Department of Energy and Economic Diversification

GOVERNMENT OF WESTERN AUSTRALIA

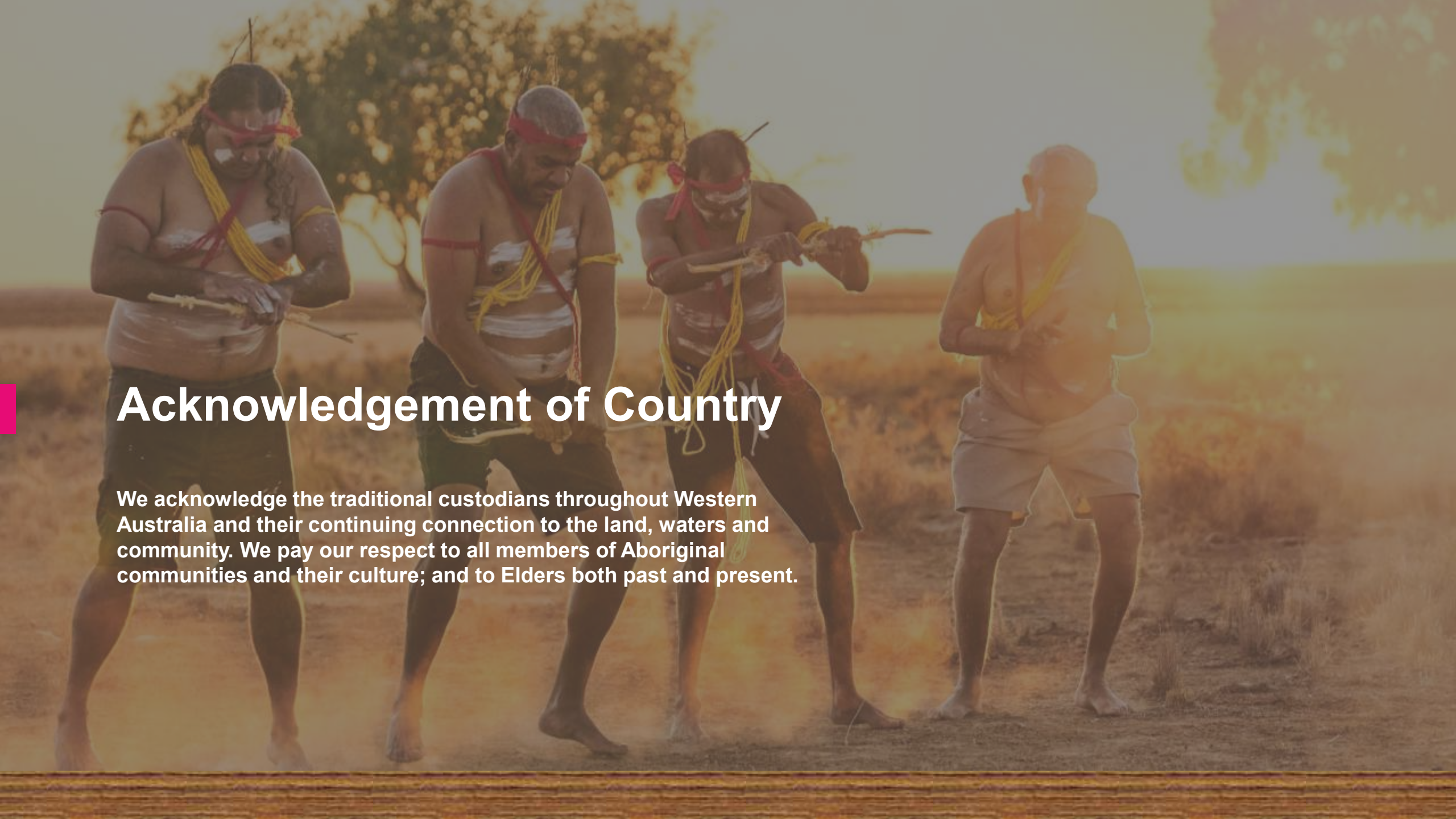
Energy Policy WA

WA Residential Battery Scheme Industry Forum

25 September 2025

9:00am – 10:30am

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



Acknowledgement of Country

We acknowledge the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respect to all members of Aboriginal communities and their culture; and to Elders both past and present.

Agenda

Welcome and acknowledgement of Country	**Jai Thomas**
Industry Update	**Jai Thomas**
Safety Compliance Update - Building and Energy	**Matthew Peacock**
Scheme Administrator Update - Plenti	**Brian Phelan**
GTE Updates - Synergy - Horizon Power	**Jamie Pickles** **James Elliott**
Panel Q&A	**Facilitated by Jai Thomas**
Close	

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

GOVERNMENT OF WESTERN AUSTRALIA

Industry Update

Safety Compliance
Consumer Protection
Interoperability - why whole of site compliance is important

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Safety Compliance Update

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Building and Energy Western Australia

Building and Energy

Battery Scheme Compliance

Battery Scheme Compliance

- **AS/NZS 5139:2019 – Electrical installations – Safety of battery systems for use with power conversion equipment**
- **AS/NZS 3000:2018 – Electrical Installations (Wiring Rules)**
- **AS/NZS 4777.1:2024 – Grid connection of energy systems via inverters**
- Western Australian Service and Installation Requirements 2021 (WASIR) - Western and Horizon Power embedded generation installation requirements
- WAER – WA Electrical Requirements
- Best Practice Guide for Battery Storage Equipment – Electrical Safety Requirements

