1 September 2026

Product regulation team
Energy Efficiency and Conservation Authority
By email: star@eeca.govt.nz

Tēnā koe,

Powerco welcomes the opportunity to provide feedback on the Energy Efficiency and Conservation Authority (**EECA**)'s proposed requirements for electric vehicle (**EV**) chargers.

Powerco is one of Aotearoa's largest gas and electricity distributors, with its energy networks providing essential services to over 1 million people. As New Zealand's electrification journey accelerates, demand flexibility is an increasingly important tool for delivering affordable, reliable and low-emissions electricity services to customers. Electrification will drive growth in electricity demand across many sectors of the economy. Demand flexibility provides an opportunity to better utilise existing network infrastructure, reduce the growth in network investment required to support this transition, and improve the overall efficiency of the electricity system.

Electric vehicles are expected to become one of the largest sources of flexible electrical demand available to households, and appropriate regulation of EV chargers to support this is important. While Powerco therefore supports the intent of the proposal, specific requirements must also maintain interoperability, customer choice, flexibility for future changes or developments, and minimise implementation costs.

Our summary observations are:

The intent of regulating EV chargers is sound	• Smart EV chargers are a practical, low-cost way to bring demand flexibility to New Zealand homes, while supporting electrification forecasts. • Maintaining customer choice must be an underlying test as regulatory requirements are developed. Open, direct communication with the charger preserves customer choice and reduces the risk of vendor lock-in.
Focus on outcomes rather than being overly prescriptive or preventing future developments	• Rules should set functionality outcomes, not mandate specific technical mechanisms for how this is achieved. Many residential chargers, and the protocols they use, do not natively support functions such as randomised delay or ramp rate. • Curtailing technology development and new approaches now, risks foreclosing demand flexibility options that have not yet emerged. The open compliance pathway should remain available so suppliers can use new approaches in future, not be limited to only a current solution known to meet the requirement. • Where a market mechanism, such as time of use pricing or an aggregator dispatch contract, can achieve the same outcome as a firmware mandate, the rules should not pre-empt it by regulating the mechanism rather than the outcome.

Align with international standards as far as possible	• Residential EV chargers are built for global markets and supplied into New Zealand in relatively small volumes. • Bespoke New Zealand requirements, particularly where they diverge from Australian practice, risk narrowing product choice and adding cost that is passed on to consumers.
Ensure neutrality on who delivers flexibility	• Regulation must preserve neutrality in who delivers flexibility. The requirements and implementation must ensure that no single business model, including network-led control, is favoured by default. • For example, the requirement that chargers respond to "a separate device, entity or system" is already open to retailers, aggregators and distributors alike.

Further comment on the above observations is provided in the attachment, along with our responses to the consultation questions. Where a consultation question falls outside Powerco's role as an electricity distributor, for example on detailed product certification or consumer labelling design, we have recorded no view and said why.

We would be pleased to meet with EECA to discuss our submission. Our submission does not contain any confidential information. If you have any questions or would like to talk further on the points we have raised, please contact Sam Van Der Sar (Sam.Vandersar@powerco.co.nz).

Nāku noa, nā,

Stuart Dickson
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POWERCO

Powerco response to consultation paper: Smart EV chargers

1. Electric vehicles are expected to become one of the largest sources of flexible electrical demand

Electric vehicles are expected to become one of the largest sources of flexible electrical demand available to households, and appropriate regulation of EV chargers to support this is important. Introducing the regulation now for future control is the best way to ensure EV chargers can play this important role.

Unlike many other electrical loads, vehicle charging can often be shifted in time with limited impact on customer experience. Smart EV chargers therefore represent a practical and relatively low-cost means of introducing demand flexibility capabilities to residential customers. Where implemented appropriately, smart charging can help customers manage charging costs, support greater utilisation of renewable generation, and reduce pressure on distribution networks during peak periods (which simple time of use tariffs alone cannot).

Powerco supports the development of a framework that enables residential EV chargers to become an important source of consumer-led demand flexibility. We believe this can deliver benefits for customers, electricity networks, and the wider electricity system, provided the requirements remain practical, interoperable, and closely aligned with international standards and market developments.

2. An outcomes focus is needed, not a prescriptive approach

A key theme of our submission is the importance of maintaining a pragmatic and outcomes-focused approach. The requirements should seek to establish the minimum functionality necessary to achieve the intended policy outcomes, while avoiding unnecessary complexity, cost, or highly prescriptive technical requirements. We recommend better articulation of the outcome sought and checking that specifications are the minimum required to achieve that outcome.

