Changes to Horizon Power's Low Voltage Embedded Generation Connection Technical Requirements

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Acknowledgement of country

Ngala kaaditj Whadjuk Noongar moort keyen kaadak nidja boodja.

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We respectfully acknowledge Whadjuk Nyungar people as the original custodians of the lands where our Bentley office is located and extend that respect to all First Nations people across our service area.

Agenda

1. Horizon Power Introduction
2. Updated Technical Requirements
3. Building Customer’s Confidence
4. Questions

Questions

- Use the Q&A panel to submit your question at anytime during the presentation
- Ask your question during the Q&A session at the end

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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

Horizon Power's Purpose is to deliver clean energy solutions for regional growth and vibrant communities

Our Guiding Principles

Community involvement

Listening, creating, and delivering together.

Aboriginal and Torres Strait Islander commitment

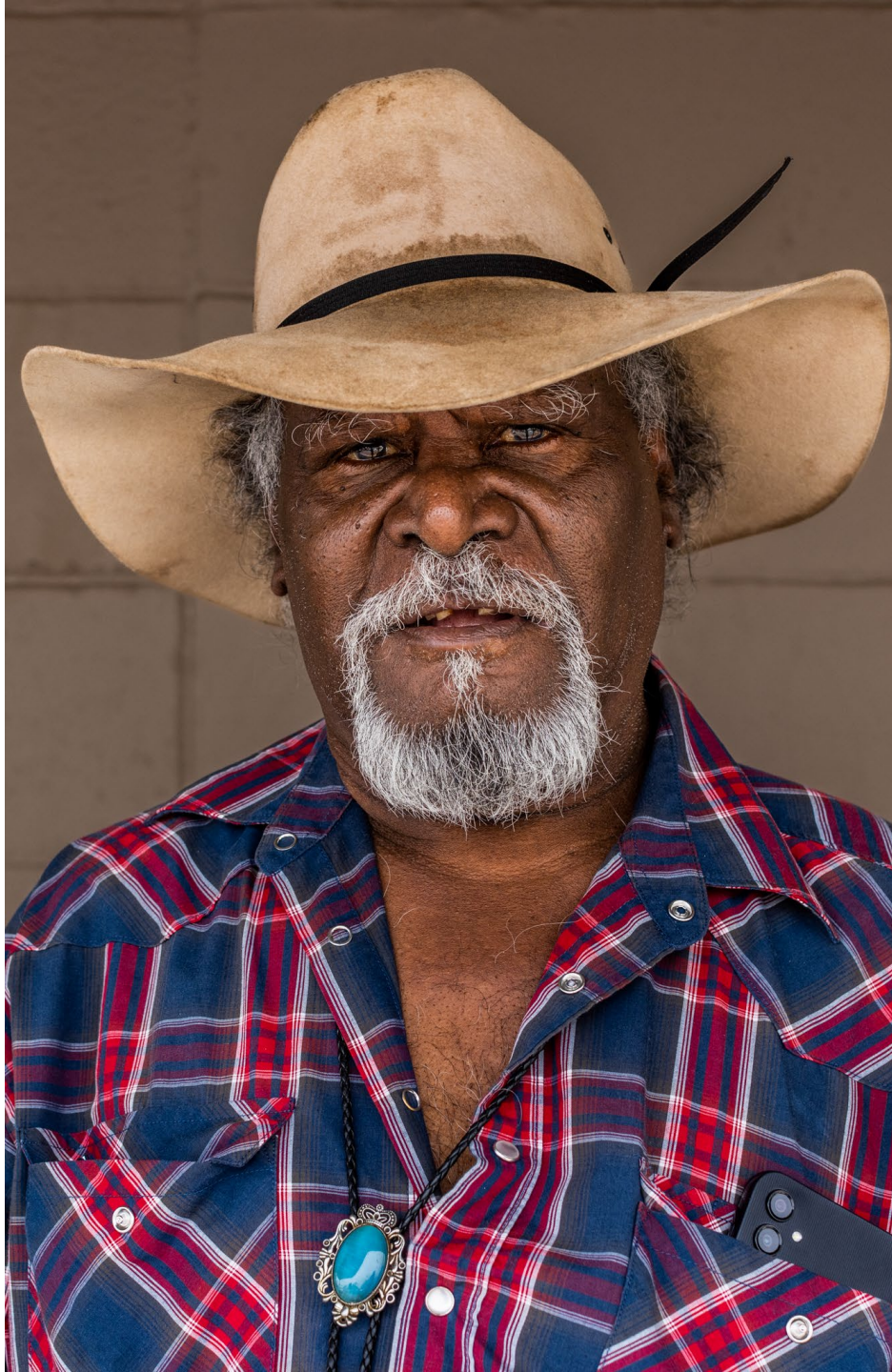
Working in partnership for meaningful, long term positive impact and mutual benefit

Cleaner, greener

Improving our shared environment.