AS/NZS 5139 KEY CONSIDERATIONS

- LOCATION OF BESS REQUIRES A RISK ASSESSMENT (DO NOT INSTALL IN HABITABLE AREAS)
- FOLLOW MANUFACTURERS INSTRUCTIONS
- ENSURE CORRECT RATINGS OF OVERCURRENT PROTECTION
- ADEQUATE SIGNAGE
- SUITABLE VENTILLATION
- STAY CLEAR OF COMBUSTABLE MATERIALS

AS/NZS 3000 KEY CONSIDERATIONS

- ALL COMPONENTS OF THE INSTALLATION MUST BE PROPERLY SELECTED AND INSTALLED
- WIRING SYSTEMS AND CABLES ADEQUATELY PROTECTED AGAINST EXTERNAL INFLUENCES
- PROECTION DEVICE LOCATED AS CLOSE AS PRACTICABLE TO OUTPUT TERMINALS OF THE BATTERY
- CABLING MUST BE DOUBLE INSULATED AND SIZED TO COMPLY WITH AS/NZS 3008
- TESTING, TESTING, TESTING and MORE TESTING
- P.S DON’T FORGET TO TEST

AS/NZS 4777.1 KEY CONSIDERATIONS

- INVERTER LOCATION AND INSTALALTION REQUIREMENTS
- INVERTER ENERGY SYSTEMS (IES) CONNECTION REQUIREMENTS
- CONTROL AND PROTECTION
- CONNECTION OF ENERGY SOURCES TO INVERTER
- TESTS SET OUT IN SECTION 8

Department of **Energy, Mines, Industry Regulation and Safety**

GOVERNMENT OF WESTERN AUSTRALIA

Building and Energy Western Australia

Inspection Program

Inspection Program

To ensure the safety of consumers electrical installations, network operators such as Western Power and Horizon Power maintain a system of inspection.

Inspections are conducted by designated electrical inspectors who issue rectification orders if defects are found during their inspections.

Defects are categorised in the following three ways;

- **Dangerous defect**
- **At Risk defect**
- **Not to standard defect**

Defect Examples

Dangerous Defects

- Live exposed parts can be accessed without the use of a tool
- Incorrect earthing arrangements
- Open circuit neutral
- Circuit protection not installed
- BESS not having a minimum IP protection level of IPX2
- Location of BESS – (i.e explosive atmospheres, ventilation)
- Equipment not installed as per manufacturers instructions

At Risk Defects

- No or inadequate labelling
- Failure to install isolator
- Incorrect wiring or incorrect sizing of DC isolator

Inspection Program Stats

From the first 218 inspections undertaken the following was identified:

- 67 installations found to be compliant
- 144 installations identified as being non-compliant
- 7 installations found to have serious defects
- 151 Inspectors orders issued with a total of 494 defects identified

