Energy Security Board

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22 February 2023

Response to the Electric Vehicle (EV) Supply Equipment Standing Data - Consultation Paper

AGL Energy (**AGL**) welcomes the opportunity to respond to the Energy Security Board's (**ESB**) Consultation Paper on EV Supply Equipment (**EVSE**) Standing Data

AGL is one of Australia's leading integrated energy companies and one of the largest ASX listed owner, operator, and developer of renewable generation. AGL is also a significant retailer of energy and telecommunications with 4.3 million customer accounts across Australia. AGL supports an energy market system that empowers consumers to take control of their energy consumption and costs.

We note the ESB's concern that individually and collectively, EV charging load has the potential to change and create risks at all system levels that need to be managed effectively. AGL is currently undertaking an ARENA funded EV charging orchestration trial and the insights will provide useful information on how consumers use and how industry can unlock flexible energy value for EV owners.

The ESB has failed to demonstrate why the granularity of data that is set out in this consultation paper is required and why EV load should be treated as different to other types of customer load that resides behind the meter. Most of the data requirements listed in the paper are of little relevance to the primary goal but will add reporting burden and cost to the people doing the reporting, and the businesses importing and selling the hardware. The proposed national EVSE database is not a necessary element to the achievement of the core objective.

Importantly, AGL believes a robust cost benefit analysis must be undertaken to ensure energy consumers and road users are the ultimate net beneficiaries. In an energy cost constrained environment that has and will have impact on broader cost of living implications, we need to ensure reforms are well targeted and do not unnecessarily add costs to end users without any commensurate or positive benefits.

EVSE standing data needs and use cases

The ESB has not provided a strong evidence base that effectively demonstrates how introducing costs to record the size and type of charger, and its performance characteristics, will in return, provide a significant benefit in being able to assess real-time impacts of EV charging on local networks. Further, the ESB has not appropriately considered alternative, and potentially lower costs approaches that can provide the same information.

The significant overhead costs to establish and maintain a register every time a customer installs a load behind their meter would be considerable. We believe, networks and the Australian Energy Market Operator (**AEMO**) can adequately conduct their planning and forecast analysis through the utilisation of sampling data, as well as being able to validate their models against operational data from EV trials or other sources.

The opportunity for managing a household's flexible load can be achieved without the onerous data requirements that the ESB is proposing to introduce. The most efficient energy system usage will be achieved if demand side response providers are working with a variety of dynamic market signals to deliver a range of flexibility outcomes. AGL believes that while uptake of EVs in Australia is still considerably low, networks and AEMO should utilise the next 2 to 3 years to understand the trends emerging in EV charging,

especially from the various EV charging trials and from other countries EV charging data collection who are far more advanced than Australia. These trends can then inform where the gaps in data capture are, and what data is required in order to conduct a meaningful cost benefit analysis in how to establish and maintain those data records. By utilising data coming out from EV trials such as the one being conducted by AGL, we believe there is sufficient information about what a home charger is going to do and therefore they will not need to know where every charger is to conduct adequate planning. Therefore, we believe the least cost option would be to analyse sampling data in the first instance to inform network planning. This approach is not dissimilar to previous programs of sampling, such as how distribution networks use sampling data for hot water in NSW.

Understanding and utilising charging behaviours

The most efficient energy system usage will be achieved if demand side response providers are working with a variety of dynamic market signals to deliver a range of flexibility outcomes. If all load control assets responded in a similar fashion concurrently, to the same market signals, the demand could be shifted from the current evening peak. Understandably, AEMO and networks want to hedge against the risk that a new secondary peak would emerge. However, the opportunity lies in mitigating against such unwanted outcomes through an iterative development of market signals and technological solutions as the uptake of smart charging expands.

To accommodate the increased demand from EVs at network level and help reduce the need for network reinforcement, the Ofgem Network Innovation Allowance funded project, "Shift", which aimed to explore innovative technical and commercial solutions to help accommodate increased demand within the existing network capacity. The study found that on average EVs only charge for 19% of the time they are plugged in at home, providing an opportunity to shift demand away from typical plug-in times when demand is already high.[1] UK Power Networks trialled three different market mechanisms with Kaluza, Octopus Energy and ev.energy to incentivise customer charging behaviour. The project, which ended in October 2021, found that customers chose to smart charge for 85% of all charging sessions which led to a reduction in EV demand during the evening peak by an average of 79%. It was also found that the customer proposition is important for the reliability of response, with ongoing financial incentives increasing the turn-down response.

Similarly, in AGL's Electric Vehicle Orchestration Trial which received funding from the Australian Renewable Energy Agency (**ARENA**) as part of ARENA' Advancing Renewables Program.[2] We are investigating three technical solutions for managing EV battery charging, each with differing maturity and complexity, via an EV charging orchestration platform. The project will inform retailers, customers, distribution network service providers, regulators, the vehicle industry, charger manufacturers and other industry stakeholders of the potential of EV charging orchestration and how the benefits can be recognised and valued.

