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Australian Energy Market Operator

NEM Reform Program

Email submission to NEMReform@aemo.com.au

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## Recommendations paper: Electric Vehicle Data

AGL Energy (**AGL**) welcomes the opportunity to provide responses to the questions posed by the Australian Energy Market Operator (**AEMO**) in response to the abovementioned recommendations paper.

Proudly Australian since 1837, AGL delivers around 4.5 million gas, electricity, and telecommunications services to our residential, small, and large business, and wholesale customers across Australia. AGL's views to the topics under consideration have been informed by our experience in delivering electric vehicle (EV) products and services to customers, including:

- AGL's EV plans which attracted over 22,000 customers in FY24 – this includes the Night Saver EV Plan, a time-of-use (TOU) plan where customers are encouraged to charge their vehicle overnight for as low as $5.
- OVO Energy's EV plan and EV Control which enables both TOU and smart charging propositions for the customer.
- AGL's EV home and commercial charging products and EV subscriptions.
- AGL's partnership with PLUS ES to expand New South Wales' EV Charging network by installing 149 public chargers.

AGL supports the objectives of AEMO's electric vehicle data (EVD) work program and the proposed AEMO and industry collaboration work programs. AGL's view is that improved collaboration and information sharing on EV uptake and EV charging behaviour would lead to efficiencies and cost savings across industry, as well as more transparency in network planning and connection decisions.

AGL notes that with the implementation of Flexible Trading Arrangements, an opportunity exists to identify EV chargers as NMI Types when connected to Type 9 metering on under a Secondary Supply Point, supporting AEMOs data capture proposals.

Notwithstanding its support, AGL has identified risks associated with the delivery of this work program including:

- A need to account for the privacy risks associated with non-intrusive load modelling (NILM).
- Dependencies with the CER Data Exchange project – particularly in relation to access to CER Standing Data for retailers.
- Data useability risks, if collection processes are not standardised across businesses.
- Overly conservative implementation costs.

AGL looks forward to engaging with AEMO on this work program. Appendix A includes responses to AEMO's consultation questions. If you have any queries about this submission, please contact Andrea Espinosa on 0422 165 705 or aespinosa2@agl.com.au.

Yours sincerely,

Kyle Auret

Senior Manager Policy and Market Regulation

## Appendix A – Response to consultation questions

| Question | Answer |
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| Are there any other key EV data use cases across stakeholders that AEMO has not included? | The paper notes the importance of EV and EV supply equipment (EVSE) standing data, data for consumer models, and aggregate EV forecasts for retailer use cases. AGL broadly agrees with AEMO's summary but notes the importance of information on EV charging patterns to satisfy these use cases.<br><br>AGL also notes that should Consumer Data Right (CDR) be considered as a use case, this would require updates to multiple AEMO API's from a GetDER and GetServicePoint perspective. These could be new fields or, preferably, enumerations to handle how this data is shared with the CDR ecosystem. |
| Are there any gaps or challenges that AEMO has not captured, or you consider AEMO has not accurately portrayed? | AGL broadly agrees with the identified gaps but notes the following.<br><br>*Access to the Distributed Energy Resources (DER) Register*<br><br>AGL considers that capturing an EV charger location is important, in the event that unidirectional chargers were converted to bi-directional devices in the future.<br><br>AGL strongly agrees that a lack of access to the DER Register presents a challenge for retailers, particularly as the DER Register is meant to already capture EVs with vehicle to grid (V2G) capabilities. As V2G data increases, and if this dataset were to be expanded to include EVs or EVSE (e.g., as part of the CER Data Exchange Project), then AGL's strong preference would be for this data to be managed through enumerations and data dictionaries to the greatest extent possible to avoid free text fields that can lead to inconsistent and potentially unusable information.<br><br>This information would be especially important in an environment where retailers play a role in orchestrating customers with EVs and other forms of DER (e.g., into 'dispatch mode' under the *Integrating Price Responsive Resources* Rule).<br><br>*Data Complexity in V2G Ecosystem*<br><br>The integration of bidirectional Vehicle-to-Grid (V2G) technology introduces unprecedented complexity to EV charging data management. Traditional unidirectional charging data is already substantial, but V2G systems dramatically expand this scope by capturing both energy consumption and energy return data flows.<br><br>This complexity is further increased by the need to manage charging profiles and command messages that instruct EVs when to charge or discharge based on grid conditions, energy prices, and user preferences. The granularity of time-based instructions creates enormous volumes of data points that must be properly handled.<br><br>The OCPP protocol, currently transitioning from version 1.6 to 2.1 and beyond, serves as the communication backbone for charging infrastructure. Each protocol upgrade introduces additional data parameters, further expanding the data footprint.<br><br>Given these challenges, AGL's view is that clear expectations should be established regarding:<br><br>• Data ownership and management responsibilities<br>• Data storage architectures and retention policies |

