



18 August 2022

Ms Anna Collyer
The Chair
Energy Security Board

By email: info@esb.org.au

Dear Ms Collyer

Re: Southern Sydney Regional Organisation of Councils (SSROC) Response to Electric Vehicles Smart Charging Issues Paper

Thank you for the opportunity to make a submission to the Electricity Security Board on *Electric Vehicles Smart Charging Issues Paper – For Consultation*.

The Southern Sydney Regional Organisation of Councils Inc (SSROC) is an association of twelve local councils in the area south of Sydney Harbour, covering central, inner west, eastern and southern Sydney. SSROC provides a forum for the exchange of ideas between our member councils, and an interface between governments, other councils and key bodies on issues of common interest. Together, our member councils cover a population of about 1.8 million, one third of the population of Sydney, including Australia's most densely populated suburbs and some among those with the highest take-up of EVs in Australia. SSROC seeks to advocate for the needs of our member councils and bring a regional perspective to the issues raised.

Background

SSROC understands that in response to a directive from the COAG Energy Council for the Electricity Security Board (ESB), to deliver a market design to meet energy transition beyond 2025 for the National Energy Market (NEM), ESB recommended a Distributed Energy Resources (DER) Implementation Plan.

SSROC further understands that as part of the DER Implementation Plan, the ESB would like technical standards for active DER to be put in place and development of policies that ensure the standards are in customers' best interest.

ESB through the *Electric Vehicles Smart Charging Issues Paper – For Consultation*, is seeking stakeholder views on residential equipment standards and an intention to promote alignment across jurisdictions. It also seeks relevant settings that could be developed or adapted in the NEM, residential interoperability and remotely managed smart charging capabilities, and policy settings likely to lead to private investment in public charging.

SSROC welcomes the opportunity to comment on EV charging issue as ESB explores issues and solutions.

Effective standards

Australia is undergoing considerable energy transition and the take up of EV is expected to increase as prices of new carbon fossil fuel vehicles and EVs attain relative parity in the coming years. The frameworks and policies to guide how households, businesses and communities tap into these opportunities in a way that meets and protects consumer energy outcomes, are important.

SSROC views the consultation and call for submissions by the Energy Security Board as timely.

We support appropriate standards to enable the effective integration of smart charging devices for EVs into the NEM, which is important for delivering the DER Implementation Plan.

SSROC recommends that the standards should be developed collaboratively, and that they should protect household, community and business energy consumer interests and service utilisation. Ideally the minimum standard for Electric Vehicle Supply Equipment (EVSE) would include remote management with consumer override. However, this requirement would need to be balanced against the cost implications for the consumer and for the grid, and the priority of EV charging infrastructure roll-out against that of managing peak demand.

Minimal cost and safe technical complexity for domestic charging systems are supported as a priority.

Regional framework

From the perspective of SSROC member councils, there are many social and environmental considerations associated with the roll-out of EV charging infrastructure. These range from building code and Development Control Plans (DCP) amendments to accommodate residential charging, to the location of EVSE on public land and allocation of parking spaces for EVs while charging, as well as many other issues. Cumulatively, these issues signal the need for a broad strategic approach to the roll-out, to ensure that there is effective and equitable provision of infrastructure, either within the constraints or the grid or with acknowledgement of the requirement or provision for grid enhancement.

The issues paper is silent on many of these types of concerns, which are significant for councils. Local councils are in a strong position to guide, support and engage with the community on the placement of charging infrastructure that serves the local community. Some SSROC member councils have, to a considerable extent, initiated planning or mapping locations and strategy for EV charging in their communities. While these initiatives by councils are good, a more strategic and integrated regional approach would give some consistency, while allowing for unique local circumstances.

SSROC is considering a 12-member council regional framework that could involve industry, community, council strategic planners, transport and environmental sustainability professionals. This could also likely involve engaging expert consultants to lead the process. No decision has been made yet.

A government strategy that enables regional organisation of councils or similar bodies to embark and collaborate on a regional approach and framework for EV charging would inform responsive pathways to EV charging and policies.

