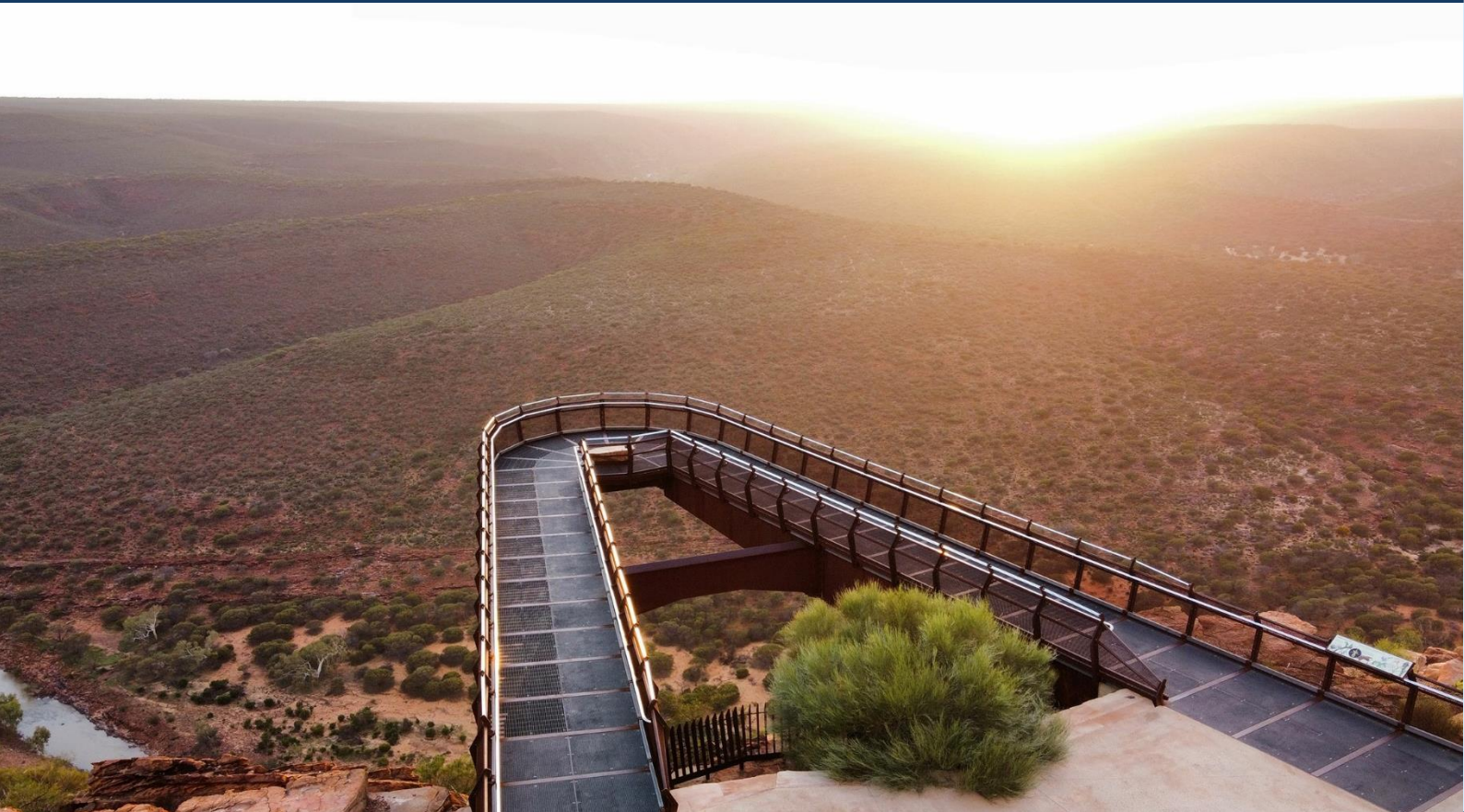




Government of **Western Australia**
Department of **Mines, Industry Regulation and Safety**
Energy Policy WA



Progress of Recommendations

Inquiry into Microgrids and Associated Technologies in Western Australia

September 2023

Working together for a **brighter** energy future.

An appropriate citation for this paper is: Progress of Recommendations - Inquiry into Microgrids and Associated Technologies in WA

Energy Policy WA

Level 1, 66 St Georges Terrace
Perth WA 6000

Locked Bag 100, East Perth WA 6892

Telephone: 08 6551 4600

www.energy.wa.gov.au

ABN 84 730 831 715

Enquiries about this report should be directed to:

Email: EPWA-info@dmirs.wa.gov.au

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Glossary

Term	Definition
Access Code	Electricity Networks Access Code 2004
WA ACE	Western Australian Advocacy for Consumers of Energy
AEMO	Australian Energy Market Operator
AES	Alternative Electricity Services
AMCoE	Australian Microgrid Centre of Excellence
DER	Distributed Energy Resources
DMG	Disconnected Microgrid
EPWA	Energy Policy WA
ERA	Economic Regulation Authority
HEES	Household Energy Efficiency Scheme
Inquiry	Inquiry into Microgrids and Associated Technologies in WA
Licencing Review	Retail Electricity Licensing and Exemption Review
SPS	Stand-alone Power Systems
SWIS	South West Interconnected System
VPP	Virtual Power Plant
WEM	Wholesale Electricity Market

Summary

In 2020, the Parliamentary Inquiry into Microgrids and Associated Technologies in WA (the Inquiry) investigated the emergence and impact of electricity microgrids, making recommendations to ensure the State maximised the opportunities presented by these and related technologies.

The Government has made progress towards each of the 21 recommendations made by the Inquiry's final report, [*Taking Charge: Western Australia's transition to a distributed energy future*](#), tabled in Parliament on 20 February 2020.

Fourteen of the recommendations have already been completed, with the Government identifying further opportunities to extend upon the scope of the original recommendations.

The Government and Government-owned Electricity Corporations, Horizon Power, Synergy, and Western Power, are working together and with energy stakeholders to deliver each of the recommendations made by the Inquiry.

Highlights of the work implemented since 2020 include:

- **Extensive reforms to regulation**, reducing barriers to the deployment of microgrid and other alternative energy solutions, including changes to the Electricity Networks Access Code 2004 to provide a framework to assess and approve non-traditional network investments.
- **Deployment of Stand-alone Power System (SPS)** microgrid solutions to address the reliability concerns of customers residing in fringe-of-grid or remote Aboriginal communities. The State Government through Horizon Power and Western Power will continue to deploy SPS as a cost effective alternative to traditional network investments.
- **New tariffs for small-use customers** to better align with renewable generation and reflect the cost of providing electricity at different times of the day. Synergy's *Community Solar* tariff being trailed amongst hardship customers will help equalise access to the benefits of rooftop solar and incentivise greater consumption during the middle of the day.
- **Expanding consumer protections and support** for small-use customers supplied by microgrids and alternative energy services, equalising access to dispute resolution and safety requirements as that of a grid-connected customer.
- **A new licence class for non-traditional network services** is under development with early consultation complete. A voluntary code of practice has been published by the State Government to invite comment from stakeholders and refine prior to release of a mandatory code in due course.

The Government remains committed to implementing all recommendations made as part of the Inquiry, and work against the remaining seven recommendations is well underway.

