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Energy Security Board
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Submitted electronically: info@esb.org.au

Re: Issues Paper - Electric Vehicle Smart Charging

Red Energy and Lumo Energy (Red and Lumo) welcome the opportunity to make this submission to the Energy Security Board's (ESB's) issues paper on smart charging for electric vehicles (EVs). While the paper notes that the Australian EV market is currently in the very early stages of its development, we agree it is appropriate to consider some of the emerging policy issues at this time. Furthermore, we see an important role for the ESB to coordinate policy development, noting the diverse range of projects that are also underway and to which the issues paper refers.

Uncertainty about the commercial environment and inconsistency in regulatory settings for EVs across jurisdictions will undermine the development of innovative and customer focused solutions and service offerings. The ESB can help to overcome this by establishing a framework that allows the competitive market to develop efficiently and to deliver service offerings that account for the unique characteristics of EVs.

However, we share the view that numerous stakeholders have expressed about EVs— including in the ESB's recent webinar—that the majority of consumers will purchase an EV primarily for the purposes of transport, rather than to participate in energy markets. We also expect this to remain the case for the foreseeable future. This means there will be limits on the extent to which consumers will respond to price signals, whether they will agree to binding constraints on the use of their EV, or whether they will want to actively participate in energy markets through their EVs (either directly or by allowing a third party to assume control).

As such, we question whether EV output can be considered to be a source of firm demand response, or whether EVs can reasonably be viewed as 'batteries on wheels'. We are also sceptical of ARENA's estimates of the size of the benefits of load flexibility that EVs could allow. ESB should take a conservative approach when comparing the costs of specific policy options against these estimated benefits.

At the same time, a regulatory framework that compels a consumer to agree to remote coordination or poorly designed tariff structures that appear to penalise EV ownership will likely cause frustration and resentment, and act as an obstacle to future reform. For example,

consumers who are compelled to agree to remote coordination if they install a charging unit at their premises may try to avoid this by using a plug in socket rather than a level 2 charger.

Similarly, the ESB must carefully consider the impact of allowing networks and other entities to manually override consumers' preferences, even for the sake of maintaining system security and to alleviate constraints. The need for such controls must be clearly explained to EV owners and specified in network connection agreements.

We recommend the ESB maintain a clear focus on the consumer impact of different options for the Australian EV market and a realistic view of how EVs could impact the energy market. It should do this through an iterative approach that continually assesses consumers' perspectives about how they want to utilise their EVs. We agree with the ESB that its Customer Insights Collaboration is an important mechanism for obtaining information about consumer preferences and it should inform the EV workstream about the opportunities and barriers to reform.

Technical standards

The ESB's principles relating to the interoperability of Customer Energy Resource devices—listed on page 16 of the issues paper—are equally applicable to EVs as they are to other assets. They focus on consumer impacts and are therefore a good starting point for considering technical standards for EVs. In terms of timing, we agree that the development of standards for EV chargers and other equipment that offer optionality for future EV participation is warranted; Open Charge Point Protocol 1.6 or higher for the communication protocol is an example that the paper notes. This would avoid the need for expensive retrofitting and limitations on portability in the early stages of market development; these are problems that were observed to some degree in the solar industry. Common standards should also promote competition by allowing consumers to move between different service providers and allow for charging across multiple connection points.

The ESB suggests that they should allow for built-in scheduling and remote management at a minimum. It is also important that standards grant consumers the ultimate control over their EV, by allowing for manual overrides or to set their own parameters for charging and output in line with competitive service offerings, for example.

However, the ESB should consider the risk of choosing technical standards that lock the Australian market into a particular approach, or impose unnecessary costs on those wanting to offer services in the Australian market, or are not sufficiently flexible to account for technological advancement. This highlights the need for the ESB to develop appropriate governance arrangements for the ongoing review and modification of technical standards so they can adjust in line with future developments and shifting consumer preferences.

Network planning and pricing

We agree that key challenges arising from increased EV penetration are orderly integration with the distribution network and the expected charging profile of EV owners. The distribution businesses will require visibility of the installation and use of chargers and other Electric Vehicle Supply Equipment. This will allow them to monitor two way flows across their networks, identify constraints and to inform their expenditure and tariff proposals, including how they could utilise non network solutions that include EVs to address constraints and other system needs. AEMO's Distributed Energy Resources Register is a tool for providing distribution businesses with greater visibility of EVs across their networks.