Interoperability is one of the strengths of a regional or jurisdictional approach to EV charging issues. It offers flexibility for customers to widen their charging options, in the house, work, shopping centres, public park, off-street charging and not encumbered by varying systems or regulations in different council areas or regions.

Access and equity considerations

SSROC recommends that the ESB prioritise community equity considerations in future EV-related policies. National guidance is important and should take a medium- to long-term approach as EV use is likely to increase in Australia in the coming years. Inconsistencies in approaches between States should be minimised to the greatest possible extent.

Many councils have disability plans that promote inclusive accessibility. EV charging road maps, frameworks and enabling market policies need to recognise that there are physically challenged drivers for whom wheelchair accessibility and related issues of accessing EV charger cables are very important. Co-location of the EV charger ports with other services such as shopping, medical and recreational services is necessary for all and particularly people with physical disability.

Increased uptake of EVs and introduction of fast and ultra-fast AC chargers will have grid and infrastructure upgrade implications. If the cost of upgrading infrastructure is recouped through shared network tariffs, it could lead to equity and access issues and concerns in local communities. There will be equity implications for energy consumers who do not have the opportunity or the means to install EV charging at home and for small local businesses.

Electricity retailers need to roll out charger points to allow for smart functionality even if the customer changes provider. This will promote competition and choice for EV energy consumers.

Relevant regulations could require EV charge energy retailers to set chargers to default to off-peak charging. The management of EV loads to shift charging to avoid peak periods could enhance the cost-effectiveness of solutions for home EV service users and contribute to system wide efficiencies.

EVSE wireless capability for smart charging functionality appears to be 3 to 4 times more expensive than minimum EVSE without smart charging capability. This is very likely to be a barrier to the acquisition of smart-charging ESVE for many homes.

Regulatory or financial incentives to address this would boost EV charging utilisation. For example, consumers are likely to support participating in remote coordination capabilities for smart charging if they can see a financial benefit and if it fits reasonably with their charging needs. As a risk mitigation for consumers a manual override capability would be important.

Council vehicle fleets

Transitioning council fleet vehicles to EVs will be a major step for councils in decarbonising transport. Some councils in the SSROC area are already showing interest and taking steps in this direction, mainly with the acquisition of EVs in their light fleets. Garbage collection trucks, street-sweeper vehicles and buses are also being considered.

Targeted policies on rebates for local council EV purchases or funding enablers for ultra-fast EV chargers, could boost council take up of EVs for vehicle fleet and catalyst for extension of these facilities to the community.

Data and analytics

Data and analytics are important at this stage to inform strategies and policies and also guide changes in the future. Councils can assist in collecting and tracking EV facilities in their areas. However, it will require an integrated regional and state level approach with councils as active stakeholders. Therefore SSROC supports a minimum standard to capture EVSE installation to assist with effective planning and operational management, with appropriate limitations for privacy and security.

Business models and EV related policies

Any business and market models should recognise diversity in the characteristics of local government areas and regions. The take up of the EV will vary among councils and regions over time. A systematic approach that takes these into consideration is important.

Policy considerations should include what the market offers in terms of AC chargers for different phase connections. If that is not the case at this stage, ESB could consider working towards single-phase and three-phase electricity connections with varying power ratings and features taking into consideration the needs of homeowners, business premises owners, type of building and EV models.

Public parks, shopping centre parks, recreational, entertainment, civic, large business premises and manufacturing and logistic complexes provide opportunities for options for EV charges – ranging from slow, fast to ultra-fast charging ports and AC chargers. An overarching framework that promotes councils, business owners and community to work together is important. EV enablement funding tailored to support community EV take up and availability of charging options: at the house, off-street, public and commercial spaces and civic centre grounds, could serve as catalyst for this.

ESB would need to recognise and address some current mismatch. For example, many EV owners would like to charge using renewable energy at home. However,

evening and night times, when charging is often preferred, are not peaks for solar panel generation. ESB recognises that EVs are purchased for transport purposes, and not for grid stabilisation or battery storage purposes. EVs do present an opportunity for DER through Vehicle-to-Grid (V2G) and Vehicle-to-Home (V2H) connection, and incentives coupled with awareness campaigns could help to promote the use of EVs in this way.