1. Background

In 2018, the Economics and Industry Standing Committee commenced the Inquiry into Microgrids and Associated Technologies in WA (the Inquiry) to investigate the emergence and impact of electricity microgrids and associated technologies.

Broadly, microgrids involve multiple electrical loads and generation sources, which are connected to the grid, but can be disconnected to operate autonomously. The associated technologies that were considered by the Inquiry included stand-alone power systems (SPS), Distributed Energy Resources (DER), Electric Vehicles (EVs), and the State's lithium mining and future battery industry.

In its terms of reference, the Inquiry was required to include consideration of:

- the potential for microgrids to contribute to affordable, secure, reliable and sustainable energy supply in metropolitan and regional Western Australia;
- opportunities to maximise economic and employment opportunities;
- key enablers, barriers and other factors affecting microgrid development; and
- initiatives in other jurisdictions to facilitate the development, and maximise the value of, microgrids and associated technologies.

The Inquiry, chaired by Ms Jessica Shaw MLA, heard from a wide range of organisations, including government agencies, the three Western Australian Government-owned Electricity Corporations and private sector industry participants, including those with a focus on sustainable and renewable energy. It also included briefings from agencies in the United States of America.

The Inquiry's final report, [*Taking Charge: Western Australia's transition to a distributed energy future*](#), was tabled in Parliament on 20 February 2020.



Inquiry findings

The report included 73 key findings and made 21 recommendations for the Energy Transformation Taskforce and the Government to consider for implementation.

Generally, the Inquiry identified key themes relating to technical challenges and regulatory barriers that required attention to support the wider use of microgrids and related technologies.

Improved clarity on the roles and responsibilities for Government, Horizon Power, Synergy, Western Power and the Australian Energy Market Operator (AEMO) was also recommended, in addition to recommendations for improved visibility and ongoing collaboration.

Customers and energy consumers featured in the Inquiry's final report, with findings and recommendations relating to a need for greater levels of community engagement, more effective tariffs, social equity considerations, and customer protections. The recommendations also covered safety, workforce capability planning, incentives and development of a microgrid 'centre for excellence' in Western Australia to promote local innovation and research.

Significant progress made

Significant progress has been made towards each of the 21 Recommendations made by the Inquiry, with implementation of fourteen now being substantively complete.

The *DER Roadmap*, released in April 2020 as part of the Government's broader Energy Transformation Strategy, outlined a pathway for the effective integration of DER in Western Australia, and contains many actions that either directly or indirectly address many of the recommendations made by the Inquiry. This document demonstrates that the ongoing implementation of the Government's Energy Transformation Strategy has achieved, or continues to address, each of the Inquiry's recommendations.

In the following pages, each recommendation is outlined and alongside an overview of progress on the actions required.

2. Progress Report

#	Recommendation	Status
1	The Minister for Energy introduce regulatory changes to provide system and network operators with appropriate levels of sub-transmission visibility and the authority to control microgrids and associated technologies in order to support the operational stability of the South West Interconnected System (SWIS).	In Progress
2	The Minister for Energy introduce a Distributed Energy Resources Register for the SWIS.	Complete
3	The Minister for Energy instruct the Energy Transformation Taskforce to specifically address the role of microgrids in the Whole of System Plan (WOSP).	Complete
4	The Minister for Energy instruct the Energy Transformation Taskforce to specifically address any issues associated with the development of microgrids, as part of the DER Roadmap.	Complete
5	The Minister for Energy should provide clear and unequivocal direction to Synergy and Western Power regarding their roles and accountabilities and ensure that there is not overlap or duplication of effort between them with respect to the development of microgrids and associated technologies. This is consistent with Western Power's role as a network asset operator and Synergy's retail function.	In Progress
6	The Minister for Energy consider formalising a mechanism for knowledge transfer and collaboration between Western Power, Synergy and Horizon Power for the development of microgrids and associated technologies.	Complete
7	The Minister for Energy ensure that the Energy Transformation Strategy clarify the roles and accountabilities for AEMO and Western Power and deliver a structure for long term accountability for Whole of System Planning in the SWIS.	Complete
8	The Minister for Energy ensure that reforms to the Electricity Networks Access Code 2004 (Access Code) expand the role of incentive-based mechanisms to ensure that assets are developed and operated on a technologically neutral basis, driven by overall cost efficiency.	Complete
9	The Minister for Energy ensure that a revised Access Code will require the Economic Regulation Authority (ERA) to consider the need to facilitate innovation, research, and development of new technologies when approving Access Arrangements for covered networks.	Complete
10	The Minister for Energy ensure that a revised Electricity Networks Access Code 2004 provides mechanisms that would promote a more collaborative approach to developing Access Arrangements, aimed at ongoing issues identification and resolution.	Complete
11	The Minister for Energy direct the Energy Transformation Taskforce, in conjunction with Western Power, to include network tariff reform as part of its scope of work.	Complete

#	Recommendation	Status
12	The Minister for Energy direct Synergy to undertake tariff trials for small use customers to determine whether signals sent through retail tariff structures would change consumer behaviours and promote more secure, reliable and affordable electricity supply in the South West Interconnected System.	Complete
13	The Minister for Energy consult with other relevant Ministers to ensure that any electricity market reform process is accompanied by a review of the supports and concessions provided to vulnerable households with respect to electricity supply.	In Progress
14	The Minister for Housing instruct the Department of Communities, as part of its general property condition assessment and management processes, to proactively identify and undertake energy efficiency improvements on public housing stock constructed prior to 2003, where it is practical and cost-effective to do so.	In Progress
15	The Minister for Energy ensure that appropriate Supplier of Last Resort provisions extend to relevant customers in new microgrid-based business models in the South West Interconnected System.	In Progress
16	<p>The Minister for Energy avoid an approach to electricity licensing based on exemptions for new business models and instead introduce a new class of licence, aimed at facilitating new business models. It is recommended that this is undertaken while achieving appropriate consumer protections, social and economic policy outcomes. As a minimum, licensing arrangements for new business models should ensure that consumers in relevant classes retain access to:</p> <ul style="list-style-type: none"> the Energy and Water Ombudsman; supply based on ERA approved contracts; supply provided under regulated tariffs, fees and charges; access concessions; coverage afforded under the Code of Conduct for the Supply of Electricity to Small Use Customers 2018; guaranteed access for life support customers; and the obligation for the retailer to supply electricity. 	In Progress
17	<p>The Minister for Energy review the operation and funding of the energy safety inspection function to ensure:</p> <ul style="list-style-type: none"> that consumers supplied through microgrids enjoy the same level of protection as traditionally supplied customers; and the costs of any alterations to inspection or safety regimes are appropriately recovered from 'causers' and not inappropriately cross-subsidised. 	In Progress
18	The Minister for Energy undertake a community engagement campaign, as part of the Energy Transformation Strategy and the market reform process, to explain the changes underway in the energy industry and the need for reform, outline the benefits offered and seek consumer's views on the proposed changes.	Complete

