

Western Australia DER Roadmap actions

ACTION	ROADMAP ELEMENT	OWNER	DESCRIPTION	PRIORITY
1	Inverter standards	AEMO	By October 2020, deliver improved inverter functions through the Standards Australia national review process for AS/NZS 4777.	High
2	Inverter standards	Western Power Energy Policy WA (EPWA)	By October 2020, assess the opportunity to update latent capabilities in the existing inverter fleet.	Medium
3	Inverter standards	Western Power AEMO	By July 2022, introduce mandatory inverter communications functionality, including communications protocols, through AS/NZS 4777, to allow remote dynamic management of DER.	High
4	Inverter standards	Western Power AEMO	By July 2022, develop a process to ensure that inverters remain compliant with connection requirements and are upgraded to the latest settings over time.	Medium
5a	Distribution storage	Western Power	By December 2020, deploy community PowerBanks to address network constraints in Canning Vale, Dunsborough, Ellenbrook, Kalgoorlie, Leda, Parmelia, Port Kennedy, Singleton, Two Rocks, and Wanneroo.	High
5b	Distribution storage	Western Power	By October 2020, develop a plan covering 2021-24 for Western Power to obtain additional distribution storage services (and installations where services do not emerge) across the SWIS to meet emerging network needs.	High
6	Distribution storage	EPWA	By December 2020, implement appropriate metering and settlement arrangements for distribution storage.	High
7	Distribution storage	EPWA Western Power	By December 2020, ensure that the Electricity Networks Access Code 2004 allows Western Power to recover appropriate costs associated with efficient use of distribution storage under its regulated revenue. (See Network Investment Process for further information on proposed Access Code changes).	High
8	Distribution storage	Western Power	By December 2021, update the Technical Rules to clarify the requirements for distribution battery storage beyond the current treatment as both a generator and a load.	Medium
9	Grid response	Western Power	By April 2020, install 25 MVAR (five x 5 MVAR units) of reactive power compensation, and continue the assessment and delivery of network technology solutions to provide grid support and maintain system stability on low-demand days.	High
10	Grid response	Western Power AEMO	By June 2020, review Under Frequency Load Shedding arrangements, and assess implications for AA5 investment program.	High
11	Grid response	EPWA	By December 2021, draft updates to the Electricity Act 1945 to reflect a voltage standard that is more suitable for a high-DER environment.	Medium

12	Power system operations	AEMO Western Power	Beginning in June 2020, revise system restart arrangements to consider DER.	High
13	Power system operations	AEMO Western Power	By March 2021, ensure that the System Operator's dynamic system modelling adequately incorporates DER, and arrangements adequately address power flows during system events.	High
14	Distribution network visibility	Western Power EPWA	By June 2020, undertake an assessment of distribution network visibility capability and develop an investment plan for deploying technology to improve that visibility, both static and dynamic, to support DSO and system/market operator requirements. The scope should include a review of the coverage of network visibility investments under the regulatory framework, including the Electricity Networks Access Code 2004 and Technical Rules.	High
15	Distribution network visibility	AEMO Western Power EPWA	By September 2020, deliver a register of static DER data for the SWIS, with processes to support data collection and future DSO functionality.	High
16	Planning for electric vehicle integration	Western Power	By June 2020, commence work on planning to integrate electric vehicles in the grid, including for the deployment of charging points (household and fast charge) and trials to better understand the capabilities of vehicle-to-grid technology.	Low
17	Tariff pilots	EPWA Synergy Western Power Horizon Power	By March 2020, develop tariff pilot programs to explore tariff structures that encourage system-efficient use of and investment in DER and help to share the benefits of DER with all customers. The scope of the pilots should include measures to assist and protect vulnerable customers.	High
18	Tariff pilots	Synergy Western Power	Beginning in July 2020, commence implementation of the tariff pilots.	High
19	Tariff pilots	EPWA Synergy Western Power	From the end of 2020, commence reviewing the progress of and insights from the tariff pilots.	High
20	DER for tenants	EPWA	By December 2021, deliver a program that reduces barriers to the installation of DER at commercial and residential rental properties.	Medium
21	Network investment process	EPWA	By July 2020, deliver a range of updates to the Access Code to facilitate better procurement of non-network solutions (using DER where appropriate) to address network issues by Western Power.	High
22	DER orchestration	Synergy EPWA Western Power	By July 2020, commence a comprehensive VPP technology pilot to demonstrate the end-to-end technical capability of DER in the SWIS, and its ability to respond in a coordinated manner under central dispatch instruction. The pilot would commence with a focus on technical performance of DER and	High

			transition to market participation testing (see action 23).	
23	DER orchestration	Synergy AEMO	By July 2022, complete a comprehensive VPP market participation pilot that tests the incorporation of aggregated DER into energy markets, including market dispatch and settlement arrangements from the market operator to individual customer.	High
24	DSO/DMO	EPWA AEMO Western Power	By December 2020, develop a plan for the establishment of a DSO and DMO in the SWIS, including the identification of roles, functions, costs and practical operations. This plan should include an assessment of the costs and benefits to the system for the establishment of these functions.	Medium
25	DSO/DMO	EPWA AEMO	By December 2020, identify legislation and regulatory framework requirements including timeframes for development and implementation to establish DSO and DMO functions.	High
26	DSO/DMO	Western Power	By September 2021, finalise communications protocols, data and technology requirements to accurately predict and publish operating constraints on the distribution network under a DSO, and requirements for coordination with the system operator.	Medium
27	DSO/DMO	EPWA AEMO	By December 2021, introduce changes to wholesale market arrangements necessary to enable the participation of DER in the wholesale market via a DER aggregator.	High
28	DSO/DMO	Western Power	By June 2022, introduce adapted network connection agreements that enable the DSO, once established, to interact with devices on the distribution network.	High
29	DSO/DMO	EPWA	By December 2022, deliver a DSO/DMO legislative and regulatory framework, for transition to commencement by 1 July 2023.	Medium
30	DSO/DMO	Western Power	At 1 July 2023, DSO and DMO goes live in the SWIS, with DER able to respond to meet network needs as well as be dispatched into the WEM and be compensated appropriately.	Medium
31	DSO/DMO	EPWA AEMO Western Power	By July 2023, develop the initial design of the framework for a distribution services market with fit for purpose arrangements for dispatch and settlement. Include an assessment of the cost and benefits of market creation.	Low
32	DSO/DMO	EPWA	By July 2024, commence the development of trials for a distribution services market for network support.	Low
33	Customer Data	EPWA	By September 2020, assess the applicability of the Consumer Data Right to Western Australian energy customers and commence assessment of an applicable customer data regulatory framework.	Medium

34	New business models	EPWA	By June 2020, commence a process to ensure new business models in the electricity sector, at a minimum, provide appropriate protections for consumers.	Medium
35	New business models	EPWA	By March 2022, establish a regulatory framework for new energy service business models to ensure access to the Energy Ombudsman, and that hardship schemes and exemptions are appropriately applied.	Medium
36	Customer engagement	EPWA	By July 2020, engage with energy customers and commence an education program to ensure industry, government and the public are sufficiently informed about the need for changes being undertaken as a result of the Roadmap recommendations.	High