Mechanisms for implementing DER in these situations could include incentives for battery installation to enable charging from residential solar systems during grid peaks, while reducing the feed-in peak in the middle of the day, overall smoothing the grid load.

ESB could explore how smart charging might address this situation in terms of exploring new technologies for better outcomes for performance and cost to drivers, the network and all electricity users.

There are several EV charger models in the market. ESB needs to address charger type, model and capacity of chargers across council areas, regions and jurisdictions and the regulation of operating standards and alignments across jurisdictions. With the EV and EVSE sector evolving, it is also important to include in these developments the need for future-proofing infrastructure. Any infrastructure today will age, and as rapidly evolving technology future obsolescence could come quickly. Unnecessary obsolescence is costly and wasteful of scarce resources, and could have environmental health implications on recycling and/or disposal.

Standards and regulations must accommodate these considerations to the fullest possible extent. They should cover allowing future upgrades and modification, open standards, and require that all components be reuseable, recyclable or recoverable. EVSE should be capable of being maintained in their existing locations, so that each site is dedicated to its purpose, and does not need to be remediated and relocated to accommodate upgrades. Long-term use of EVSE sites must be a factor in determining where they are located.

The range of related issues includes: the fee structures of public charger providers; booking apps; location selection; measures to maximise utilisation; and use renewable energy. 100 per cent renewable energy is preferred by SSROC members and other councils. Collaborations between councils, industry and government would be necessary to achieve an efficient, sustainable and equitable balance.

ESB should support the requirement for domestic chargers to have built-in scheduling capability. This would provide the user with the potential to charge vehicles at optimal times, allowing cost-effective charging during the day if the property has solar photovoltaic (PV) or during the night when off peak charges apply.

Multi-unit dwelling and high-rise apartments

There are different and additional issues and solutions for multi-unit dwellings (walk-up apartments) and multi-unit high rise apartments. These could have implications for EV charging provision and are as yet largely unpacked and unresolved. Some of

these could include possibly building code and development control plan (DCP) changes, EV charging provision for existing parking spaces and design and location of new parking spaces. These issues include: the wiring and metering of the building to support equitable access to shared EVSE; fair billing of building occupants whether EVSE users or not; provision for EVSE in new buildings; retrofitting older buildings; balancing potentially significant demand with grid capacity.

Councils need to be supported to undertake the necessary research and consultations to inform future changes to support EV charger roll-out and utilisation.

Conclusion

Thank you for the opportunity to make a submission on *Electric Vehicles Smart Charging Issues Paper – For Consultation*. SSROC supports the transition to EVs and part of a broad electrification strategy coupled with the development of renewable energy resources. SSROC is committed to the achievement of Net Zero by 2030, and further seeks to exceed Net Zero. 11 SSROC member councils now use 100% renewable electricity to power their own facilities, offices and street lights. The adoption of EVs will take member councils even closer to their Net Zero targets. Their contribution to EVSE roll-out will also help their communities to move toward Net Zero emissions.

As Australia transitions increasingly to renewable energy and to electric vehicles, SSROC member councils will continue to welcome opportunities and enabling environment for electric vehicle charging solutions for council, local business and the community.

In order to make this submission within the timeframe for receiving comments, it has not been possible for it to be formally reviewed by councils or to be endorsed by the SSROC. I will contact you further if any issues arise as it is reviewed. If you have any queries, please do not hesitate to contact me or Vincent Ogu, SSROC Program Manager on 8396 3800 or ssroc@ssroc.nsw.gov.au.

Again, thank you for the opportunity to provide a submission to the Energy Security Board on electric vehicles smart charging issues.

Yours faithfully

A handwritten signature in black ink that reads "Helen Sloan".

Helen Sloan
Chief Executive Officer
Southern Sydney Regional Organisation of Councils