#	Recommendation	Status
19	The Minister for Energy ensure that the Government Trading Enterprises have comprehensive workforce capability plans, aimed at building existing employee's skills and capabilities and appropriately recruiting new staff to develop, operate and maintain microgrids and distributed energy resources.	Complete
20	The relevant Minister develop a strategy to commercialise and maximise the value delivered to Western Australia arising from the intellectual property and microgrid delivery capability developed in the Government Trading Enterprises. The commercialisation strategy should identify target interstate and overseas markets, particularly in India and South-East Asia, and specifically consider ways to partner with the private sector to deliver scale and generate additional growth opportunities.	Complete
21	The relevant Minister to investigate the establishment of a Centre of Excellence for Advanced Microgrids in Western Australia, to coordinate research and development, intellectual property commercialisation, and the development of new skills.	Complete



3. Recommendations

3.1 Recommendation 1 – Introduction of regulatory changes

Recommendation 1: *The Minister for Energy introduce regulatory changes to provide system and network operators with appropriate levels of sub-transmission visibility and the authority to control microgrids and associated technologies in order to support the operational stability of the South West Interconnected System (SWIS).*

- The system operator (AEMO) keeps the South West Interconnected System (SWIS) stable by balancing demand and generation, and managing other physical characteristics of power system (such as frequency levels). These system operation activities are undertaken at the higher-voltage transmission network level.
- The network operator (Western Power) is responsible for the reliable operation of the electricity network, which includes the transmission network as well as the lower-voltage (or 'sub-transmission') distribution network.
- Microgrids and associated technologies, such as DER, are generally connected at the sub-transmission, distribution network level.
- As these technologies grow in prevalence, they will have a material impact on the stability of the whole power system – this recommendation and the Government's implementation reflects the growing need for the system and network operators to have improved visibility at this sub-transmission level.

Progress of actions arising to address recommendation

This recommendation is being addressed through the Government's implementation of the [Distributed Energy Resources \(DER\) Roadmap](#) and other policy activities.

The Inquiry noted that the visibility and management capability of microgrids and DER was not currently available to both the system and network operators.

This recommendation is highly aligned with the activities of the Government, particularly in relation to DER. The DER Roadmap specifically addresses the safe and efficient integration of DER in the SWIS and outlines a range of actions for implementation over the years to 2025. DER Roadmap Actions 1, 2, 3, 4, 14 and 15 relate to the technical capabilities of DER inverters and other equipment, visibility requirements for Western Power in a high-DER environment, and introduction of a DER Register to provide data about DER to AEMO (discussed in Recommendation 2, below).

Improved inverter standards for newly installed inverters assist with support of the power system during disturbances. Inverters act as an important interface between DER devices such as solar panels (which produce direct current), and household devices or the electricity network (which use alternating current). In 2021, updated inverter standards¹ were introduced by Standards Australia that apply to inverters in Western Australia, which improve the capacity of the power system to ride through disturbances and manage voltage levels across the grid. Work has also been undertaken

¹ AS/NZS 4777.2 - Grid connection of energy systems via inverters, or 'AS4777.2'

to ensure that Western Australia is aligned with emerging national standards relating to remote management capabilities for DER, which will facilitate visibility and control.²

Action 14 of the DER Roadmap required Western Power to undertake an assessment of its requirements for the visibility of its distribution network and develop a plan to efficiently deliver the necessary related network infrastructure, systems, and processes. Western Power is currently implementing this action and is reviewing its existing Technical Rules with network visibility as a priority. Western Power is also rolling out advanced metering infrastructure, which will significantly improve its visibility of the network, with plans to install over 1.2 million advanced meters by mid-2027.

In addition to DER Roadmap implementation, the Government introduced Emergency Solar Management from February 2022 which significantly improves visibility in order to deliver remote management capability for small rooftop solar systems. Energy Policy WA (EPWA) and Western Power are currently investigating how this capability can be applied more broadly, including its application to microgrids and embedded networks.

Policy development continues to improve the ability of AEMO and Western Power to manage microgrids and DER, including identifying relevant visibility and control requirements. The [DER Orchestration: Roles and Responsibilities Information Paper](#), released in May 2022, provides further detail on the evolution of Western Power's ability to manage the network at the sub-transmission level, and the interaction with AEMO as system operator.

In January 2023, AEMO also published a 'Visibility Guideline', providing an initial framework for improving visibility of DER and how this visibility might be reflected in market and system operations in the SWIS.

In the short term, WA Government is supporting the development of standards to ensure microgrid technologies are scalable and can be integrated with existing infrastructure. Looking towards the future, work is underway to determine the roles of Synergy, Western Power and AEMO in a high-DER environment.

In Progress

² For example, policy development is giving consideration to the introduction of the 'CSIP-AUS' standard capability for inverters, or alternatively considering the use of a standardised communication protocol (in particular, the IEEE2030.5 standard) for DER.

3.2 Recommendation 2 - DER Register for the SWIS

Recommendation 2: *The Minister for Energy introduce a Distributed Energy Resources Register for the SWIS.*

- At the time of the Inquiry, information on DER (primarily relating to rooftop solar systems) was collected by Western Power at the time of device connection, but similar data was not available to AEMO, the power system operator.
- Individually, each rooftop solar system does not have a large impact the power system – however, in aggregate, hundreds of thousands of DER devices have a significant effect on power system security, and adds significant complexity, volatility and cost to managing the power system.
- Introduction of a DER Register was recommended by the Inquiry to improve AEMO's visibility of DER devices installed in the SWIS.

Progress of actions arising to address recommendation

This recommendation has been addressed through the Government's introduction of a DER Register.

In 2020, in order to meet DER Roadmap Action 15, the Government implemented regulatory changes through the Wholesale Electricity Market (WEM) Rules to introduce a DER Register for the SWIS.

Launched by AEMO in April 2021, the DER Register is improving the visibility of DER for the system operator by facilitating the communication of DER data from Western Power to AEMO.

The DER Register sees the transfer of data relating to DER devices (for example, the generating capacity of solar panels) to AEMO for the purposes of improving system operations and forecasting. As a result of the regulatory changes, Western Power, as the collector of data on customer DER connecting to its network, is now required to provide AEMO with data it receives about installed DER devices. The DER Register also includes all relevant data collected prior to the register's introduction.

EPWA is continuing to work with Western Power and AEMO to update and improve the DER Register over time, to better reflect rapidly changing power system needs and deal with the limitations of current regulatory structures.

Following regulatory changes by Government in 2020, a DER Register for the SWIS was launched in April 2021. EPWA continues to work with AEMO and Western Power to update and improve the DER Register over time.

Complete

3.3 Recommendation 3 – Microgrids addressed in the Whole of System Plan

Recommendation 3: *The Minister for Energy instruct the Energy Transformation Taskforce to specifically address the role of microgrids in the Whole of System Plan (WOSP).*

- The Energy Transformation Taskforce was established to respond to urgent challenges facing the electricity sector, and was provided with a two-year mandate that expired in May 2021.
- The WOSP, released by the Taskforce in October 2020, presents a 20-year view of potential demand scenarios for the SWIS, and models the lowest-cost network and generation requirements to meet that demand while maintaining power system security and reliability.
- While the Taskforce has now been concluded, a WOSP is now required to be produced by the Coordinator of Energy every five years, with the next one required by 30 September 2025.
- The next WOSP will consider the role of new technologies, including microgrids, in meeting potential demand at the lowest sustainable cost.

