

Making it easier to connect solar, batteries and EV chargers

Removing existing EV charging barriers and broadening DER participation in the SWIS

KEY RECOMMENDATIONS

1. Establish a clear regulatory pathway for compliant residential cross-pavement and kerbside EV charging, including resolution of the uncertainty created by section 9.7 of the WA Electrical Requirements.
2. Recognise consumer-controlled, signal-responsive DER as a distinct participation pathway alongside VPP aggregation, supported by open, machine-readable information identifying when and where DER responses have value to the SWIS.

About Electrify Everything WA

Electrify Everything WA (EEWA) is a volunteer, not-for-profit organisation advocating for widespread and equitable electrification of Western Australian households, businesses and transport to reduce energy costs and emissions.

EEWA broadly supports the seven proposals in the Department of Energy and Economic Diversification's (DEED) Making it easier to connect solar, batteries and EV chargers Issues Paper.^[1]

EEWA considers that implementation should minimise unnecessary administrative and technical barriers, support interoperability and consumer choice, and enable consumer-owned DER to contribute effectively to the SWIS.

EEWA identifies two areas where the proposed framework should be extended: removal of an existing regulatory impediment to residential kerbside EV charging; and recognition of consumer-controlled, signal-responsive DER as a participation model alongside VPP aggregation.

Principle 1 – Increasing DER standing data quality

Proposal 1 – CSIP-AUS for systems up to 30 kVA

EEWA supports Proposal 1.

A common communications standard should improve interoperability and simplify DER integration.

Proposal 2 – Western Power functions to collect, validate and share DER data

EEWA supports Proposal 2.

Implementation should adopt the principle: collect once, validate where necessary, and securely reuse. Consumers and installers should not be required to resupply information already available elsewhere within the electricity system.

Proposal 3 – EV charger data and existing connection barriers

EEWA supports the proposed indirect approach to collecting information about Level 2 EV chargers.

The decision not to impose an additional connection or registration process is appropriate. DEED proposes to use existing processes, including electrical safety documentation, to improve EVSE visibility while keeping entry barriers low.^[1]

There is, however, an incongruity between the title of the consultation – Making it easier to connect solar, batteries and EV chargers – and the scope of the EV-specific proposal. Proposal 3 avoids creating a new regulatory barrier; it does not remove an existing barrier to residential EV charging.

Cross-pavement and kerbside EV charging

Households without practical access to off-street parking require a scalable means of accessing residential EV charging. Cross-pavement systems, including cable gullies installed within the footpath, can connect a vehicle parked at the kerb to an EV charger supplied from the adjoining residence.

The principal Western Australian electrical-regulatory issue is section 9.7 of the WA Electrical Requirements (WAER), "Segregation of electrical installations". Subject to specified exceptions, section 9.7 provides that

installation wiring or consumer mains from one lot must not cross into another lot. It also restricts the circumstances in which consumer mains may cross or be located in a road or other reserve.^[2]

The application of these provisions to cross-pavement charging depends on the configuration. A cable gully may carry a removable EV charging cable rather than permanent installation wiring within the road reserve. Other designs may place electrical equipment beyond the lot boundary. The WAER does not presently provide a clear standard pathway that resolves these different configurations.

WA Local Government Association (WALGA) has independently identified the same issue. Its 2025 State Election Priorities state that it is not clear whether installing EV chargers in the road reserve may conflict with section 9.7 of the WAER, and recommend that the WAER be reviewed and amended to facilitate safe kerbside EV charging, supported by guidance for infrastructure located in road reserves.^[3]

International experience indicates that the physical and regulatory issues can be managed through defined approval and installation standards. UK Government guidance now addresses cable gullies and other cross-pavement solutions, including permissions, construction, accessibility, maintenance and electrical safety.^[5]

EEWA's review has identified at least 170 local-government jurisdictions in Europe that permit, are trialling, or have committed to regulated cross-pavement EV charging arrangements.^[6]

