in relation to EVs or other parts of the consumer household load such that individual loads would need to be identified by a retailer or other third party specialist provider. Accordingly, the AER considers there is merit in ensuring that market arrangements do not prevent consumers from pursuing such options, and do not prevent competition from emerging in related sectors that might depend on the development of EV specific service packages. Some of these service packages might also include services which assist consumers in actively managing the timing of their charging behaviour (e.g. time controlled battery charging). The AER considers the important distinction is that regulatory arrangements should facilitate the exercising of consumer preferences, rather than mandating specific market arrangements. This is consistent with the AEMC approach in its Power of Choice report.

The AEMC has identified a range of metering configurations to enable consumers to separate their EV load from the rest of their household, including:

- parent/child or multi-element metering; or
- separate metering within an 'embedded network'.

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<sup>1</sup> AEMC, *Draft report – Power of Choice review, Appendix B – Efficient price structures and cost reflective prices*, September 2012.

<sup>2</sup> For example, consumers might prefer to have a tariff linked to a particular appliance where they see a sufficient financial benefit and are flexible in their consumption patterns, or they might see value in having another party manage the usage of their appliance – e.g., the timing of their electric vehicle battery charging, or value in some other bundled EV service offering

The AER broadly supports the AEMC's approach in regard to these metering arrangements. However, we note that there could be issues with the implementation of these arrangements, including the possibility of two financially responsible persons at a connection point, which will need to be considered by AEMO and relevant market participants.

### *Identifying large loads*

The AEMC has queried whether arrangements are required for DNSPs to be able to identify large loads on the network, including EV loads. The AEMC considers that large load identification would be used for network security purposes and for refining the price signals that a DNSP can offer. A number of options have been identified including:

- using the Wiring Rules Australian Standard to determine the maximum demand at a premise and notify the DNSP of installations affecting this demand level
- setting a total load threshold above which identification to a DNSP would be required.

The AER questions the practicality and value of such an administratively complex approach. The AER considers that the AEMC's draft recommendations regarding a roll-out of interval meters, including a requirement on DNSPs to offer time varying tariffs for certain consumer categories, would provide DNSPs with the necessary information regarding the location of peaky loads within the network. This metering information can assist a DNSP with introducing time varying network tariffs, consistent with the obligations to offer these types of tariffs recommended by the AEMC's power of choice.

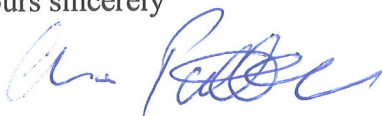
Further, the AER considers that refinement to this approach will depend on how the AEMC sets the threshold levels for the large and medium-large consumer categories, which would be subject to time varying tariffs and interval metering. That is, whether these levels can be assumed to sufficiently capture consumers with EVs.

Alternatively, if consumers choose to pursue an arrangement by which they separate their EV load from the rest of their household, the relevant meter configuration would ensure that DNSPs would be able to directly identify loads arising from EV, allowing for even greater tariff customisation related to EV's.

In any case, as acknowledged by the AEMC's power of choice review, a degree of flexibility will still be required for DNSPs as to how they reflect local level constraints and shared asset costs in implementing time varying tariffs. Accordingly, the AER considers it is unclear what value is in mandating the identification of large loads on the network.

If you would like to discuss further, please contact Mr Blair Burkitt on [blair.burkitt@acr.gov.au](mailto:blair.burkitt@acr.gov.au) or by telephone on (03) 9290 1442.

Yours sincerely



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