Progress of actions arising to address recommendation

This recommendation has been addressed through regulatory changes made by Government in July 2021.

The [WOSP](#) is designed to identify cost-effective investments which maintain security and reliability for the power system and guide efficient integration of renewable generation to assist in the transition to a lower-emissions power system. The WOSP also provides guidance to regulators and industry about efficient power system investment, and to policy makers on the power system's future needs.

As a result of regulatory changes made in July 2021, the WEM Rules require that the Coordinator of Energy prepare and publish a WOSP by 30 September 2025 and then at least once every five years thereafter.³ The rules outline the purpose of and process for developing a WOSP, including specifying public consultation processes and the publication of required documents.

A draft WOSP (which is required to be published for consultation) must include relevant information about network constraints, development opportunities across both the transmission and the distribution systems; and provide an initial assessment of whether non-network options (which includes microgrids) are reasonably likely to meet a relevant identified network need.⁴

The next WOSP is scheduled to be published by 30 September 2025, and will include considerations for microgrids as an option for meeting future energy demand.

Complete

³ WEM Rules 4.5A.2

⁴ WEM Rules 4.5A.14(f), and 4.5A.14(h)

3.4 Recommendation 4 – Address microgrid issues through DER Roadmap

Recommendation 4: *The Minister for Energy instruct the Energy Transformation Taskforce to specifically address any issues associated with the development of microgrids, as part of the DER Roadmap.*

- As microgrids are a relatively new and innovative opportunity when compared to traditional ways of providing electricity, the Inquiry identified that regulatory barriers must be addressed in order to enable the development of microgrids.
- Regulatory barriers include barriers in legislation or other legislative instruments (such as regulations) that prevent certain activities from being undertaken.
- The DER Roadmap, produced by the Energy Transformation Taskforce, identified a range of regulatory changes to facilitate development of microgrids and DER.
- New technologies like Stand-alone Power Systems (SPS) can improve regional and rural reliability at a lower cost, particularly for customers at fringe-of-grid locations – reducing regulatory barriers also facilitates the roll-out of SPS and improved service for regional and rural customers.

Progress of actions arising to address recommendation

This recommendation has been addressed through the Government's implementation of the DER Roadmap, and legislative changes in 2021 to facilitate the roll-out of SPS.

Further improvements continue to be made as part of Western Power's review of its Technical Rules, which outline the technical requirements for microgrids, embedded networks and SPS.



In 2021, the Government introduced changes to the *Electricity Industry Act 2004* (and other legislation) to enable Western Power and Horizon Power to deploy SPS in Western Australia, and allocated \$218 million to manufacture and install up to 1,050 SPS across the State.⁵

On 7 September 2021, the commitment to the installation of SPS was designated a strategic project under the *Western Australian Jobs Act 2017*, and has since been extended to cover Western Power's procurement of SPS, which it is deploying as an alternative to traditional network investments. Designation as a strategic project will drive local supply of SPS units and promote opportunities for the local manufacture of SPS components. EPWA, Horizon Power, Western Power, and the Department of Jobs, Tourism, Science and Innovation have been working closely to drive outcomes under this initiative.

Building on the success of the SPS project, the Government is currently working with Western Power to test the capacity and capability of the market to develop the first 'disconnected microgrid' (DMG) pilot in the SWIS.

EPWA has undertaken a regulatory and policy review to facilitate future pilots of DMGs. The review concluded that, for the purposes of future pilots, a DMG is dealt with under the same regulatory framework as a large SPS and only a minor change to the Electricity Industry (Stand-Alone Power Systems) Regulations 2021 is required to increase the number of customers an SPS can serve from five to 50.

The DER Roadmap identifies a range of regulatory changes to facilitate development of microgrids and DER. Further improvements by Government in 2021 are facilitating the roll-out of SPS to increase customer reliability while reducing emissions.

Complete

⁵ Western Power are expected to deploy up to 900 SPS, and Horizon Power, 150.

3.5 Recommendation 5 – Clear directions on roles and responsibilities

Recommendation 5: *The Minister for Energy should provide clear and unequivocal direction to Synergy and Western Power regarding their roles and accountabilities and ensure that there is not overlap or duplication of effort between them with respect to the development of microgrids and associated technologies. This is consistent with Western Power’s role as a network asset operator and Synergy’s retail function.*

- DER roles and responsibilities refer to the obligations of different parties in enabling the participation of DER and microgrid technologies in the SWIS.
- These can include (but are not limited to) enabling visibility of the lower-voltage network, the provision of network support services, and the coordination of customer DER to provide electricity services in a manner similar to a traditional generator.
- Establishing these positions is an important step to unlocking the full range of opportunities presented by microgrids and associated technologies. These roles and responsibilities will continue to evolve as the technical and regulatory environment develops.



Progress of actions arising to address recommendation

This recommendation is being addressed through the Government's implementation of the DER Roadmap.

As part of DER Roadmap implementation, EPWA is leading development of DER roles and responsibilities policy positions, including through targeted workshops with Synergy, Western Power, and AEMO to establish their roles and accountabilities in a high-DER future (see [DER Roles and Responsibilities Information Paper](#)).

As part of this process, to date the Government has confirmed:

- Synergy's role as the sole aggregator for most non-contestable customers in the SWIS (those consuming less than 50 megawatt hours per year), in line with its current role as the monopoly retailer for households and smaller businesses;
- limitations on which parties may directly contract with Western Power to provide network support services, in order to manage the number of entities accessing customer-owned DER for the purpose of aggregation; and
- opportunities to improve Western Power's network investment processes, including updates to the Electricity Networks Access Code 2004 (Access Code) to improve processes through which Western Power procures non-network solutions (which can include DER) as an alternative to traditional network investments.

These roles and accountabilities are informed by the Project Symphony virtual power plant pilot, which will assist in providing clarity at an operational level around the interaction between Western Power and Synergy regarding remote management of customer DER.

Government will make the required legislative and regulatory changes to give effect to these policy positions on roles and accountabilities, once they have been finalised.

The Government is developing clear policy positions on the roles and responsibilities of Synergy and Western Power and AEMO in relation to customer DER and microgrid technologies. These roles will continue to evolve as the technological and regulatory environment develops.

In Progress

3.6 Recommendation 6 – Introduction of a knowledge sharing mechanism

Recommendation 6: *The Minister for Energy consider formalising a mechanism for knowledge transfer and collaboration between Western Power, Synergy and Horizon Power for the development of microgrids and associated technologies.*

- Knowledge transfer between the public-owned energy businesses (Western Power, Synergy and Horizon Power) will help ensure the State can maximise the benefits from investments that develop microgrids and associated technologies.
- This collaboration occurs through the Minister for Energy, who is kept up to date on the technical and regulatory progress to apply microgrid solutions through regular meetings with the energy Government Trading Enterprises.
- EPWA also engages at an operational level with peers in the Government Trading Enterprises, and provide regular updates to the Minister for Energy.

Progress of actions arising to address recommendation

This recommendation is being addressed through ongoing collaboration between Western Power, Synergy and Horizon Power in relation to DER and other emerging network issues.