The project will also provide detailed insights into customer behaviour to inform how best to maximise customer participation and customer value and will materially advance the preparedness of the energy industry to be able to integrate large numbers of EVs in the future. Some patterns of charging behaviour are starting to emerge with early analysis of data being collected from both the smart charger and vehicle API trial streams. Similar to the UK trial Project Shift, our trial has also challenged the common assumption that drivers do around 80% to 90% of their EV charging at home. In the Lessons Learnt Report 4, we reported that approximately 55% of charging has taken place at home. Whilst this is still the largest category of charging location, it falls well short of the expected 80% to 90%.[3] The gap between the UK findings and the findings from our trial could be accounted for due to the fact that Australia has a lower level of EV

[1] Electric Vehicle Smart Charging Action Plan, p39. UK Department for Business, Energy & Industrial Strategy, https://bit.ly/3RZw8Ug
[2] https://arena.gov.au/projects/agl-electric-vehicle-orchestration-trial/
[3] AGL EV Orchestration Trial Lessons Learnt Report 4, p.18, https://arena.gov.au/assets/2022/09/agl-ev-orchestration-trial-lessons-learnt-report-4.pdf

penetration and EV chargers located outside of peoples homes. However, what these two trials also demonstrate is the significant opportunity in EV charging that lies in optimising and incentivising charging use, rather than creating a costly, static register that ultimately has not clearly demonstrated how it will work in the long term interests of consumers.

Achieving a nationally consistent approach to EVSE data collection

The analysis carried out in the final section of the consultation paper only sought to provide evidence and commentary on the implementation of the DER Register as the data repository. This selected analysis of the ESB's preferred option limits the ability for stakeholders to provide adequate feedback. The ESB notes that data collection involves trade-offs between the usefulness of large datasets, and the cost of data collection and management. We agree with the general tests for data collection set out by the ESB to ensure that data is not collected 'for its own sake'. However, the proposal for collecting EVSE data set out in this paper fails to both test 1 and 3 as the datasets presented are not limited to a clear purpose and remains without due consideration of the costs and risks of data collection for different stakeholders.

We recommend the ESB consider capturing a simplified dataset through the motor vehicle registration process for EVs. As noted by the Electric Vehicle Council in their submission, adequate consideration does not appear to be given in the paper towards securing data sharing arrangements between AEMO and the motor vehicle registration bodies. These existing data sets include the usual garaged address of the majority of vehicles in the Australian market. Data sets such as vehicle registration data would likely contribute significantly to the core objectives of this paper, without requiring any new information to be collected from anyone. They would also be instrumental in identifying locations where EV charging is happening without the installation of EVSE, which currently constitutes a majority of domestic EV charging activity. To achieve this outcome, work will be needed at state government level around the legislation governing the sharing of vehicle registration data.

Case Study: Automatic Asset Registration

Although CER assets are already being recorded under the DER Register, thought should be given to the efficacy of the current registration process and the accuracy of the records prior to designating any new datasets or data repositories. The ESB should examine the project underway in the UK where they are trialling the development of an automatic, automated secure data exchange process for registering energy assets and collecting and accessing small-scale asset data, making grid connected assets more visible. When the UK Department of Business, Energy & Industrial Strategy carried out developing the Coordinated Asset Registration Strategy, it was revealed that only a small proportion of new energy assets are currently being registered and hence visible to the network companies. Since all the benefits of asset registration accrue to the network companies instead of the installers, creating new policy levers to nudge and enforce compliance amongst installers would not only be difficult and complicated, but still likely result in a proportion of installations going unregistered or poorly registered.

Under the Automatic Asset Registration (**AAR**) Programme the UK Government is funding the development of innovative solutions to replace manual registration of small-scale demand, generation, and storage assets (such as heat pumps, EV charge points, solar PV, and in-home/SME batteries) as well as the development of a Central Asset Register capable of collecting and sharing energy asset data, once successfully registered.[4] By contrast, an innovative technical solution – Automatic Asset Registration – could remove the element of incentive entirely and overcome barriers by introducing a digitalised, automatic, automated,

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[4] Automatic Asset Registration SBRI Competition: guidance, p.14, UK Department for Business, Energy & Industrial Strategy, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1066744/Automatic_Asset_Registration_SBRI_Competition_Guidance_Notes.pdf

standardised, and secure data exchange process. AAR is looking to fundamentally deliver benefits to all those within the energy system who interact with it. This includes:

- Simplifying the registration process for installers
- Reducing the collection of duplicate data and;
- Creating a more reliable dataset.

If you have any queries about this submission please contact Emily Gadaleta, Regulatory Strategy Manager at egadaleta@agl.com.au.

Yours sincerely,

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