In many cases there are multiple technically equivalent ways of achieving the same outcome. The regulatory framework should allow flexibility in implementation where this does not compromise interoperability, customer choice, or the ability to realise flexibility benefits. It is critical to avoid overly prescriptive regulation that locks in out-of-date technology, or curtails technology developments and new approaches in demand flexibility that we may not even be aware of yet as New Zealand's energy system evolves.

We support measures that enable flexibility while maintaining interoperability and preserving customer choice. Open communication interfaces should support third-party integration and reduce the risk of vendor lock-in. We also support approaches that allow EV chargers to respond to external signals, exchange operational information, and participate in future flexibility services as these markets and capabilities mature.

Bidirectional charging and other emerging capabilities are still developing and should not be locked into detailed requirements before the technology and market have matured.

Once the regulations are drafted, we recommend a test of the proposed requirements against the makes/models currently available in New Zealand. This will provide a check of whether the regulations are sitting at the right level of prescriptiveness to achieve the outcome sought. For example, if most EV chargers fail the regulations, this would suggest they are too prescriptive and it would add significant cost (and unclear benefit) for manufacturers to comply.

3. Aligning with international standards will optimise product availability and compliance

Powerco encourages strong alignment with established international standards and overseas regulatory approaches wherever practical. Residential EV chargers are manufactured for global markets and supplied into relatively small volumes in New Zealand. Requirements that diverge significantly from internationally recognised standards or established product capabilities risk increasing compliance costs, reducing product choice, slowing innovation, and ultimately increasing costs for consumers. In some circumstances, highly bespoke requirements may lead manufacturers to develop New Zealand-specific product variants or decide not to offer particular products in this market at all.

This consideration is particularly important given the close relationship between the New Zealand and Australian markets. Aligning with internationally adopted standards and, where appropriate, Australian requirements will help maximise product availability, simplify compliance for suppliers, and reduce costs while still delivering the outcomes sought through this consultation.

Several of the proposed requirements appear well aligned with established industry standards and current product capabilities. However, there are also areas where the consultation appears to assume functionality that is not commonly implemented within residential EV chargers, is not typically required internationally, or may sit outside the scope of existing communication protocols. For example,

- Randomised delay and ramp rate are not common charger functions and should not be mandated.
- Mandating inbuilt dynamic connection load management would add cost where simpler or external solutions already exist.
- Communications fail-safe/fallback requirements should recognise residential, workplace, and fleet charging use cases.

Where possible, we recommend the strict pathway be based on recognised international standards and clearly defined protocol functions, while the open pathway remains available for emerging technologies and innovative approaches that can demonstrate equivalent outcomes.

4. Requirements must be neutral on who delivers the flexibility

EECA must preserve neutrality in who delivers flexibility. The requirements and implementation must ensure that no single business model, is favoured by default. This includes not inadvertently building in a default role for EDBs over retailers and aggregators.

Optimising value for customers will be achieved through ensuring maximum availability of the full stack for all participants or potential participants in flexibility. While EDBs may be the operator, it must be for the market to determine how it is delivered.

5. Response to consultation questions

This section responds to the questions in the consultation paper. We have focused on those questions related to Powerco's role and interests. Our responses are aimed at the development of a practical, interoperable, and future-proof framework for residential EV charging.

	Consultation Question	Our Response
1	Do you support excluding DC chargers and AC/DC combination chargers?	Support the proposed scope. DC and combination chargers are more commonly used in commercial charging applications. We note, however, that while the consultation document is largely framed around residential charging use cases, the AC chargers captured by the proposal are also widely deployed for workplace and fleet charging. This includes businesses operating multiple chargers as part of a managed charging installation. While this does not warrant a change in scope, the requirements should be assessed for unintended impacts on these non-residential applications.
2	Do you support the AC charger exclusion of above 23kW?	Support excluding AC chargers above 23kW. Very few AC chargers greater than 23kW exist. At this size, DC is almost universal.
3	Are there any other specific types of EV chargers that should be excluded from the requirements or a component of the requirements (e.g. labelling)?	No additional exclusions recommended
4	Do you agree that at this time no specific requirements should be set for the EV discharging component of bidirectional chargers? If you disagree, what requirements should be set?	Agree. V2X/V2G technology is still emerging and should not be subject to specific requirements at this stage. These should largely align with any future requirements developed for grid-connected inverters (e.g. solar and battery systems), while recognising that bidirectional EV charging introduces some additional EV-specific considerations.
5	Do you agree that the communication should be direct with the EV charger?	Agree. Direct communication reduces lock-in and preserves functionality if vendor cloud services cease.
6	Do you support use of proprietary communication protocols, if there is public documentation enabling the development of system to control the EV charger, are there any other requirements that would have to be implemented e.g. requiring it to be free?	Support proprietary protocols only where free, full public documentation is available to enable third-party integration. Prefer standardised protocols e.g. OCPP