EPWA, Western Power, Synergy and Horizon Power have collaborated extensively on the application of SPS, DMG project development, and through delivery of other DER Roadmap actions.

Knowledge sharing and collaboration occurs through formalised meeting arrangements, including a quarterly meeting between the Minister for Energy, EPWA and the CEO and Chair of each of the three energy Government Trading Enterprises. The organisations also all participate in a monthly Energy Transformation Coordination Group meeting underpinning the Energy Transformation Strategy work program, and various officer-level working groups on specific projects and issues.

Frequent knowledge sharing sessions between the Minister for Energy, EPWA and Government Trading Enterprises, as well as operational-level meetings ensure decision makers are able to accurately identify the suitable application of microgrids in place of traditional network infrastructure.

Complete

3.7 Recommendation 7 – Clarification of roles and accountabilities for Western Power and AEMO

Recommendation 7: *The Minister for Energy ensure that the Energy Transformation Strategy clarify the roles and accountabilities for AEMO and Western Power and deliver a structure for long term accountability for Whole of System Planning in the SWIS.*

- The WOSP presents a 20-year view of potential demand scenarios for the SWIS, and models the lowest cost network and generation requirements to meet that demand while maintaining power system security and reliability.
- Changes made to the Wholesale Electricity Market Rules under the Energy Transformation Strategy assigned responsibility for the WOSP with the Coordinator for Energy, to be conducted on a five year interval.

Progress of actions arising from recommendation

This action has been addressed in the WEM Rules, which were updated through the Energy Transformation Strategy process.

The WEM Rules now require that the Coordinator of Energy be responsible for preparing and publishing a Whole of System Plan by 30 September 2025 and then at least once every five years thereafter (4.5A.2), and that the Coordinator must collaborate with AEMO and Western Power in doing so (4.5A.10).

The WEM Rules also state that, at the request of the Coordinator, AEMO, Western Power and other WEM Rule Participants must provide information and assistance to inform development of a WOSP (4.5A.11).

Updates to the WEM Rules require the Coordinator of Energy to publish a Whole of System Plan every five years, in collaboration with AEMO and Western Power. The next WOSP must be published by 30 September 2025.

Complete

3.8 Recommendation 8 – Reforms to the Access Code to expand incentive-based mechanisms

Recommendation 8: *The Minister for Energy ensure that reforms to the Electricity Networks Access Code 2004 (Access Code) expand the role of incentive-based mechanisms to ensure that assets are developed and operated on a technologically neutral basis, driven by overall cost efficiency.*

- The Access Code sets out the how Western Power provides network services, recovers the costs of investing in and maintaining the network, facilitates connection to the network, and the standards of service it will provide customers.
- The Access Code also provides the framework how the Economic Regulation Authority (ERA) prepares, approves and reviews Western Power's investments.
- Changes to the Access Code made in September 2020 updated the New Facilities Investment Test to ensure that network investments consider the overall net benefit for customers so that solutions are assessed on a technologically neutral basis.
- These changes give an opportunity for more innovative DER and microgrid solutions to be approved in place of traditional network investments.

Progress of actions arising from recommendation

This recommendation has been addressed through changes made by the Minister for Energy to the Access Code in September 2020, as part of the implementation of the DER Roadmap.

DER Roadmap action 21 identified a requirement to enhance processes relating to non-network solutions (known as 'alternative options', which can include microgrids) and efficiency of investments. The changes facilitate greater use of alternative options through which Western Power can procure cost-efficient alternatives (such as those provided by DER) to traditional network asset investments.

Changes to the New Facilities Investment Test emphasise that investments should consider the overall net benefit for customers, be technologically neutral, and be unbiased regarding a preference for either capital or operational expenditure.

Other Access Code changes also introduced obligations for Western Power to produce a Network Opportunities Map, an Alternative Options Strategy and a vendor register in order to support overall cost efficiency. Western Power has since published a Network Opportunities Map in October 2021 and 2022, as well as an Alternative Options Strategy and vendor register.

The Minister for Energy made changes to the Access Code in September 2020 that ensure investments decisions are technology neutral, and improve overall cost efficiency by considering the net benefit of investments for customers.

Complete

3.9 Recommendation 9 – Revised Access Code to facilitate innovation, research and development of new technologies

Recommendation 9: *The Minister for Energy ensure that a revised Access Code will require the Economic Regulation Authority (ERA) to consider the need to facilitate innovation, research, and development of new technologies when approving Access Arrangements for covered networks.*

- The ERA reviews and approves Access Arrangements for covered networks (like Western Power), which includes an assessment of efficient expenditure.
- Revising the Access Code to facilitate innovation allows covered networks to invest in research to identify how DER could be deployed, and reduce long-term costs to customers.
- Changes made to the Access Code in September 2020 recognise that DER and microgrid technologies can be deployed in the place of higher cost traditional network solutions.
- In addition, the changes to the Access Code adjustment mechanism outline how the ERA can approve 'non-capital costs' (i.e. DER, Microgrid technologies) to provide an opportunity for more innovative technologies to be deployed.

Progress of actions arising from recommendation

This recommendation has been addressed through changes made in September 2020 to the Access Code, as part of the implementation of the DER Roadmap.

Access Arrangements include the ERA's approval of network services, the agreed standards of services, and the revenue that the network operator can recover from its customers through prices for those services. The Access Arrangement process includes consideration of network operators' expenditure and investment.

Generally, traditional network investments relate to capital expenditure for infrastructure like 'poles and wires'. However, emerging technologies (including DER) can be contracted to provide services to networks that can defer or remove the need to make capital investments – lowering the



long-term cost of operating the network. Unlike traditional network investments, these services are treated as a 'non-capital cost'. The Access Code was amended to facilitate networks being able to incorporate innovation and new technologies, regardless of the nature of the expenditure.

Amendments to the Access Code introduced a range of measures to promote innovation and development of new technologies through Access Arrangements, including:

- introduction of a Demand Management Innovation Allowance – this allows Western Power to invest in research and development of projects with the potential to reduce long-term network costs, and recover the costs of those investments;
- provision of clarifying information on the 'adjustment mechanism' (also known as the 'd-factor adjustment') - this outlines how the ERA can approve non-capital costs within an Access Arrangement period and further supports incorporation of new technologies within the normal operation of networks; and
- review of the framework for network access following anticipated amendments to the *Electricity industry Act 2004* to be introduced to Parliament in the second half of 2023. This review will provide additional opportunities to amend the network access framework to incentivise efficient network investment, including in microgrids.

The revisions to the Access Code in 2020 by the Minister for Energy have enabled innovative DER and microgrid solutions to be considered alongside traditional network investment.

Complete

3.10 Recommendation 10 – Revision of Access Code to promote a more collaborative approach to identifying and resolving issues

Recommendation 10: *The Minister for Energy ensure that a revised Electricity Networks Access Code 2004 provides mechanisms that would promote a more collaborative approach to developing Access Arrangements, aimed at ongoing issues identification and resolution.*

- The Access Code, which sets out the requirements of Access Arrangements, can be used to ensure that covered networks like Western Power can provide the services that are needed by customers.
- Changes made to the Electricity Network Access Code in September 2020 introduced the 'Framework and Approach' model of approvals.
- This revised process incorporates early public consultation and allows refinement on services that are to be provided before an Access Arrangement is formally submitted to the ERA.