Regions first

Preference towards local people, goods and services.



We’re committed to making it easier for:

More households and businesses to access the benefits of solar and battery

Our evolving Distributed Energy Management System (DERMS) has helped to deliver Horizon Power’s strategic goal of zero refusals for solar connections:

- 2010 – Hosting capacity introduced
- 2016 - Carnarvon DER trials
- 2018 – SmartSun Broome VPP trial
- 2019 - Onslow DERMS trial
- 2024 - Smart Connect Solar
- 2025 – Community Wave (VPP)

We heard you and we've made some changes….

Updated Low Voltage EG Technical Requirements

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Simplified Renewable Smoothing Requirements

- Renewable Energy Smoothing is required for all LV EG Systems (except the North West Interconnected System)
- Solar Smoothing Services are available in Broome and Derby *(other areas coming soon!)*
- The simplified technical requirements for Renewable Energy Smoothing are:
  - Install a Battery;
  - Battery kW and kVA capacity >= 70% of the AC capacity of the solar PV array;
  - Battery usable kWh capacity >= 20% of the Battery kW capacity;
  - Must be programmed with a standard self-consumption algorithm;
  - Self-consumption algorithm response time <= 15 seconds (“soft limit” control);
  - Must comply with Energy Management Requirements;
  - Must comply with the AS4777.2 region ‘C’ settings; and
  - Frequency-Watt response time shall be <= 500 milliseconds.
- Removed specific testing requirements for Renewable Smoothing

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Options for connecting the SGD for Low Voltage EG Installations

- There are now two options for connecting the LV EG System to the Secure Gateway Device (SGD):

  - **SGD Connection Option 1** ***(existing option)*** – provide a ***single control interface*** (the LV EG control system) between the LV EG connection and the SGD, which aggregates the monitoring and control parameters of all inverters comprising the LV EG connection. Configure the LV EG control system to provide suitable control and monitoring inputs to Horizon Power's SGD. Horizon Power requires that the LV EG connection control system has Modbus TCP protocol capabilities, and the LV EG connection control system must comply with the Modbus mapping table in the Technical Requirements.

  Or:

  - **SGD Connection Option 2** ***(new option)*** – for LV EG connections comprising inverters which are directly compatible with the SGD and may be connected to a single SGD, Horizon Power will allow ***direct connection of the SGD to those inverters*** in lieu of provision of a dedicated control interface (the LV EG Control System) in accordance with the Technical Requirements. For the latest list of compatible inverters or enquiries in relation to compatible inverters please refer to Horizon Power's website at www.horizonpower.com.au/contractors-installers/connect-solar-battery-ev/. Horizon Power will only provide one SGD per site.