	Consultation Question	Our Response
7	Do you agree that EV chargers should be able to employ other communication protocols, external communication interfaces, or approaches in addition to a protocol and external communication interface that meets the requirements?	Agree. Additional protocols should be permitted provided at least one compliant open interface is supported. All interfaces need to meet information security requirements, including vulnerability management (e.g. security software updates) over entire product lifespan.
8	Would this approach work for other products if regulated for energy flexibility e.g. air conditioners, hot water systems?	Approach is similar, yes. Need to consider the nuances between different products in terms of technology, additional cost of being demand flexible, and impact on customer experience. These approaches have been well-discussed in the EECA demand flexible appliances technical advisory group.
9	Do the product responses listed need to be more detailed (e.g. specifying response time, or the granularity of increasing or decreasing power input i.e. to a resolution of 1 ampere increments?)	Product response should include a specific setpoint/profile, rather than just relative 'increase/decrease power import' e.g. 'charge at 16 Amps from 9pm-10pm and 32 Amps from 10pm to 11pm unless lower local limits apply'
10	Are there any other product responses EV chargers should be required to provide (noting randomised delay/ramp rate, and exchange of information covered below)?	No, keep these requirements simple.
11	Do you agree with the exclusions? Are there any that need to be added?	Agree with the proposed exclusions. Manual user override is mentioned elsewhere, but this should take precedence over any remote commands to the unit.
12	Do you agree with the response that the EV charger must deploy if it becomes disconnected from the separate device, entity, or system?	Maintaining the most recent charging state following loss of communications may be appropriate in many circumstances. Clarify that this includes any previously loaded charging schedules or charging profiles, rather than only the most recent charging limit. However, as noted earlier, these chargers are used in a range of residential, workplace and fleet charging applications, and the preferred behaviour following a communications failure may differ between these use cases. For example, in a workplace installation with multiple chargers operating under a local load management system, maintaining the previous charging state could result in higher aggregate charging demand than the installation can accommodate following a communications failure. The requirements should therefore consider the different operational objectives and fail-safe behaviours that may be appropriate across different types of installation. Manual local override must work without remote communication.
13	Do you agree that the consumer should be able to override any	Agree. Consumers should retain the ability to override external control, including through a local override that does not require

	Consultation Question	Our Response
	product response that has been implemented (noting the exclusions)?	connectivity to a remote management system. However, consideration should be given to making override functionality a configurable option, allowing consumers to opt in or out depending on the service, tariff, or flexibility arrangement they have chosen.
14	Do you agree that randomised delay/ramp rate should only be required for the responses listed above? Are there any that should be excluded? Are there any that should be added?	'Randomised delay' and 'ramp rate' should not be included as required responses. These can be implemented with logic in whichever system sends the charging commands to the EV charger. Important to note that the most common protocol for EV charge point management (OCPP) does not include explicit randomised delay or ramp-rate functions, instead relying on charging schedules and charging profiles to control charging behaviour. These functions are not commonly built into the firmware and control systems of residential EV chargers and requiring them would increase costs to consumers. More fundamentally, this risk is better addressed through market mechanisms, such as time of use pricing or aggregator dispatch contracts, than through a firmware mandate on every charger. EECA has not evidenced why the market cannot solve this on its own before the rules pre-empt it.
15	Do you agree that EV chargers should have the option to comply with randomised delay or ramp rate?	Unclear question – does this suggest they must comply but can opt for either of these two options? Or that vendors can choose not to comply at all? Suggest including 'dynamically updated charging schedule or charging profile' as a third option. Suppliers should be able to choose any of these three options to comply with the requirement. However, as stated above, requiring randomised delay and/or ramp rate is not desirable.
16	Is ramp rate a suitable alternative to randomised delay? Please explain.	Technically, yes. At sufficient scale, both approaches can reduce the risk of large coincident load changes and are likely to deliver broadly similar outcomes from a distribution network perspective. That does not imply either approach should be mandated. As noted elsewhere, Powerco's concern is not the effectiveness of these mechanisms, but that requiring all chargers to include them is not justified when similar outcomes may be achieved through other means. The regulations must focus on the outcome and leave options for the mechanisms used to achieve it, which could be randomised delay, ramp rate, or another approach. Alongside the regulations, EECA can provide information for consumers and manufacturers to support understanding about options for means of compliance. This provides the opportunity to confirm current mechanisms (eg ramp rate) that may be in use and comply.
17	Do you agree with the exclusions? Are there any other scenarios that should be excluded?	Yes, no additional exclusions