Recommended reform

EEWA recommends that DEED coordinate with the Director of Energy Safety, Western Power and local government to establish a standard compliance pathway for residential cross-pavement EV charging. The pathway should:

- review and, where necessary, amend or clarify WAER section 9.7;
- define the boundary between the consumer electrical installation and infrastructure within the road reserve, including the status of removable charging cables passing through an approved cable gully;
- specify appropriate electrical safety, isolation and installation requirements;
- define local-government approval and responsibility for works within the road reserve; and
- provide an interim pathway for controlled trials while permanent arrangements are developed.

Regulation 49(2a) of the Electricity (Licensing) Regulations 1991 permits the Director of Energy Safety to vary a WAER requirement, specify that a requirement does not apply, or impose additional requirements in relation to electrical work on a consumer installation. This may provide a mechanism for controlled trials pending a permanent regulatory solution.^[4]

The objective is not to reduce electrical or pedestrian safety requirements. It is to replace regulatory uncertainty with a defined compliance pathway. This would constitute a substantive measure to make it easier to connect EV chargers, consistent with the stated purpose of the consultation.

Principle 2 – Making it easier for businesses to connect DER

Proposal 4 – Standardised data and commercial connection pathways

EEWA supports Proposal 4.

Routine commercial DER connections should use standardised and increasingly automated processes, with detailed engineering assessment applied where justified by the technical characteristics of the installation or local network.

Proposal 5 – Requirements to share network capacity

EEWA supports Proposal 5.

EEWA recommends that network-capacity and DER opportunity information progressively be made available in open, machine-readable form, potentially through an application programming interface (API).

This would allow information to be incorporated directly into energy-management systems, batteries, EV chargers and other DER control systems. The same digital infrastructure could subsequently support dynamic information identifying when and where generation, storage, increased demand or reduced demand has particular value to the SWIS.

Proposal 5 could therefore provide part of the technical foundation for two-way digital interaction between consumer DER and the electricity system.

Principle 3 – DER participation should extend beyond VPPs

EEWA supports VPPs where aggregation provides a system characteristic that is required, including firm availability, coordinated dispatch or contracted performance. EEWA does not consider third-party aggregation necessary for all forms of useful DER participation.

The regulatory framework should distinguish between DER aggregation and the broader concept of DER participation.

Consumer investment and operational control

Consumers invest in solar, batteries and energy-management systems for several reasons, including energy cost reduction, increased self-consumption, security of supply and greater control over energy use.

Australian research has found that VPP participation can conflict with motivations for solar and battery investment, particularly independence from the grid and security of supply. Control, trust, transparency and fairness also influence willingness to participate.^[7]

AEMO estimates current VPP participation at approximately 13% of battery owners in the NEM. AEMO also notes that Western Australian participation is affected by the requirement to join a VPP for a minimum of two years to access the WA Residential Battery Scheme rebate.^[8]

The relatively limited voluntary uptake of VPPs is relevant to DER policy design. A framework that assumes consumer flexibility will predominantly be accessed by assigning operational control of privately funded equipment to an aggregator may exclude DER owners who are willing to respond to system needs but prefer to retain control of their equipment.

WEM market structure

EEWA recognises that the WEM includes the Reserve Capacity Mechanism and differs materially from the NEM's energy-only wholesale market structure. The Reserve Capacity Mechanism secures sufficient capacity ahead of forecast system requirements and operates separately from the energy market.^[9]

The proposed consumer-controlled participation model does not require replacement of the Reserve Capacity Mechanism and does not require residential consumers to participate directly in the wholesale market.

Where the electricity system requires capacity that is firm, contracted and available for dispatch, aggregation or another contractual arrangement may be necessary. There are also circumstances in which system value can arise from a statistically predictable aggregate response without guaranteed performance from each individual DER resource, including increased battery export during periods of high system value, reduced discretionary demand during peak periods, increased charging during periods of excess renewable generation, or response to a local network constraint.