Inspection Defect Examples

The old electrical tape used as a label trick

Inspection Defect Examples

BESS Installed next to a window

Inspection Defect Examples

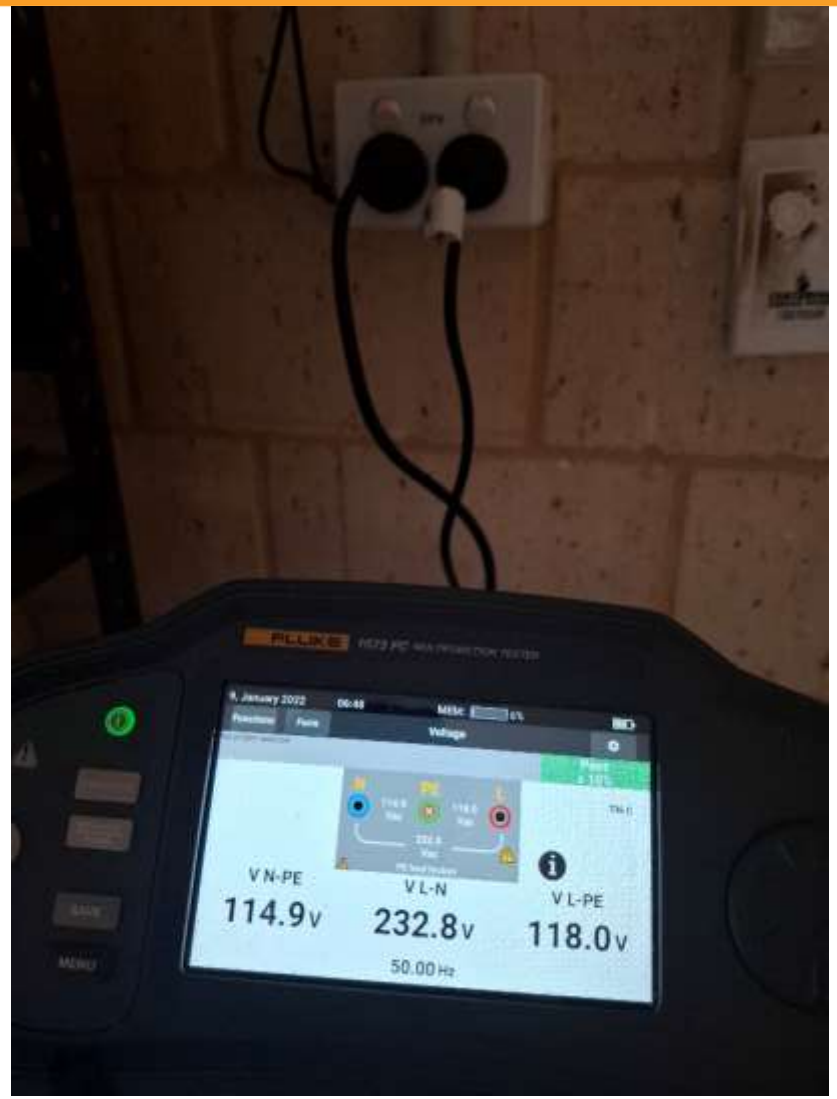
Inadequate clearance around BESS

Inspection Defect Examples

Washing line sun cover attempt

Inspection Defect Examples

Voltage recorded between neutral and earth



Critical Defects Identified

Two types of dangerous defects have been identified during inspection:

- Parallel MEN connections made by the inverter
- Lack of neutral continuity between the alternative supply port and installation MEN

Grid Connected Hybrid Inverters

Two types of configuration available:

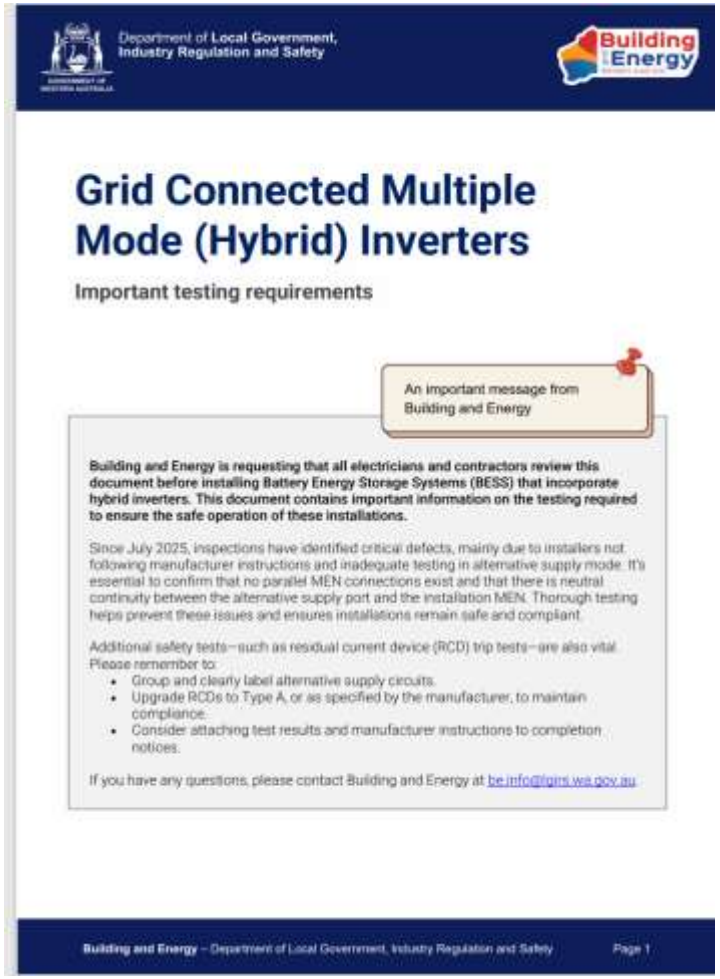
- Combined supplementary and alternative supply port inverter (requires an external grid disconnection device to operate in alternative supply mode)
- Separate supplementary and alternative supply ports inverter (internal inverter changeover switching from the grid supply to alternative supply operation)

Testing Grid Connected Hybrid Inverters

Testing requirements to ensure safe operation of Hybrid Inverters

1. Double check installed as per manufacturers instructions
2. Perform tests as required in AS/NZS 3000
3. Perform tests as required by AS/NZS 4777.1 section 8.3.3
4. Test in accordance with AS/NZS 4777.1 sections 8.3.3.2 and 8.3.3.3 (current measurements) to prove no parallel MEN or N-E connections made by the inverter.
5. Test in back up mode in accordance with AS/NZS 4777.1 section 8.3.3.4 to prove that the neutral conductor between the main neutral bar and alternative supply neutral are connected

