

Electric Vehicle Supply Equipment (EVSE) Technical Regulator Guideline

Demand Response Requirements for EV Chargers

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energymining.sa.gov.au/industry/modern-energy/electric-vehicles/electric-vehicle-supply-equipment-evse-standards



Acknowledgement of Country

As guests here on Kurna land, we acknowledge everything this department does impacts on Aboriginal country, the sea, the sky, its people and their spiritual and cultural connection which have existed since the first sunrise. Our responsibility is to share our collective knowledge, recognise a difficult history, respect the relationships made over time, and create a stronger future. We are ready to walk, learn and work together.

Ngaityalngadlu taikunthitya yalaka

Yantupinarna Kurna yartangka, ngadlu tampinhi tupa yaintyu pirku wapinhi, wiwunthi yaitya yarta, yarlu, ngayirda, miyurnakuma paraku tuwila tapa purruna tarraitpayinhi. Muna tirntu parrka-parrka wanti.

Ngadluku taingi ngutu yungkurinhi, tampinhi yurni ngantanhi pukingka, niipurna pintyathi mankurrititya, taingintya tarrkarri pintyanhi.

Nata ngadlu padnitha, tirkatha Kuma kumangka warpulayi-utha.



What is happening?

- New Demand Response requirements for EVSE apply to installations completed after **1 July 2024**
- These are detailed in a Technical Regulator Guideline available on the Department website:

<https://www.energymining.sa.gov.au/industry/modern-energy/electric-vehicles/electric-vehicle-supply-equipment-evse-standards>



Who does this apply to?

- Regulation 58A of the *Electricity (General) Regulations 2012* provides for the Technical Regulator to make demand response requirements on designated electrical equipment.
- Connecting equipment to a distribution network that does not meet these requirements is then a breach of this regulation.
 - Note that this does not apply to off grid, stand-alone installations
- As this is usually completed by an installer, they are the main party affected by these new requirements.
- Retailers, importers and wholesalers also need to ensure they are supplying stock to installers which can be legally installed in SA.



Scope

The requirements apply to EVSE capable of:

- Charging Mode 3 as defined in standard IEC 61851-1:2017
- Charging Level 2 as defined in standard SAE J1772:2017

Requirements also apply to EVSDE (EVSE capable of V2G or V2H). Contact us at dem.smartappliances@sa.gov.au if you wish to seek approval for these devices.



The requirements *do not* apply to EVSE:

- Capable of Charging Mode 4 (IEC 61851-1:2017)
- Capable of Charging Level 3 (SAE J1772:2017)
- On board charge controllers (OBCC) in the EV itself
- Charge controllers that are part of charging cables that are physically detachable from the electricity supply (usually associated with IEC Mode 2 or SAE Level 1 charging).

Mode 4 and Level 3 are typical of commercial and public chargers, where owners manage demand as a matter of course.

What is required?

- From 1 July 2024, EVSE in scope must not be installed unless they are registered with the Technical Regulator and comply with:
 - Open Charge Point Protocol (OCPP) 1.6, edition 2 FINAL, 2017-09-28 (or higher, SOAP/JSON); or
 - ANSI/CTA-2045-B:2021; or
 - A method or standard that has been “Deemed to Comply” by the Technical Regulator.
- EVSE shall be capable of responding to and implementing at least:
 - An instruction from a Remote Agent to cease or prevent charging (corresponding to either DRM 0 or DRM 1); and
 - An instruction from a Remote Agent to constrain the rate of charge in accordance with DRM2 in Table 2; or
 - An instruction from a Remote Agent to constrain the rate of charge to between 40% and 60% of the maximum rate of charge set at the time of installation of the EVSE.

DRM	General description of required response
0 (a)	Open the disconnection device or contactor, if present
1 (a)	Do not consume energy from the grid for charging EV but control and auxiliary functions may continue.
2 (a)	When charging, limit rate to $\leq 50\%$ of reference value or to a pre-set limit (c)
3 (a)	When charging, limit rate to $\leq 75\%$ of reference value or to pre-set limit (c)
4 (a)	Initiate charging from grid if able to do so. If already charging, increase rate if able to do so
5(b)	Do not discharge energy to the grid
6(b)	When discharging, limit rate to $\leq 50\%$ of reference value, or to pre-set limit (c)
7(b)	When discharging, limit rate to $\leq 75\%$ of reference value or to pre-set limit (c)
8(b)	Initiate discharging of energy to the grid if able to do so. If already discharging, increase rate if able to do so.

Deemed to Comply provisions

While established international Standards (OCPP 1.6 or ANSI/CTA-2045-B:2021) are how most EVSE are anticipated to comply, an additional pathway is available to those wishing to demonstrate that their product meets the requirements but has not been certified to these Standards.

The Technical Regulator may deem to comply a solution which delivers similar outcomes to options 1 or 2 (Open Charge Point Protocol (OCPP) 1.6, edition 2 FINAL, 2017-09-28 (or higher, SOAP/JSON) or ANSI/CTA-2045-B:2021).

Full details on these requirements are available within the guideline for those wanting to investigate this pathway.

Registration

- EVSE which meet these requirements must be registered with the Technical Regulator prior to installation.
- Registration can be completed via Form A in the guideline and provided to dem.smartappliances@sa.gov.au
- Applicants who claim compliance with options 1 or 2 (Open Charge Point Protocol (OCPP) 1.6, edition 2 FINAL, 2017-09-28 (or higher, SOAP/JSON) or ANSI/CTA-2045-B:2021) declare compliance via Form A but are not required to provide verification of compliance (Form C) unless requested to do so by the Technical Regulator.
- Those claiming compliance via the Deemed to Comply provision must provide a test report (Form C).



Questions

- Please reach out to us with any questions at dem.smartappliances@sa.gov.au