EEWA is not challenging the WEM's capacity-market architecture. It challenges the assumption that capacity-market architecture necessarily requires third-party control of consumer DER for all useful forms of participation.

Consumer-controlled, signal-responsive DER

EEWA recommends that the DER framework provide a mechanism for consumers to respond voluntarily to transparent price or system signals without being required to assign operational control of their equipment to a third party.

A signal could identify the value of battery export, reduced demand, increased battery charging, increased or deferred EV charging, or other forms of flexible DER operation. It need not correspond directly to the WEM wholesale energy price, but could reflect an appropriate combination of energy-market conditions, capacity conditions, distribution-network constraints, renewable energy availability and other identifiable system value.

That value could be translated into a consumer-facing tariff, payment or other financial incentive. A home or business energy-management system could then determine automatically whether to respond within parameters established by the consumer.

This model would not provide the same firmness as contracted VPP capacity and should not be represented as equivalent. At sufficient scale, however, aggregate consumer behaviour may become statistically predictable and capable of inclusion in forecasting and system planning.

Role of third-party aggregation

For non-contestable customers in the SWIS, Synergy acts as the Parent Aggregator, and third parties wishing to provide services to the network operator or market through non-contestable DER are required to form agreements with Synergy.^[10]

This structure provides a mechanism where coordinated aggregation is necessary to provide a defined service. Applying the same intermediary structure where voluntary consumer response is sufficient may add a commercial and administrative layer without a corresponding technical requirement.

EEWA therefore recommends that third-party aggregation be required where the characteristics of the relevant service make aggregation necessary, rather than as a general prerequisite for consumer DER participation.

An open DER value signal

EEWA recommends that DEED investigate the feasibility of an open, standardised and machine-readable DER value signal. Its purpose would be to communicate the value of specified DER behaviour at a particular time and, where relevant, location.

The signal could be made available through an API or similar digital service to consumers, retailers, VPP aggregators, equipment manufacturers, EVSE providers and independent energy-management systems. Open access would allow different technologies and commercial arrangements to respond to the same underlying system information.

Two participation models could operate in parallel:

- aggregator-controlled participation, in which DER is contracted and controlled to provide defined services; and
- consumer-controlled participation, in which consumers or their energy-management systems respond voluntarily to published value signals.

The value assigned to each resource should reflect its respective firmness, predictability and operational capability.

Proposal 6 – VPP capacity data

EEWA supports Proposal 6.

VPP-controlled capacity should not be treated as representing the total flexible capability of consumer DER. Future forecasting and planning should also recognise consumer-controlled, signal-responsive DER where aggregate behaviour can be characterised with sufficient confidence.

Proposal 7 – Network capacity information and DER opportunities

EEWA supports Proposal 7 but recommends broadening the concept of “VPP opportunities” to “DER opportunities”.

Where Western Power identifies that a particular DER response has value at a specific time or location, that information should, where practicable, be available to all parties capable of providing the response. Where firm contracted delivery is required, aggregation or another contracted service may be appropriate. Where an aggregate voluntary response is sufficient, consumers and consumer-controlled energy-management systems should also be capable of responding.

Reciprocal visibility

The proposed reforms increase the amount and quality of information available to Western Power, AEMO and retailers about consumer DER. DER integration would also benefit from increasing the information available in the opposite direction.

Relevant information may include available network capacity, current and forecast network constraints, periods in which additional generation or reduced demand has value, periods in which increased consumption or storage charging has value, and other DER opportunities capable of influencing consumer investment or operation.

The level and granularity of disclosure should remain consistent with network security, privacy and operational requirements. Where information is suitable for consumer or automated action, it should progressively be available in machine-readable form.

Greater visibility of consumer DER should therefore be accompanied by greater visibility of the network conditions and system opportunities relevant to its operation.