Fact Sheet about to be issued



Department of **Local Government, Industry Regulation and Safety**

Building & Energy

Grid Connected Multiple Mode (Hybrid) Inverters

Important testing requirements

An important message from Building and Energy

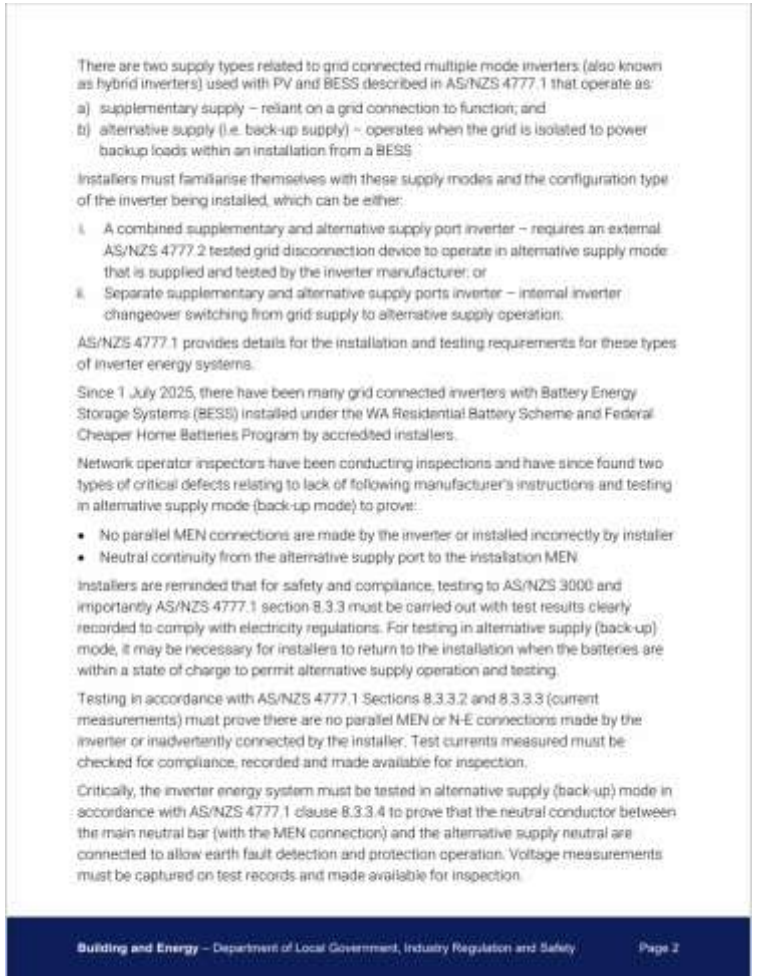
Building and Energy is requesting that all electricians and contractors review this document before installing Battery Energy Storage Systems (BESS) that incorporate hybrid inverters. This document contains important information on the testing required to ensure the safe operation of these installations.

Since July 2025, inspections have identified critical defects, mainly due to installers not following manufacturer instructions and inadequate testing in alternative supply mode. It's essential to confirm that no parallel MEN connections exist and that there is neutral continuity between the alternative supply port and the installation MEN. Thorough testing helps prevent these issues and ensures installations remain safe and compliant.

Additional safety tests—such as residual current device (RCD) trip tests—are also vital. Please remember to:

- Group and clearly label alternative supply circuits.
- Upgrade RCDs to Type A, or as specified by the manufacturer, to maintain compliance.
- Consider attaching test results and manufacturer instructions to completion notices.

If you have any questions, please contact Building and Energy at be.info@lgirs.wa.gov.au



There are two supply types related to grid connected multiple mode inverters (also known as hybrid inverters) used with PV and BESS described in AS/NZS 4777.1 that operate as:

a) supplementary supply – reliant on a grid connection to function; and
b) alternative supply (i.e. back-up supply) – operates when the grid is isolated to power backup loads within an installation from a BESS.

Installers must familiarise themselves with these supply modes and the configuration type of the inverter being installed, which can be either:

i. A combined supplementary and alternative supply port inverter – requires an external AS/NZS 4777.2 tested grid disconnection device to operate in alternative supply mode that is supplied and tested by the inverter manufacturer; or
ii. Separate supplementary and alternative supply ports inverter – internal inverter changeover switching from grid supply to alternative supply operation.

AS/NZS 4777.1 provides details for the installation and testing requirements for these types of inverter energy systems.

Since 1 July 2025, there have been many grid connected inverters with Battery Energy Storage Systems (BESS) installed under the WA Residential Battery Scheme and Federal Cheaper Home Batteries Program by accredited installers.

Network operator inspectors have been conducting inspections and have since found two types of critical defects relating to lack of following manufacturer's instructions and testing in alternative supply mode (back-up mode) to prove:

- No parallel MEN connections are made by the inverter or installed incorrectly by installer
- Neutral continuity from the alternative supply port to the installation MEN

Installers are reminded that for safety and compliance, testing to AS/NZS 3000 and importantly AS/NZS 4777.1 section 8.3.3 must be carried out with test results clearly recorded to comply with electricity regulations. For testing in alternative supply (back-up) mode, it may be necessary for installers to return to the installation when the batteries are within a state of charge to permit alternative supply operation and testing.

Testing in accordance with AS/NZS 4777.1 Sections 8.3.3.2 and 8.3.3.3 (current measurements) must prove there are no parallel MEN or N-E connections made by the inverter or inadvertently connected by the installer. Test currents measured must be checked for compliance, recorded and made available for inspection.

Critically, the inverter energy system must be tested in alternative supply (back-up) mode in accordance with AS/NZS 4777.1 clause 8.3.3.4 to prove that the neutral conductor between the main neutral bar (with the MEN connection) and the alternative supply neutral are connected to allow earth fault detection and protection operation. Voltage measurements must be captured on test records and made available for inspection.

Additionally, in alternative supply (back-up) mode the following tests must be performed:

- Testing of final and subcircuits shall be done in accordance with all mandatory tests required by AS/NZS3000 section 8. Trip testing of RCDs using an RCD testing instrument or meter from within the installation. Push button testing is insufficient for this purpose.

Installers should attach test results and manufacturers installation/operating instructions to the Notice of Completion to facilitate inspections.

It is important to read and understand manufacturer's installation and operation instructions including Australian specific wiring layouts. If in doubt, consult the manufacturer or refer to the relevant Australian Standard to determine safety compliance requirements.