Progress of actions arising from recommendation

This recommendation has been addressed through changes made to the Access Code in September 2020, as part of the implementation of the DER Roadmap Action 21.

Previously, Access Arrangement processes involved a 'propose and respond' model of approvals, where Western Power would make a full proposal to the ERA, which would then undertake a public consultation process based on written submissions. The Inquiry noted this process was limited in its scope for collaborating with industry and resolving issues.

These changes to the Access Code introduced a new 'Framework and Approach' to guide the development of Access Arrangements. This new process brings greater clarity and collaboration between the ERA, Western Power and industry in an agreed approach to identifying issues (and outlining a method for assessing solutions) as part of Western Power's Access Arrangement proposals.

This step facilitates early public consultation and helps establish stakeholder agreement on the services that will be provided in each forthcoming five-year access period.

The 'Framework and Approach' has already been utilised to inform Western Power's fifth access arrangement (AA5), for which the ERA released its [final decision](#) on 31 March 2023.

Additional changes also introduced greater flexibility for the ERA to manage the approval process timeframes for Access Arrangements which can facilitate more timely approvals of access proposals.

The revisions to the Access Code in 2020 by the Minister for Energy introduced a new 'Framework and Approach' model to facilitate early public consultation and stakeholder agreement on proposed Access Arrangements.

Complete

3.11 Recommendation 11 – Inclusion of network tariff reform

Recommendation 11: *The Minister for Energy direct the Energy Transformation Taskforce, in conjunction with Western Power, to include network tariff reform as part of its scope of work.*

- Network tariffs for Western Power are approved by the ERA through the Access Arrangement process under the Access Code.
- Tariff reforms can facilitate more effective tariffs that meet the needs of network users.
- Changes made to the Access Code in September 2020 updated the pricing principles and introduced the Tariff Structure Statement to provide network users with more transparent information about the costs underpinning their network fees.

Progress of actions arising from recommendation

This recommendation was addressed by the Energy Transformation Taskforce, and implemented through changes to the Access Code made by the Minister for Energy in September 2020.

The changes to the Access Code included a review and update of pricing principles and the introduction of a Tariff Structure Statement (a document to provide network users with transparent information about network reference tariffs).

These changes have been utilised in the development of Western Power's fifth access arrangement, which was approved on 31 March 2023. Further consideration will be given by Western Power to the potential for additional network tariffs to incentivise aggregated DER and microgrid investment to reduce the longer-term costs of electricity supply.

After consideration by the Energy Transformation Taskforce, changes were made to the Access Code in 2020 that included reforms of network pricing principles, and improved transparency through a new Tariff Structure Statement.

Complete

3.12 Recommendation 12 – Undertake tariff trials for small use customers

Recommendation 12: *The Minister for Energy direct Synergy to undertake tariff trials for small use customers to determine whether signals sent through retail tariff structures would change consumer behaviours and promote more secure, reliable and affordable electricity supply in the South West Interconnected System.*

- Retail tariffs are the tariffs paid by customers – for most residential customers, this is the A1 tariff, which comprises a fixed, daily supply charge plus a variable charge based on total energy use.
- Retail tariffs can encourage consumers to use electricity in ways that help keep the power system secure and reduce total system costs.
- Synergy has conducted tariff trials with small use customers which eventuated in the development of new tariff products.

Progress of actions arising from recommendation

This recommendation has been addressed through implementation of the DER Roadmap.

Synergy has undertaken trials of new, “time-of-use” tariffs in line with DER Roadmap actions 17, 18 and 19, which offer different per unit rates for electricity to incentivise households to shift their energy use outside of peak periods (in the evening).

Subsequent to those trials, Synergy has introduced the ‘Midday Saver’ time-of-use tariff and associated tariff for customers with electric vehicles. These tariffs are designed to encourage load shifting from peak times into the middle of the day (where rooftop solar output is plentiful in the power system).

Synergy has introduced a Community Energy Tariff for some residential customers that do not have access to rooftop solar, which offers a lower rate during hours when solar generation is highest. This allows these customers to share in the benefits of high levels of rooftop solar generation during the day. This tariff is being trialled with select hardship customers and is expected to be extended to other groups later in 2023.

Synergy tariff trials have informed the development of new residential tariffs, including the ‘Midday Saver’ time-of-use tariff, and ‘Community Energy’ tariff for non-solar customers.

Complete

3.13 Recommendation 13 – Ministerial consultation to support vulnerable households

Recommendation 13: *The Minister for Energy consult with other relevant Ministers to ensure that any electricity market reform process is accompanied by a review of the supports and concessions provided to vulnerable households with respect to electricity supply.*

- The growing uptake of new technologies can have varying impacts on members of the community – during this energy transition, it is important that vulnerable households are provided with appropriate supports and concessions for their electricity supply.
- Synergy's Community Energy Tariff is being trialled amongst residential hardship customers to give them access to low cost electricity during the middle of the day.
- Synergy and Horizon Power continue to offer financial support to residential hardship customers who are experiencing difficulty affording their electricity bills.

Progress of actions arising from recommendation

This recommendation is being addressed through implementation of the DER Roadmap and other activities around energy efficiency, which includes specific consideration of vulnerable customers.

Synergy has introduced a trial of a Community Energy Tariff for some hardship customers that do not have access to rooftop solar, which allows these customers to share in the benefits of high levels of rooftop solar generation during the day. This tariff is expected to be extended to other groups later in 2023.

Synergy and Horizon Power continue to offer financial hardship management and payment plans for residential customers who are experiencing difficulty paying their electricity bills.

Broader concessions reform is not currently being considered but will require further review if private microgrid operators supply directly to residential customers.

Synergy's Community Energy Tariff is being trailed amongst non-solar hardship customers, offering a discounted rate during daylight hours to emulate a rooftop solar system. Further review will be required should private microgrid operators begin supplying residential customers.

In Progress

3.14 Recommendation 14 – Energy efficiency improvements to Department of Communities public housing

Recommendation 14: *The Minister for Housing instruct the Department of Communities, as part of its general property condition assessment and management processes, to proactively identify and undertake energy efficiency improvements on public housing stock constructed prior to 2003, where it is practical and cost-effective to do so.*

- The electrification of household appliances and improvements to energy efficiency of housing can help households lower their bills, and tenants in public housing rely on the Department of Communities to facilitate these changes.
- The Department of Communities is progressing towards replacing gas fixtures and fittings in public housing to lower costs for tenants, as well as giving households opportunities to reduce costs further by shifting electricity demand outside of peak times.
- Additionally, the Government has provided \$13 million to fund a Household Energy Efficiency Scheme (HEES) to identify opportunities to increase efficiency and replace less-efficient appliances for hardships customers.

Progress of actions arising from recommendation

This recommendation is being addressed through initiatives being taken by the Department of Communities, with support and guidance from EPWA.

EPWA understands that Department of Communities is progressing toward replacing gas fixtures and fittings in existing dwellings with electric options that are energy efficient at the end of their useful life, with the aim of full conversion of housing stock to all electric by 2040.

