



Jason Venning
Country Manager, Australia
jason.venning@fimer.com
M +61 409 087 175

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Energy Security Board
Level 15, 60 Castlereagh Street
Sydney NSW 2000

FIMER Response to Electric Vehicle Smart Charging – Issues Paper

FIMER S.p.A. is a global manufacturer of solar PV inverters and electric vehicle chargers. FIMER Australia has a strong physical presence in Australia providing product sales and technical support to customers in Australia and New Zealand. One of our objectives is to become a significant and trusted supplier of EVSE products in this market.

Please see our response to some of the some of the questions raised in the Issues Paper related to domestic electric vehicle smart charging.

Q1 – As a minimum we believe it is reasonable to expect domestic smart chargers to include support for OCPP 1.6J protocol. This support is already present in most chargers available from major international manufacturers. We do not believe the charger hardware needs to be able to support scheduling and time of use charging as a mandatory function currently. There are already providers in the market who can provide this functionality through cloud-based software services if the charger supports the OCPP protocol and has an internet connection. This also provides more flexibility due to the variations in electricity tariffs across Australia. A cloud software solution could more easily adapt to changes and be rolled out in different states and territories without having to manage ongoing charger firmware or software updates to do the same thing when it will not be possible to know the ultimate location of a charger at the time of sale.

Q2 – As stated in the answer to Q1, as a minimum EVSE equipment standard we believe it is reasonable to expect domestic smart chargers to include support for OCPP 1.6J protocol. This support is already present in most chargers available from major international manufacturers. We believe that any other smart functions that do not impact on the charger hardware may be best done via a cloud-based software solution. This would allow consumers to be able to choose a provider who can give them scheduling and other smart functionality that is applicable to their circumstances and location.

Q3 – Most EVSE from major brands support remote communications to a charge point operator or EV management software provider but we still see other functions like scheduling as an emerging functionality that may be better implemented in cloud software rather than in the EVSE hardware. New products are starting to have a smart charging approach, with also FIMER implementing such a functionality to manage different charging rates at different times, with charging profiles release.

Q4 - In addition to being a protocol developed specifically for this type of market, the OCPP has the advantage of being free and already integrated and used by all market players (service or technology providers). The OCPP 1.6J version is currently the most used worldwide and integrates all the functions necessary for the correct management and operation of EVSE in residential applications.

Q5 - Communication between Electric Vehicle Supply Equipment (EVSE) and Electric Vehicles (EV), especially in AC charging, would enable a whole series of functions and algorithms for intelligent management of EVSE within a more complex system such as a smart home or smart building. Through the information that the EVSE receives from the EV, such as the state of charge, it would be possible to schedule charging according to the availability of power and the level of charge to be achieved.

Q6 - State-wide default seems a more reasonable approach, as it reasonably reflects the habits of that part of the world. This default setting may vary across the different seasons, like 1 time every quarter, to better reflect energy availability across the year.

Q7 – We strongly believe a coordinated national approach to regulation and their implementation will give the best outcomes for consumers and OEMs. Typically, a phase-in period of 12 months minimum would be enough time for EVSE manufacturer's to be able to review and implement new requirements on the basis that a national standard is possible.

Q8 – We acknowledge that remote coordination capabilities may be necessary over time as the demand for EV charging grows. The key thing is to be able to show the benefit to the consumer of participating and to keep the incremental cost of the required hardware and/or software to a minimum. The consumer should be confident that they will always be able to charge their vehicle at least at a minimum level without totally losing control of their own asset.

Q9 – I think that retailers/aggregators, OEMs and other third-party software providers should be able to act as a CPO without making it too much of a formal, regulated process. There are several providers in the market now and they should be allowed to grow to promote healthy competition and provide additional benefits for consumers. It could be considered as like choosing an internet service provider or mobile phone plan, the consumer can choose whoever provides the best offer to suit their needs knowing that any mandatory regulatory requirements will also be managed.

Q10 – A CPO should be able to ensure that any required functionality is available when required and notify consumers and relevant parties whenever a particular service may be affected by an outage. They should also be able to provide customer technical support via phone or on-line to help consumers. The quality and availability of this service could also be a source of competitive advantage to CPOs.

Q15 - Cyber-Security is the only way to mitigate grid vulnerability in a system where more and more devices are interconnected; IEC 62443 provides a structured approach to Cyber-Security, becoming the industry standard leader.

Q17 – For consumers with solar connected EV charging and/or battery storage, there are smart chargers on the market now that can allow interoperability with the solar PV or battery inverter to maximise the use of renewable energy when charging. We do not see this as being incompatible with remote management possibilities, a CPO could provide a software-based solution that allows such consumers to continue to charge their vehicle if the energy is not coming from the grid without being switched off or limited in times of high demand.

Yours sincerely

A handwritten signature in cursive script that reads "Jason Venning".

Jason Venning
Country Manager