Installers are also reminded of AS/NZS 4777.1 requirements to re-arrange, group and label all alternative supply (back-up) circuits or install an alternative supply switchboard. In addition, it is a requirement that residual current devices (RCDs) for these alternative supply final sub-circuits are upgraded to Type A or to the type specified by the inverter manufacturer.

Testing of Grid Connected Multiple Mode Inverters as described in this document and AS/NZS4777.1 may involve work on or near live energised parts. Any such work must be carried out in accordance with Building and Energy's Code of Practice for Persons Working on or Near Energised Electrical Installations, which can be found at www.lgirs.wa.gov.au.

Department of Energy, Mines, Industry Regulation and Safety
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GOVERNMENT OF WESTERN AUSTRALIA

Scheme Administrator Update

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

Plenti

WA Residential Battery Scheme – Plenti Update

September 2025

1. Scheme Update
2. Administration Overview
3. Scheme Improvements
4. Industry Reminders

1. Scheme Update

Overall the scheme's momentum has rapidly accelerated since July 1

- ✅ 190 vendors now accredited
- 📥 10,000 applications submitted (800 per week)
- 💰 60% of all completed rebates paid
- 💵 55% of loans settled
- 🔋 16 mWh (approx.) of battery installations
- #️⃣ 600 rebates paid weekly. 200% increase Week on Week.

2. Plenti's Role as Scheme Administrator

Plenti

Plenti role as Scheme Administrator is to:

Accreditation of Vendor Applicants

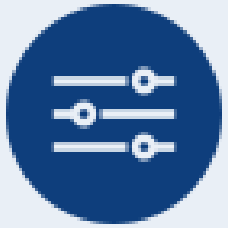
Assessment of scheme eligibility for rebates and loans

Finance

Plenti's Role as Scheme Administrator

Plenti role as Scheme Administrator **does not include**:

Provide installation and grid expertise or Supported Solution Recommendations



Setting the rules

Advising customers on suitability of a system

Application Eligibility Criteria

Plenti

The following loan and rebate criteria must be met in order for a Loan or Rebate application to be **conditionally approved**

Rebates

Rebate Purpose: Installation of batteries for WA households for Australian residents 18 years and older.

Battery Size: Battery rebates apply from 5 kWh. Rebates are priced $/kWh of usable capacity up to 10 kWh (Synergy - $1,300 & Horizon Power $,3800).

Rebate Scope: Rebates will only be applicable for newly installed, CEC approved battery storage. This includes stand alone battery installations and any additional modular battery storage upgrades completed within the scheme. All inverters and gateways must also be on the Synergy and Horizon Supported Solution List.

Low-Income Zero-Interest Loan

Loan Purpose: Installation of batteries where household pre-tax income is less than $210,000 AUD, verified via the applicants Income Tax Return, Pensioner Statement, Centrelink Statement, Superannuation statement or DVA.

Loan Structure: Amount between $2,001 - $10,000 on a term between 3-10 years with no upfront or ongoing (monthly) fees.

Loan eligibility: Finance of Battery Energy Systems including the Battery, PV, Solar Inverters and labour costs. The loan amount, plus the Rebate amount, must not exceed the invoice-stated purchase price

Responsible Lending: As a responsible lender, all Loan applications must undergo a credit assessment to confirm the applicant's identity and credit bureau file and conduct a servicing assessment of the applicant's income against ongoing obligations.

Verification Eligibility Criteria

The following loan and rebate criteria must be met in order for an Loan or Rebate application to be settled

1 Eligible Goods

- ✓ All goods must be on the State and (Synergy & Horizon) eligible equipment lists and be CEC approved.
- ✓ All installations must be connected to an approved VPP and verified by Synergy or Horizon Power
- ✓ All installers must have SAA Grid Connected Battery Systems accreditation
- ✓ Application goods match invoice goods and approval to operate goods (including pricing and capacities).

2 Property

- ✓ Application address matches Approval to Operate and invoice.

3 Applicant

- ✓ A permanent resident of Australia
- ✓ 18 years of age and over
- ✓ A Synergy or Horizon Power customer

Post-Install Settlement Documentation

Plenti

Synergy

Installation Invoice (Provided by Installer)

Western Power Authority to operate letter (dated)

Horizon Power

Installation Invoice (Provided by Installer)

Post-NOC Horizon Power Confirmation Receipt (Provided by Installer)

3. Scheme Challenges and Improvements

Plenti and the Scheme's partners are continuously learning, iteratively making improvements to the scheme's operations and working to train the industry on how to seamlessly process Scheme rebates and loans.

Challenges	Improvements
• WA Rebate application portal and form usability.	• Improvements to the Scheme application platform (ID, application fields)
• Applicant email messaging and the usability of links in the journey.	• Revised language throughout all emails and applicant forms to improve user experience and reduce emails being caught in Spam.
• Initial scheme policy did not include scope for multiple batteries or modular system upgrades.	• Updates to both scheme policy, portal and SSL to support multiple batteries, modular batteries and gateway devices.
• Processing of an influx of Vendor accreditation applications	• Re-built website to support additional information for all parties and faster accreditation status updates.
• Volume based delays on support lines.	• Additional support staff hired to reduce support and processing wait times.
• Providing accurate, timely information on the status of battery installations and time to Rebate and Loan payouts.	• Improvements to Plenti and Synergy Verification processes and pending status information.