Summary of EEWA recommendations

1. adopt common DER communications standards;
2. apply the principle “collect once, validate where necessary, and securely reuse” to DER standing data;
3. address the current regulatory uncertainty affecting residential cross-pavement and kerbside EV charging;

4. review and, where necessary, amend or clarify WAER section 9.7 to establish a standard compliant pathway for such charging;
5. provide an interim pathway for controlled cross-pavement charging trials while permanent arrangements are developed;
6. simplify and standardise routine commercial DER connection processes;
7. progressively provide network capacity and DER opportunity information through open, machine-readable interfaces;
8. recognise VPP-controlled DER and consumer-controlled, signal-responsive DER as distinct participation models;
9. investigate an open, standardised DER value signal;
10. broaden “VPP opportunities” to “DER opportunities”; and
11. require aggregation where firm capacity, coordinated dispatch or contracted performance makes it necessary, rather than as a prerequisite for all useful DER participation.

Conclusion

EEWA supports the proposed reforms as a basis for improving DER connections, standing data and integration within the SWIS.

Two extensions would materially improve the reform package. First, the EV component should address an existing regulatory impediment rather than being limited to avoiding additional data-collection requirements. The uncertainty associated with WAER section 9.7 is already recognised by WALGA and is directly relevant to the development of residential kerbside charging. Establishing a defined compliance pathway would align the EV component more directly with the stated objective of making it easier to connect EV chargers.

Second, DER policy should distinguish between aggregation and participation. VPPs are appropriate where firm capacity, coordinated dispatch or contractual performance is required. Consumer-controlled DER can also provide system value through voluntary response to transparent price, network and system signals.

The WEM Reserve Capacity Mechanism can continue to perform its capacity-adequacy function while consumer-controlled DER provides additional, non-firm flexibility according to its demonstrated operational characteristics. Open, machine-readable network and DER value information would provide the technical basis for this additional participation pathway.

Together, these reforms would remove an identified barrier to EV charging, broaden access to consumer DER flexibility, and improve utilisation of privately funded DER within the SWIS.

Sources consulted

- [1] Department of Energy and Economic Diversification, Making it easier to connect solar, batteries and EV chargers – Issues Paper on connections and data quality for distributed energy resources, 20 July 2026. [Source](#)
- [2] Government of Western Australia, WA Electrical Requirements (WAER) – August 2023, section 9.7 “Segregation of electrical installations”. [Source](#)
- [3] WA Local Government Association (WALGA), WALGA’s 2025 State Election Priorities, “Transport: Public EV Charging Infrastructure”, pp. 36–37; identifies uncertainty concerning section 9.7 of the WAER and recommends review and amendment to facilitate safe kerbside EV charging. [Source](#)
- [4] Government of Western Australia, Electricity (Licensing) Regulations 1991, current consolidated version from 1 July 2026, regulation 49(2a). [Source](#)
- [5] UK Department for Transport, Cross-pavement solutions for charging electric vehicles, guidance for local authorities. [Source](#)
- [6] Electrify Everything WA review of European local-government cross-pavement EV charging policies and trials, August 2026; underlying jurisdictional analysis available on request.
- [7] Energy Research & Social Science, “Social license to automate batteries? Australian householder conditions for participation in Virtual Power Plants”, vol. 104, October 2023. [Source](#)
- [8] Australian Energy Market Operator, Draft 2026 Forecasting Assumptions Update, p. 22; current VPP participation estimate and WA Residential Battery Scheme assumption. [Source](#)
- [9] Australian Energy Market Operator, Reserve Capacity Mechanism; overview of the WEM capacity-adequacy framework and its separation from the energy market. [Source](#)
- [10] Australian Energy Market Operator, 2026 WEM Electricity Statement of Opportunities, section 2.5; Parent Aggregator arrangements for non-contestable customers and forecast VPP impacts. [Source](#)