Another element of the orderly integration of EVs is the development of connection standards. They should apply to electric vehicle supply equipment as they do for other distributed resources, such as solar PV and batteries, ensuring consistency in the treatment of such resources. For example, a connection agreement could involve a similar inverter standard to that which applies for the aggregation of solar and batteries for bidirectional flows and includes curtailing or derating to manage network security and reliability in certain circumstances.

In terms of tariffs to encourage efficient network utilisation, we acknowledge that the distribution businesses are seeking to develop cost reflective tariffs that involve sharper price signals at peak times. We recommend that rather than developing EV specific tariffs, the distribution businesses consider the broader use of their networks, including bidirectional flows, in their expenditure proposals and Tariff Structure Statements. Network tariffs should reflect network characteristics, including usage profiles, and be the product of extensive consultation with retailers and consumers, including EV owners. This would clarify the rationale for sharper price signals and allow informed consumers to adjust their consumption and output accordingly.

Furthermore, the presence of a charging point should not necessarily be the basis for assigning a specific EV tariff to that NMI. The EV owner may leave the premises and the new resident may not own an EV or use the charging infrastructure. The portability of an EV differentiates it from other distributed resources and implies that network tariffs should reflect the bidirectional flow of energy, rather than the installation of a charger. The distribution businesses and the Australian Energy Regulator will need to consider how to address this.

Retailers are already offering bespoke EV products—that might include very low rates during off-peak periods, for example—that are not aligned with current network tariff definitions. There should be no mandate for default configured tariffs but instead, retailers should have the flexibility within a competitive market to develop pricing structures (and other aspects of a service offering, such as controls on charging and discharge) that reflect their customers' specific needs. These products relate to all aspects of consumption and output, rather than just EV ownership.

The case for a specific network tariff for EV chargers applies to public charging points, where usage is for a very specific purpose and where EV owners have greater flexibility over whether

to charge or not charge at particular times. There is no sound reason to cross subsidise energy consumption at public charging points and it would risk creating distortionary signals for consumption and create sub-optimal investment and outcomes.

Emerging business models and consumer protections

The issues paper refers to new business models that could emerge as the Australian EV market develops. This includes Charging Points Operators who could manage the energy consumption and output of individual or aggregated EVs and respond to price signals and operational limits. The issues paper also acknowledges that retailers and other competitive service providers are already developing EV products. They will refine these offers over time in line with shifts in consumer needs and preferences, and in line with technological change.

We refer the ESB to our response to the Australian Energy Regulator's review of the retail authorisation and exemption framework in which we emphasised the importance of competitive neutrality.¹ We stated that regulatory frameworks that facilitate effective competition will deliver innovative and customer focused service offerings and this applies to those available to EV owners. Therefore, it is vital that the regulatory framework, including the responsibility for complying with consumer protection obligations, does not penalise or favour specific business models. This would distort investment decisions and undermine competition over the longer term. For example, a CPO could earn revenue from Frequency Control Ancillary Services participation or sell exports to the grid while a more traditional retailer remained solely liable for network costs and for the full range of consumer protections.

There may be a case for very limited exemptions from some consumer protections, such as where a service provider has a contract with an EV owner for a very specific purpose and involves control over a single asset, such as a charger. However, this should be the exception. Energy has always been regulated as an essential service, regardless of the purpose of consumption. The ESB's starting point should be that any service provider who is able to interrupt the supply of an essential service must comply with certain regulatory obligations.

Another issue is the importance of effective ringfencing arrangements for distribution businesses to further maintain the integrity of competitive markets. Therefore, the ESB must consider the regulation of EVs within the context of the broader suite of post 2025 NEM market design reforms and how the regulatory framework needs to evolve to ensure appropriate consumer protections apply in all instances.

¹ Our submission can be accessed through the Australian Energy Regulator's website for this project (available [here](#)).



About Red and Lumo

We are 100% Australian owned subsidiaries of Snowy Hydro Limited. Collectively, we retail gas and electricity in Victoria, New South Wales, Queensland, South Australia and in the ACT to over 1.2 million customers.

We thank the ESB for the opportunity to comment on its issues paper. Please contact Geoff Hargreaves, Regulatory Manager on 0438 671 750 if you have any further queries or want to discuss this submission in more detail.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Stefanie Monaco", on a light-colored rectangular background.

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