4. Industry Reminders

Plenti and the Scheme's partners are continuously learning, iteratively making improvements to the scheme's operations and working to train the industry on how to seamlessly process Scheme rebates and loans.

✅**Application Information -** All customer information is entered correctly and reflective of the applicant's ID.

✅**OEM Information -** All OEM information in the application form is reflected in the invoice and Approval to Operate letter, including series' names, capacities and pricing

✅**Approval to Operate -** The correctly staged Approval to Operate letter is uploaded to the Plenti Platform with an email timestamp shown.

✅**Finance Settlement -** Where a loan is also being settled in addition to a rebate, please complete the Plenti Loan verification steps.

❌ **Non-Compliant installations -** Installations that are non-compliant or include non-compliant goods will not be accepted and will be identified during GTE testing.

❌**False Information -** If your company or subcontracted installers are participating in false marketing the Scheme administrator reserves the right to remove the Vendor from the scheme.

Where to go for more information:

wabatteryscheme@plenti.com.au

www.plenti.com.au/wa-residential-battery-scheme/

P: 1300 931 104

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Energy Policy WA

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GTE Updates

- Synergy
- Horizon Power

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

WA Residential Battery Scheme Industry Forum

Jamie Pickles
Head of DER and Engineering

Current state of play

WA Residential Battery Scheme

From 1 July, eligible residential customers have access to financial incentives to encourage more households to invest in household energy assets.

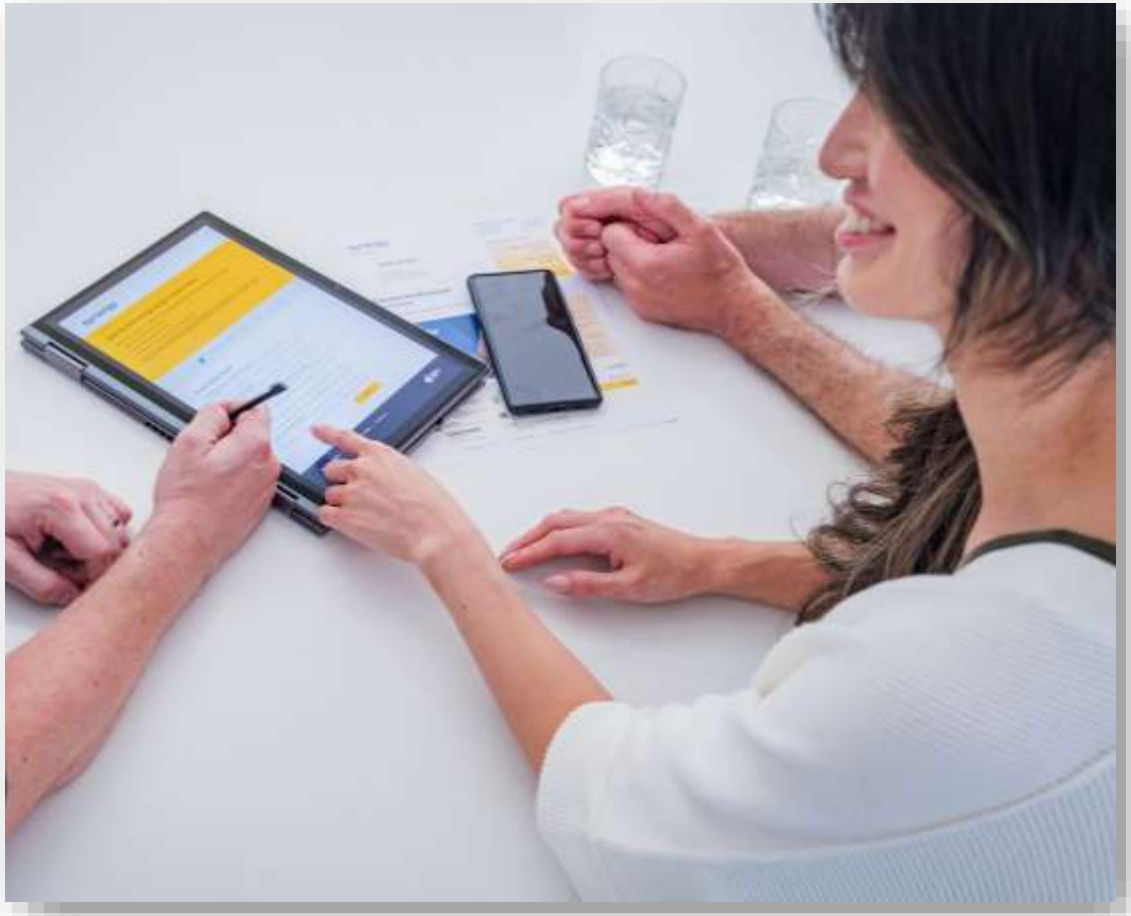
To be eligible for the WA Government financial incentives, households will be required to participate in a Virtual Power Plan (VPP), offered by several parties using a compatible battery.

The eligibility requirements are administered by the Scheme Administrator.

Battery Rewards

At Synergy, we're supporting our customers to make the most of these new incentives.

From 1 July, we have new VPP programs to help customers get the most out of the WA Government backed initiatives and help keep WA's energy system more reliable for all.



How Synergy Battery Rewards works

How it works

Event is triggered

This occurs when electricity demand exceeds supply.

(E.g. hot sunny afternoons)

Standby window*

A signal is sent to your battery in preperation for an activation event. During this time we may hold or charge your battery. Energy offset credits apply.