The Government has provided \$13 million for the Household Energy Efficiency Scheme (HEES) which helps households (including Department of Communities tenants) identify energy efficiency improvements and behaviour changes that a household in hardship can make to reduce their energy use.

Synergy and Horizon Power have released a call for interest from Charities and Non-Government Organisations who can deliver HEES services in metropolitan and regional Western Australia. The Scheme intends to reach 10,000 customers across Western Australia over the next four years.

The Department of Communities is undertaking energy efficiency improvements within its public housing stock. The HEES will also address energy inefficiencies in the homes of 10,000 vulnerable customers over the next four years.

In Progress

3.15 Recommendation 15 – Ensure that the Supplier of Last Resort extends to microgrid business models

Recommendation 15: *The Minister for Energy ensure that appropriate Supplier of Last Resort provisions extend to relevant customers in new microgrid-based business models in the South West Interconnected System.*

- The Alternative Energy Services (AES) Framework is being introduced by the Western Australian Government to ensure adequate protections are available for consumers of alternative electricity business models and services.
- These services include embedded networks (i.e. apartments, some strata complexes) but also extend to customers supplied by a microgrid or another type of off-grid solution in the next phase of work.
- The AES Framework will apply a code of practice to microgrid providers, along with other emerging DER business models to better protect consumers supplied under these arrangements.

Progress of actions arising from recommendation

This recommendation is being addressed through the development of an Alternative Energy Services regulatory framework (AES framework), which was borne out of the Retail Electricity Licensing and Exemption Review (Licensing Review).

Under the AES framework, new and emerging electricity services can be prescribed as an AES by regulation and providers of those services will be required to register as AES providers and comply with certain obligations. The obligations for AES providers will be contained in a single code of practice, the Alternative Electricity Services Code (AES Code).

The AES Code will be supported by provisions for compliance and enforcement and will contain a mechanism for resolving disputes between service providers and consumers. In May 2023, a voluntary code of practice was published by the Government to outline future requirements for operators and seek feedback for refinement of a mandatory code to be published in due course.

Amendments to the *Electricity Industry Act 2004* are currently being drafted to give effect to the AES framework. Subject to drafting and Parliamentary processes, the aim is for these amendments to pass Parliament in the second half of 2023.

Where a service represents the primary supply of electricity to customers (i.e. it is considered an essential service), such as is the case with microgrids, then at the time the service is prescribed as an AES, consideration will be given to what supplier of last resort obligations may be necessary for inclusion in the code of practice to support customers in the event of the failure of the service provider.

The Government is developing a new AES framework which will apply consumer protections (including Supplier of Last Resort provisions) for customers in embedded networks and microgrids, as defined in an AES code.

In Progress

3.16 Recommendation 16 – Introduction of a license class for new business models

Recommendation 16: *The Minister for Energy avoid an approach to electricity licensing based on exemptions for new business models and instead introduce a new class of licence, aimed at facilitating new business models. It is recommended that this is undertaken while achieving appropriate consumer protections, social and economic policy outcomes. As a minimum, licensing arrangements for new business models should ensure that consumers in relevant classes retain access to:*

- *the Energy and Water Ombudsman;*
- *supply based on ERA approved contracts;*
- *supply provided under regulated tariffs, fees and charges;*
- *access concessions;*
- *coverage afforded under the Code of Conduct for the Supply of Electricity to Small Use Customers 2018;*
- *guaranteed access for life support customers; and*
- *the obligation for the retailer to supply electricity.*

- The AES Framework is being introduced by the State Government to ensure adequate protections are available for customers of alternative energy business models and services which would include microgrids.
- Under the framework, services that are recognised as an AES will be required to comply with the AES Code.
- The AES Code will include provisions for adequate customer protections and options for dispute resolution, equalising protections currently available to grid-connected customers.



Progress of actions arising from recommendation

This recommendation is being addressed through the implementation of the DER Roadmap, and development of an AES framework (referred to under Recommendation 15).

The implementation of the DER Roadmap actions 34 and 35 has seen development of protections for consumers and a regulatory framework for new energy service business models (the AES framework). The AES framework has the following features:

- customers of registered AES providers will be able to access the Energy and Water Ombudsman to resolve disputes;
- the ERA will provide regulatory oversight of AES providers, including monitoring and enforcing compliance with the AES Code;
- price controls for customers of AES providers are able to be prescribed;
- appropriate customer protections for customers of AES providers through the AES Code, which – for services such as microgrids – would seek to mirror the protections under the Code of Conduct for the Supply of Electricity to Small Use Customers, including protections for life support customers (noting that some life support protections already exist for customers being on-sold electricity); and
- the ability to oblige AES providers to supply electricity.

Concessions will continue to be available to eligible customers who do not receive their supply of electricity from Synergy or Horizon Power through the Energy Concessions Extension Scheme.

The current focus for prescribing AES under the AES framework is on embedded networks and behind-the-meter services. Microgrids will be considered in the next phase of work, potentially during 2024. The protections that apply in relation to the retail of electricity in embedded networks could be extended to microgrids, with further work to be undertaken on protections relating to the distribution of electricity in a DMG.

The Government is developing a new AES framework which will introduce a new licence class to capture emerging energy business models. Microgrids will be explicitly considered in the second phase of work, scheduled for 2024.

In Progress

3.17 Recommendation 17 – Review of the energy safety inspection function

Recommendation 17: *The Minister for Energy review the operation and funding of the energy safety inspection function to ensure:*

- *that consumers supplied through microgrids enjoy the same level of protection as traditionally supplied customers; and*
- *the costs of any alterations to inspection or safety regimes are appropriately recovered from ‘causers’ and not inappropriately cross-subsidised.*

- As per Recommendation 16, The AES Framework will introduce new protections and dispute resolution code of practice (the AES Code) for suppliers of an alternative energy service.
- The legislative amendments to implement the AES Framework will introduce heads of power to amend the Energy Safety Act 2006 to extend the term ‘energy industry participant’ to capture AES service providers. This will ensure providers are responsible for safety and maintenance in supplying an electrical service.

Progress of actions arising from recommendation

This recommendation is being addressed through the introduction of the AES framework (referred to under Recommendation 15).

The legislative amendments to implement the AES framework includes heads of power to amend the *Energy Safety Act 2006* to extend the term ‘energy industry participant’ to registration holders of certain AES so they are required to pay the levy to fund energy safety inspections.

EPWA will continue to consult with the Building and Energy Division of the Department of Mines, Industry Regulation and Safety regarding the operation and funding of the energy safety inspection function in relation to specific AES (such as microgrids) when those AES are being prescribed.

In the Electricity (Network Safety) Regulations 2015, SPS is captured within the definition of ‘network’, to which all safety requirements apply.

Legislative amendments introduced in coordination with the AES Framework will enable amendments to ensure that customers supplied by microgrids are afforded the same customer protections as a grid-connected customer.

In Progress

3.18 Recommendation 18 – Community engagement campaign

Recommendation 18: *The Minister for Energy undertake a community engagement campaign, as part of the Energy Transformation Strategy and the market reform process, to explain the changes underway in the energy industry and the need for reform, outline the benefits offered and seek consumer's views on the proposed changes.*

- Community outreach and engagement on the Energy Transformation Strategy and associated work streams is performed in collaboration with Synergy, Horizon Power and Western Power, leveraging their existing communications channels and rapport with the community.
- The Western Australian Advocacy for Consumers of Energy (WA ACE) and Expert Consumer Panel provide a forum to collaborate and refine community engagement with engaged members of the public.