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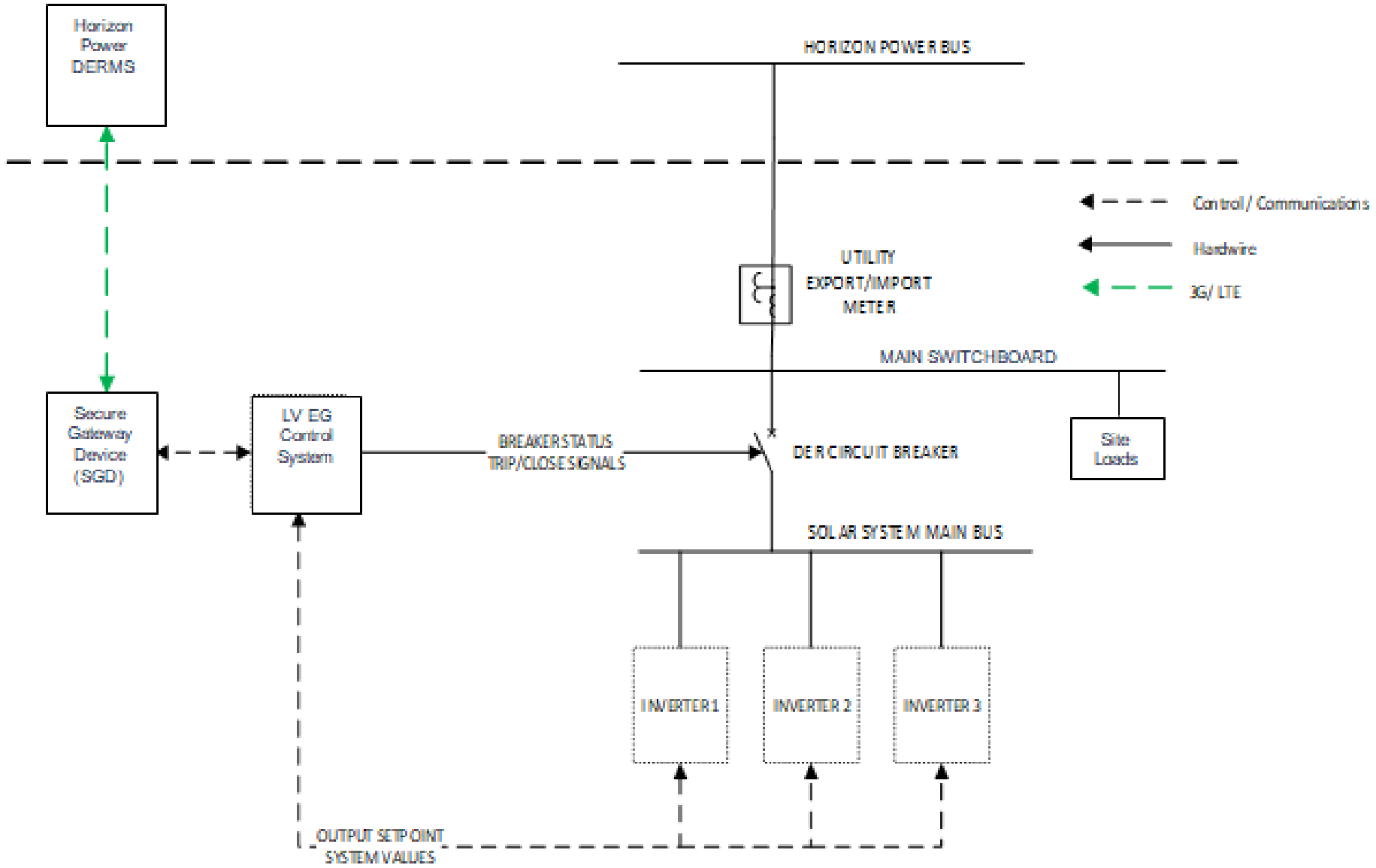
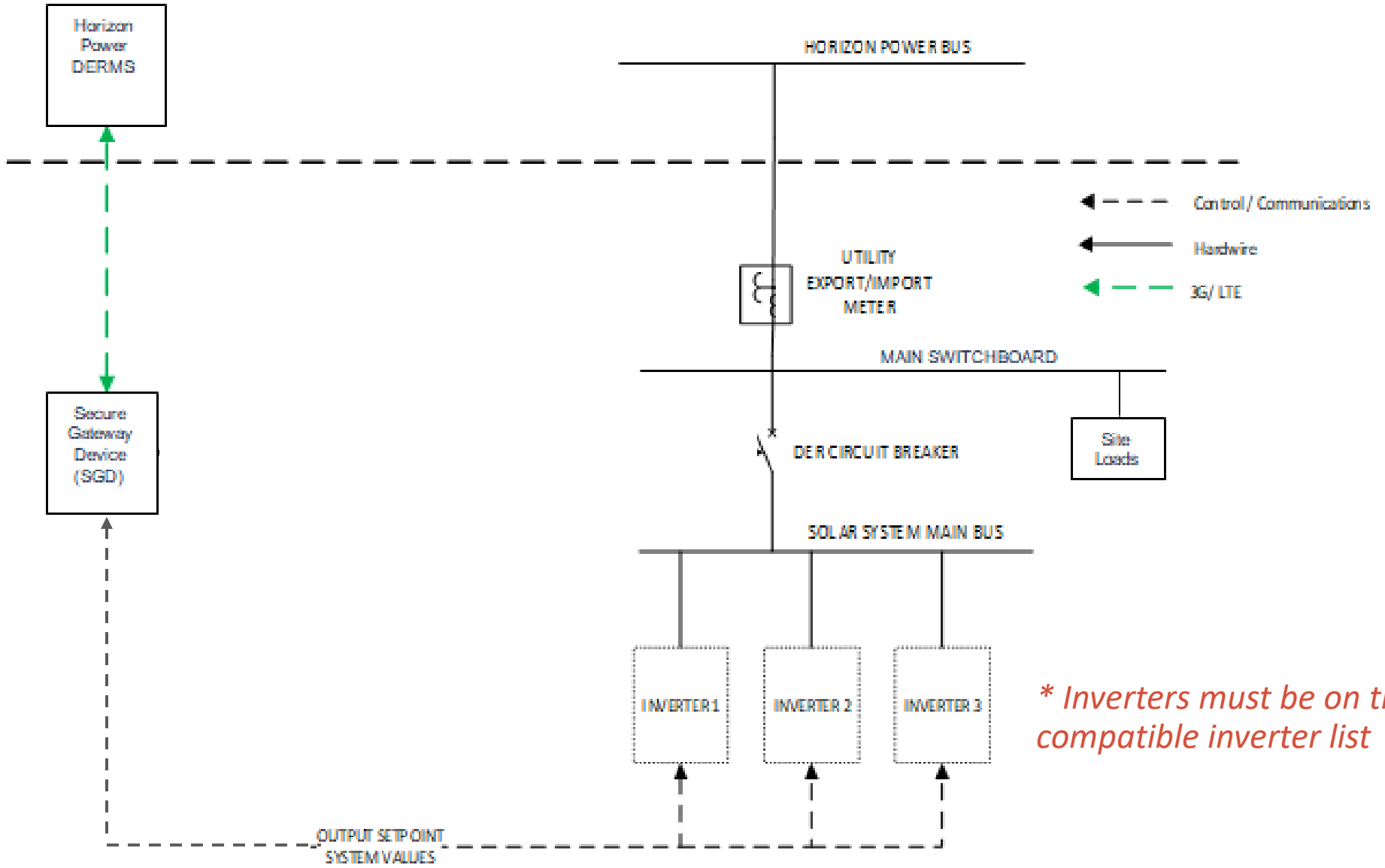
SGD Connection Option 1 – LV EG Control System