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18	Can you provide detail on how to further refine the exclusion for solar/battery power draw use-case?	We do not have a strong view on the detailed scope of this exclusion. The proposed framework already includes broader managed charging capabilities that can accommodate charging arrangements involving behind-the-meter generation and storage. Additional carve-outs for specific technology configurations may therefore be unnecessary and risk creating an overly prescriptive framework that limits flexibility in how the desired outcomes are achieved.
19	Are there any EV chargers that should not have to comply with the randomised delay/ramp rate limit requirements?	As mentioned above, no chargers should be mandated to include one/both functions.
20	Do any of the requirements need to change e.g. Maximum 600 second duration, ramp rate limit of 0.75kW?	A 10-minute ramp rate or randomisation period is likely to have limited value for managing sustained EV charging demand beyond specific use cases such as post-outage restoration. While it may help reduce short-term coincident load changes, its effectiveness in managing longer-duration periods of network constraint is likely to be more limited than the use of dynamic charging schedules or ongoing charging limits.
21	Do you support the idea that the maximum randomised delay/ramp rate can be changed post supply?	(Contingent on inclusion of a dynamically set charging profile or scheduling approach as an alternative compliance option). These settings should be adjustable post-supply. Clarify whether these need to be adjustable via remote communication protocols or whether they can be configured via local configuration of the device itself.
22	Should the EV charger retain the data for a period? And if so is 30 days sufficient?	No view. Data retention periods are a product design and consumer data question for suppliers, and have no material bearing on network operations
23	Is there any other information the EV charger should make available?	Consider making charger status, communication connectivity status, and whether external control is currently active available.
24	Are the proposed resolutions of values e.g. nearest second, nearest watt-hour, +-2% reasonable, should it be something else?	The proposed resolutions and tolerances appear reasonable from an electricity distribution perspective.
25	What units should the remaining available power be reported in e.g. kW, amperes per phase?	Assuming this is in reference to 'The remaining available load that can be added to the local circuit and Installation Control Point without overloading it'. It is unrealistic to expect that an EV charger would be able to discern the available load for an ICP, and it should not be mandated for the charger itself. Any power measurements are most useful in kW for electricity distribution use cases.
26	The cumulative electrical energy imported is proposed to be defined by the EV charger, meaning the reference point for the cumulative value may vary by charger. Do you	No view on where the rules should set the reference point. We would only note that any reference point should still let a third party discern the total energy transferred over a charging session.