*Approximately 2 hours prior to an activation event

Activation event+

Your battery releases unused energy after your household usage to assist with peak demand, helping keep the energy system more reliable for everyone.

+No more than 30 activation events a year.

Your rewards#

You receive energy offset and activation credits for supporting the energy system.

#Depending on your level of participation.

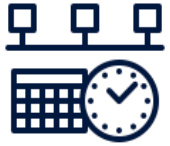
Synergy Battery Rewards

Battery Rewards is designed for new eligible battery customers to make the most of their household battery, while accessing the WA Residential Battery Scheme.

Why Synergy Battery Rewards?

Earn activation credits – *70 cents per unit* *

Earn 70 cents for every unit (kWh) of electricity exported to the energy system during an activation event. For comparison, our customers on a standard Synergy A1 tariff usually pay 32.3719c per unit kWh * of electricity they use. Customers could earn credits up to the maximum capacity of their battery during an activation event.



Capped battery activation events – *30 per annum and maximum 1 per day*

Under Battery Rewards, Synergy would only manage a customer's battery for a maximum of 30 activation events per year, with each event being a maximum of 6 hours and limited to one charge/discharge cycle per day. All other times, the customer's battery remains available for their own use and benefit.

Receive energy offset credits during activation standby windows

Customers will receive energy offset credits ** to cover energy costs during the activation standby window. These credits** are designed to offset any energy usage charges that a customer might use from the energy system (i.e. import from the network) while Synergy is managing their battery during a standby window.

* GST inclusive. Price subject to change from time to time

** capped at a maximum of the system's installed battery capacity (kWh).

Battery Rewards - Terms and Conditions

We've received important feedback from our customers and industry partners regarding our Battery Rewards VPP Terms and Conditions.

- Customers have expressed concern regarding the 'survival rights' and its relevance to VPPs and prompted ambiguity on how and when Synergy would control customer's energy assets.

What are "survival rights"?

- Contractual rights and obligations that continue after the two-year initial period, for use in limited circumstances.
- Synergy will only exercise these "survival rights" in prescribed circumstances where Synergy is legally required to take action to protect the safety and security of the electricity system. These are not used for Synergy's benefit.

We've listened, and we're making the changes below...

Trust

We are listening to customer feedback and proactively working to simplify our VPP products and information to help our customers make informed, value-based decisions.

Transparency

We're working to simplify our language to provide greater customer transparency, including clarity on what rare situations Synergy is legally required to operate an asset as a survival right.

Clarity

We are committed to sharing and updating FAQs for our customers, to provide on-going education and support regarding the Rebate Scheme, Virtual Power Plants (VPPs), and our Battery Rewards product.

Optimising support for retailers and installers

Dedicated support hotline
Installers can call for troubleshooting during installation and onboarding of assets to meet rebate scheme criteria.

Weekly retailer updates
Retailers receive a list of installations requiring action, with clear steps to resolve issues.

Retailer feedback
Engaging with retailers to understand challenges in meeting rebate scheme criteria and improve processes.

Case manager support
Retailers are offered personalised support to resolve issues via a dedicated case manager.

Installer test tool improvements
- Continuous upgrades for better performance.
- Integration tests only after required steps are completed in Technology Provider's system.
- New refresh button for easier test result visibility.
- Installers can now edit assets as needed post-test.

Industry resources

Supporting household electrification and the ongoing sale and installation of DER is a whole of industry effort.

Synergy, as part of its role to assist the Scheme Administrator, will work collaboratively with all parts of industry to realise the benefits of DER integration.

To support your readiness, Synergy will continue to share updates as more information becomes available.

Ensure you visit our industry support page for updates, frequently asked questions and additional resources.

For updates, visit
https://www.synergy.net.au/Our-energy/Household-energy-assets/DER-Industry-Resources/Equipment-retailers-and-installers

Navigating whole-of-site compliance

As part of the Scheme Administrator requirements, where new DER is being added to a site with existing DER, all systems, whether new or existing, must meet Synergy's DER Functionality Requirements and be listed on Synergy's Supported Solutions List (SSL).

As part of system design and pre-sales activities, DER retailers and installers must ensure that both new and existing systems can meet the requirements and achieve whole of site compliance.

Installers can identify compatible solutions through their listing on the SSL and by consulting the Technology Provider.

Navigating whole-of-site compliance

For sites with existing PV-only inverters wishing to add a battery, there are three broad options:

Replace the existing inverter with a hybrid inverter

- Suitable when no compatible gateway is available
- May be the simplest solution

Add an AC-coupled battery (with inverter) and a gateway device compatible with both the existing and new inverters

- Enables the existing inverter to be retained, reducing waste
- May be the most cost-effective solution
- May support optimization of other appliances like hot water systems and EV chargers

Where available, add an AC-coupled battery (with inverter) that is interoperable with the existing inverter

- Possible in some cases when adding a battery system from the same brand, however, may not be a broadly available option

*Where an inverter is listed on the SSL but a compatible whole-of-site compliant solution cannot be found, contact Synergy for further advice.