| Question | Answer |
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| | • Access control and permission structures<br>• Privacy protections and compliance requirements<br><br>Any system design must prioritize flexibility to accommodate evolving protocols and scalability to handle the exponential growth in connected charging infrastructure and associated data streams.<br><br>Many of these issues could be worked through the CER Data Exchange Project.<br><br>*Operational data*<br><br>The paper notes that post-event operational data at 60 seconds or smaller time increments may be needed in the future. AGL's view is that this resolution would come at a high cost as this implies a need for use of fast metering.<br><br>Should CDR data be in scope, AGL also queries whether CDR non-functional requirements (NFR's) would need to be amended to deal to real time or close to real time data being shared to ADRs. For example, Traffic Thresholds that the Data Standards Body control and where they have documented standards.<br><br>*Role of the retailer*<br><br>While AGL acknowledges the focus of the recommendations paper is on AEMO and DNSP use cases, direct relationships between retailers and energy users will be crucial to realise the benefits of the electrification of transport for all consumers. Retailers are well placed to develop products and services that incentivise consumers to change behaviour to maximise individual value while providing broader benefits to other consumers.<br><br>For example, AGL's EV Orchestration Trial found that EV customers on time-of-use tariffs respond very strongly to pricing signals and operate their chargers at off-peak periods. This trial informed AGL's 'Night Saver EV plan' which enables customers to charge their EV for only 8c/kWh between 12 and 6 am.<br><br>Retailers are also well placed to effectively orchestrate customer devices and unlock further value for consumers by accessing both network and wholesale revenue streams.<br><br>*Flexible Trading Arrangements*<br><br>AEMO's paper should include mention of the Unlocking CER benefits through flexible trading reform, which could improve visibility of CER assets such as EV chargers in Secondary Settlement Points and Type 9 Metering. This could also be used as an opportunity to establish appropriate NMI classifications for these assets. |
| Do you agree with AEMO's summary of the common themes from engagements? | AGL agrees with the summary and reiterates the need for participation from multiple industry representatives, including retailers, to reduce redundant efforts.<br><br>AGL also notes that 'an independent source of truth on EV data' would be important to ensure transparency in network planning and in distribution network service provider (DNSP) connections processes. |

| Question | Answer |
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| What are your views on the initiatives that AEMO proposes to implement?<br>• Do you consider these initiatives as capable of providing benefit through improved accuracy of AEMO's forecasting and planning at a reasonable cost? | AGL is supportive of AEMO's proposal and supports greater levels of EV / EVSE data being made available to industry with the right safeguards. AGL also notes the following.<br>*Vehicle telematics data*<br>AGL agrees with the proposed approach, particularly as this would source information from original equipment manufacturers (OEMs) and existing databases directly, and not from other consumers of this information such as retailers.<br>AEMO could also consider a separate pathway to collect data from fleet managers who would have different information and processes.<br>*Non-intrusive load modelling*<br>AGL agrees that NILM offers powerful data analysis capabilities to disaggregate energy usage patterns, and that industry collaboration would lower the time and effort required to develop effective algorithms.<br>However, access to NILM could present a risk for serious privacy concerns if access and use of this information is not carefully considered and managed. Once this granular monitoring infrastructure is established, there's little technical barrier preventing its expansion to identify and track other household appliances and assets. This could lead to unprecedented visibility into customers' private behaviours and habits within their homes.<br>As a general principle, the level of information collected through this method should not go beyond what's strictly necessary for system and network management. In first instance, AEMO could look into the European Union's data protection regulations, which include requirements for NILM information collection.<br>*EV uptake data*<br>AGL would support a data sharing arrangement with NEVDIS and subsequent public reporting of this data. This information would go a long way in resolving industry's need for a definitive data source. |
| What are your views on the proposed national collaboration framework and workstreams?<br>• Do you have any views on how this forum should be set up? For example, from the proposed organisations (ARENA, RACE for 2030, CSIRO) who would be the best organisation to chair it and drive it forward, and how could we best support industry participation?<br>• What are your views on how these initiatives will align with longer-term objectives either of your organisation | AGL strongly supports the proposed national collaboration framework.<br>AGL does not have strong views on how the forum should be set up, but notes that the Electric Vehicle Council (EVC) has played a leading advocacy role to date. Subject to resourcing, the EVC could also play a role in supporting the establishment and management of these working groups.<br>AGL also notes that if AEMO were to pursue the *Pooling of EV charging load profile data* workstream, then industry would need to agree on consistent data gathering processes across organisations. In the absence of this consistency, the information would not be easily interrogated / comparable across businesses and network areas.<br>This principle is important across the work program – the earlier data collection efforts can be standardised, the more industry and other interested parties will be able to use this information in the long run. |

| Question | Answer |
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| or more broadly to improve access to EV data? | |
| • Do you consider these costs appropriate in relation to the potential benefits that could be derived? | AGL's initial views is that the costs described in AEMO's paper are likely to be overly conservative, and that AEMO may have underestimated the effort that will be needed to pursue these workstreams. As the project progresses, AEMO and industry could incur increasing costs including ongoing governance and data management. Nonetheless, AGL still considers this is a valuable work program that could lead to efficiencies and cost savings across industry.<br>If AEMO's project costs were set to increase, then AGL's preference would be for AEMO to seek funding options outside of the NEM Reform Program (e.g. ARENA grants). |
| • Do you agree with the proposed implementation timeline? | The proposed timeline should also consider the CER data exchange work program.<br>AGL supports the 12-month review.<br>If the project were to result in a multi-year implementation, and if this implementation were to require ongoing costs for data management and data sharing, then AGL's preference is for the project to 'sunset' after a few years – or continue only subject to a review of the benefits of the project – as by then industry may have built the necessary capability to continue its EVD efforts without the need for this forum. |
| • Do you perceive any risks in AEMO's proposed recommendations and implementation? | It will be important to ensure the data collected through this process is subject to appropriate data privacy measures, which include consideration of which information needs to be collected, which information can be shared and who can be granted access.<br>AEMO would also need to account for commercial sensitivities that can be associated with this data.<br>Cost recovery will be a critical consideration. This would include who bears the cost for additional metering devices (if necessary), for data collection, data processing, and data sharing.<br>While AGL understand that planning and forecasting are a key motivation for AEMO and DNSPs, the success of this project will also be dependent on the forum's ability to keep other industry player's and consumer needs as an integral part of the work program. |