Progress of actions arising from recommendation

The recommendation is being addressed through implementation of the DER Roadmap, and the ongoing Western Australian Advocacy for Consumers of Energy (ACE) Forum, and Expert Consumer Panel.

As part of DER Roadmap Action 36, consumer education to support the DER Roadmap and other Energy Transformation Strategy initiatives is delivered collaboratively, leveraging the communications channels employed by Synergy, Western Power and Horizon Power and reinforced on the Government's consumer focused Brighter Energy Future web page.

Other work programs under the DER Roadmap include consultation with affected customers and other stakeholders in the development of specific projects related to the transition to a high-DER energy future.

The WA ACE Forum was established by the Government in June 2020. Chaired by the Coordinator of Energy, the forum meets regularly to provide an opportunity for energy sector and consumer advocates to represent consumer views on policy and reforms. This forum also supports the Expert Consumer Panel, established in 2021, and consisting of a more targeted, engaged group of energy consumers who are outside of the energy industry. The Government works collaboratively with these groups to evaluate and refine its community engagement.

The implementation of the Energy Transformation Strategy has applied a collaborative approach to community engagement. Regular engagement with the WA ACE Forum and the Expert Consumer Panel is providing ongoing communication on reforms and helping to improve consumers' energy literacy.

Complete

3.19 Recommendation 19 – Workforce capability for Government Trading Enterprises

Recommendation 19: *The Minister for Energy ensure that the Government Trading Enterprises have comprehensive workforce capability plans, aimed at building existing employee's skills and capabilities and appropriately recruiting new staff to develop, operate and maintain microgrids and distributed energy resources.*

- Stand-alone Power Systems are usually comprised of solar, battery and back-up generation components, and can provide a more cost-effective, safer, and more reliable alternative to a network connection for many regional or remote customers.
- Western Power and Horizon Power's SPS programs are helping to provide lower-cost and reliable electricity supply for customers in regional Western Australia and is helping to reduce reliance on long feeder lines which are vulnerable to disruption.
- The SPS roll-out has been designated as a 'strategic project' in the *WA Jobs Act 2017* due to its role in driving investment in local manufacturing and creating training opportunities which directly relate to the deployment of microgrid solutions.

Progress of actions arising from recommendation

This recommendation is being addressed through the roll-out of SPS programs, alongside collaboration with industry and local manufactures through EPWA's Energy Industry Development team.

As outlined under Recommendation 4, the procurement of SPS has been designated as a strategic project under the *WA Jobs Act 2017*.

This designation results in tailored participation plans being developed that addresses specific local economic or social outcomes.

The project, being delivered by Western Power and Horizon Power, will create demand for locally manufactured power systems, including solar panels, batteries and hydrogen electrolyzers, creating hundreds of local manufacturing jobs and training opportunities within Western Australia.

The Government is further supporting this recommendation through the Energy Industry Development team at EPWA, who are working with the mining industry and local manufacturers to increase the uptake of locally-supplied renewable energy solutions for application in remote mine sites and small regional communities.

Stand-alone Power Systems are being deployed across Western Australian customers, driving demand for locally manufactured equipment and upskilling members of the community to install, manage and maintain microgrid infrastructure. EPWA's Energy Industry Development team is working closely with industry to promote uptake of locally supplied renewable energy solutions.

Complete

3.20 Recommendation 20 – Commercialisation strategy

Recommendation 20: *The relevant Minister develop a strategy to commercialise and maximise the value delivered to Western Australia arising from the intellectual property and microgrid delivery capability developed in the Government Trading Enterprises. The commercialisation strategy should identify target interstate and overseas markets, particularly in India and South-East Asia, and specifically consider ways to partner with the private sector to deliver scale and generate additional growth opportunities.*

- Boundary Power, a joint project between Horizon Power and Ampcontrol, was launched by the State Government in 2021.
- This venture is capitalising on Horizon Power's extensive expertise in deploying microgrid solutions.
- In December 2022, Boundary Power announced its first onsite deployment of its SPS technology outside of Western Australia.

Progress of actions arising from recommendation

This recommendation has been addressed through the formation of Boundary Power.

In February 2021, the McGowan Government launched Boundary Power - a joint venture between Horizon Power and leading power and control solutions specialist Ampcontrol. The partnership brings together significant SPS expertise and marks one of the ways Government is working with industry to capitalise on this emerging market. In December 2022, Boundary Power announced its first onsite deployment of its SPS outside of Western Australia.

The Western Australian Government is working closely with the Commonwealth Government on its National Battery Strategy which is looking to highlight and showcase Western Australia's SPS deployment and target numbers including the potential to export SPS skills.

Boundary Power, a joint venture between Horizon Power and Ampcontrol, is leveraging local expertise to offer microgrid solutions outside of Western Australia.

Complete

3.21 Recommendation 21 – Investigate establishing a Centre of Excellence for Advanced Microgrids in Western Australia

Recommendation 21: *The relevant Minister investigate the establishment of a Centre of Excellence for Advanced Microgrids in Western Australia, to coordinate research and development, intellectual property commercialisation, and the development of new skills.*

- The Australian Microgrid Centre of Excellence (AMCoE) was established in 2021 provides incubator and business development services to microgrid and other alternative energy providers.
- The State Government continues to support the AMCoE and engage with its stakeholders to identify opportunities for collaboration.

Progress of actions arising from recommendation

This recommendation has been met, as the Australian Microgrid Centre of Excellence (AMCoE) was established in 2021 and is headquartered in Perth.

The AMCoE is a not-for-profit organisation whose members comprise energy businesses, academia and other entities with related interests, such as Magellan Power, General MicroGrids, InfraNomics, Lithium Valley, Regional Development Australia, RACE for 2030 Cooperative Research Centre, South Metropolitan TAFE, Murdoch University and Edith Cowan University.

In achieving this recommendation, the Western Australian Government is undertaking ongoing engagement with AMCoE to understand how it can assist with its vision to provide business development services to new companies and facilitate cooperation activities for existing companies.

The establishment of a local Australian Microgrid Centre of Excellence provides an opportunity for emerging microgrid providers to collaborate with academia and existing industry and on their pathway to commercialisation.

Complete

4. Conclusion

These matters are part of an ongoing reform program of the energy sector as the sector transitions from centralised fossil-fuel based electricity generation to decentralised high-renewable electricity generation, and the range of technical, regulatory and consumer issues this transition presents.

Progress on these recommendations are continuing, with the DER Roadmap guiding ongoing improvements to policies, regulations, technical requirements and consumer protections which will support the integration of DER into electricity system into the future.

The Government has demonstrated its commitment to achieving the recommendations made by the Inquiry, and continues to undertake further work to maximise the opportunities that are presented by microgrids and related technologies for the State.



Energy Policy WA

Level 1, 66 St Georges Terrace, Perth WA 6000

Locked Bag 100, East Perth WA 6892

Telephone: 08 6551 4600

www.energy.wa.gov.au