Thank you

synergy

Supporting the WA Residential Battery Scheme

Industry Forum #2

25 September 2025

HORIZON POWER

Horizon Power at a glance

2.3M km²

Total **service area** in regional and remote WA

~38,000

Residential accounts*

~9,000

Business accounts*

53,694

Customer connection points to network*

170

Remote Communities around WA

8,410km

Overhead and underground transmission and distribution lines*

79

Standalone Power Systems (**SPS**) installed*

7

Energy types – gas, diesel and renewable (wind, solar, hydro, battery, hydrogen)

25

Battery Energy Storage Systems (**BESS**)*

24.1 GWh

Renewable energy purchased from customers*

14.23%

Energy from **centralised renewable energy** sources

*based on Annual Report 2023/24

Connecting solar & batteries

Horizon Power's Distributed Energy Resource Management System (DERMS) enables the connection of customer energy assets and ensures the stability of our power systems

In 2024, we launched Smart Connect Solar across our regional service area to enable the connection of more customer renewable energy systems and ensure the stability of our power systems.

The project introduced:

- Eligibility T&Cs related to energy management
- A Compatible Inverters List
- Updates to application, connection and commissioning processes e.g. new requirements related to Secure Gateway Devices and internet connectivity

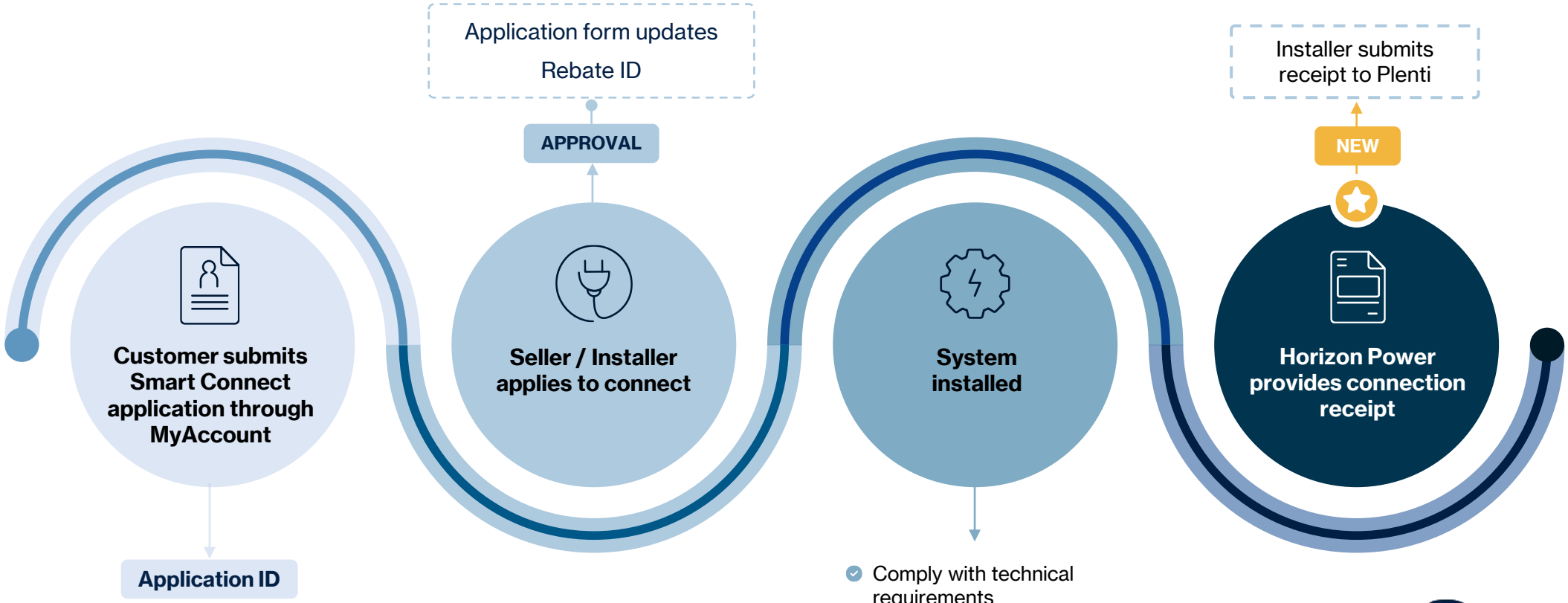
Supporting the Residential Battery Scheme

Horizon Power has updated its Smart Connect processes to support the Residential Battery Scheme

What changed?

- Enhanced customer solar and battery savings calculator
- Updates to Compatible Inverters List
- Updates to Technical Requirements
- New Virtual Power Plant (VPP) product for customers, known to our customers as Community Wave

Connecting a renewable energy system in regional WA



- Comply with technical requirements
- Submit Notice of Completion
- Customer Smart Connect application complete

HORIZON POWER

Where to find more information

Connecting solar & batteries in regional WA	Horizon Power www.horizonpower.com.au/solar
Scheme Administration	Plenti www.plenti.com.au
Accreditation	Solar Accreditation Australia – Get Accredited Approved batteries | Clean Energy Council Horizon Power Smart Connect Solar - Learn LAB

Contact us

www.horizonpower.com.au

Department of Energy, Mines, Industry Regulation and Safety
Energy Policy WA

GOVERNMENT OF WESTERN AUSTRALIA

Panel Session – Q & A

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

Panel Session - Q&A

- Jai Thomas : Coordinator of Energy
- Matthew Peacock : Building and Energy
- Brian Phelan : Plenti
- Jamie Pickles : Synergy
- James Elliott : Horizon Power
- Clayton Vander Schaaf : Western Power

Your questions are welcome in the Teams Q&A

Thank you