	Consultation Question	Our Response
	support this approach, or should the rules prescribe the reference point for the cumulative value?	
27	Do you support the requirement for EV chargers having inbuilt load management or being supplied with a device to enable this?	No, this is unnecessary and would increase costs. The other requirements stipulated throughout this consultation provide a means to influence charging behaviour where required. Customers with a specific need for dynamic overload protection should remain free to adopt chargers or energy management systems that provide this functionality. Overload protection at the circuit level is already required under AS/NZS 3000 wiring rules, which the consultation paper itself notes sit outside this consultation (section 2.2). EECA has not evidenced a gap in that existing regime that this requirement would close.
28	Should the overload management requirement be limited to EV chargers used in residential settings? If so, how should the scope be limited noting that the requirements apply at point of supply, not install.	No additional requirements for overload management should be included, for any chargers. The other requirements in this document already provide a means to alter charging rates in response to an external signal. Where required, this capability can be combined with additional monitoring or energy management systems to help maintain operation within local capacity limits.
29	Should the requirement to not overload focus on: • the local circuit (defined at point of install), • The Installation Control Point, or • Both?	Neither. Consider including the requirement for an installer-configured current limit (within the device) to avoid overloading either the ICP or the local circuit. Installer-configured current limits are already commonly supported by residential EV chargers and provide a simple and low-cost means of avoiding overload of the dedicated charging circuit. Dynamically avoiding overload of the ICP is complex and would require additional hardware to sense total load at the ICP. This is not required for all customers and should not be a strict requirement as it would increase cost and complexity.
30	Do you support requiring that EV chargers must be able to receive software updates but, subject to consumer laws, not be able to receive a software update that would prevent it from meeting the requirements?	Support. Software updates should not remove compliance with regulatory requirements. Software updates should also be provisioned over the lifespan of the device so the functionality remains in place over the full life of the device.
31	Do you support the proposed labelling and information requirements?	No view on the detail of the labelling design, which is a consumer information matter for suppliers and EECA. We would caution that highly prescriptive label content risks adding cost without a corresponding consumer benefit.
32	Is there additional information that needs to be published to help facilitate the use of an EV charger in an energy flexible way e.g. the exact implementation of a protocol e.g. OCPP 1.6.?	Documentation should include protocol versions and setup instructions where relevant. Consider how protocol changes implemented by software updates after purchase (e.g. supporting newer OCPP versions) could be shown to users.

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33	Do you have any feedback on what questions or information should be collected in the prescribed form?	No view. The content of the prescribed form is an administrative matter between EECA and suppliers. We would only note that the form should collect no more than is needed to verify compliance with the final requirements, to avoid adding unjustified compliance cost.
34	Do you have any feedback on the defining scope of families of models?	No view. Defining the proposed families -of -models is a product certification question for suppliers, outside Powerco's role as a distributor.
35	Do you have any feedback on software version definition for families?	No view. Software version definitions for compliance purposes are a supplier certification matter outside Powerco's role as a distributor.
36	Do you have any concerns with the proposed approach?	No concerns.
37	Do you support the rules providing a pathway to enable new approaches to meeting the requirements of the proposed rules?	Support the dual-pathway approach. The strict pathway should be straightforward to comply with and align closely with established international standards and protocols wherever possible. Requirements should avoid creating unnecessary complexity or requiring New Zealand-specific device variants. Some of the current requirements would be difficult to meet through the strict pathway using existing standards-based implementations. The open pathway should remain available to support innovation and emerging capabilities, provided interoperability and consumer choice are maintained, avoiding reliance on proprietary or closed ecosystems that could create vendor lock-in.
38	Do you support the rules specifying in detail a strict pathway that will meet the requirements of the rules? If a strict pathway is introduced (as one of the pathways), what protocols and versions of protocols should it specify e.g. OCPP 1.6, OCPP 2.0.1, OCPP 2.1.	Support a strict pathway with clearly specified requirements, provided it is developed with industry. Powerco has no view on the exact protocols, versions and profiles that should be specified: this technical detail is best resolved between EECA and charger manufacturers. We recommend it draw on established protocol profiles rather than new, New Zealand-specific implementations, to avoid adding compliance cost without a corresponding benefit.
39	Should certain protocols not be allowed e.g. setting a minimum of OCPP 2.0.1, which would exclude OCPP 1.6?	Avoid unnecessarily excluding widely deployed protocols unless there is a strong technical justification. OCPP 1.6 remains widely deployed and supported across the residential EV charging market.
40	Should the strict pathway be developed with industry and would you like to be part of that group (if this approach is taken)? Would this approach work for other products if regulated for energy flexibility e.g. air conditioners, hot water systems?	Industry involvement would be highly beneficial. The approach could also apply to other flexible electrical loads and has been discussed at the EECA demand flexible appliances technical advisory group. A key consideration is ensuring that New Zealand representatives for international hardware vendors are involved in the discussion to ensure we align with international markets wherever they are acceptable, minimising the additional cost to them of selling products in New Zealand.

	Consultation Question	Our Response
		Powerco would be happy to participate in any such discussion where our experience with demand flexibility, distribution networks, and Distribution System Operator capabilities would be valuable. However, detailed refinement of product requirements, protocol implementations, and hardware capabilities will likely benefit most from strong involvement from charger manufacturers, software providers, and their New Zealand representatives.
41	Are there any other requirements that EV chargers should have to meet under the rules?	Consider future requirements for cybersecurity, standardised consumer controls, and eventual V2X capability. Current requirements should also preserve flexibility for future V2X adoption without mandating it now.