SGD Connection Option 2 – Direct Connection of Inverters to SGD



** Inverters must be on the compatible inverter list*

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Changes to Low Voltage application fees and charges

These changes are in response to industry feedback and our commitment to support regional WA communities access the benefits of renewables.

This includes the removal of Solar Smoothing witness testing charges and reduced DER Management fees – down from $13,300 to $6,600 (plus GST)

Summary of Proposed Changes

Aspect	Current (existing LV EG Technical Requirements)	Proposed (Mar 2026 draft)
Smoothing – Battery power sizing	Not specifically prescribed (typcially 1:1 to Solar Inverter capacity)	**≥70% of PV AC capacity (kW & kVA)**
Smoothing – Battery energy sizing	Not specifically prescribed (MUST achieve defined ramp down/up performance)	**Usable kWh ≥20% of battery kW (Simplified approach)**
Smoothing – Control approach	Specific smoothing controller required	**Self-consumption algorithm (PV→Battery→Grid)**
Smoothing – Response time	≤15 seconds (soft limit)	**≤15 seconds (soft limit)** **Frequency-Watt <= 500 milliseconds**
Smoothing – Testing	Required	**Not Required**
SGD Connection	One Option: 1. Via Single control interface (i.e. PLC)	**More Options:** 1. Via Single control interface (i.e. PLC) 2. Direct connection SGD to PV Inverters
DER Management Fees	$13,300 + GST	**Reduced to $6,600 + GST**

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Community Wave update

Helping to support customer confidence in considering solar & battery and the steps involved in getting connected.

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Community Wave
Our Virtual Power Plant product

Joining Community Wave is free, and gives customers access to a range of great benefits

Solar and battery systems are smart connected to help manage energy flows and keep the power system stable

Initially, the types of renewable energy assets that are enabled for orchestration include **solar.**

Batteries will be enabled next. We'll keep you up to date along the way and notify you when this commences.

As the technology used for orchestration becomes more refined, we may see electric vehicles (EV) chargers and heat pumps join this mix.

Renewable Rewards™

Battery Boost
WA State Rebates of up to $7,500 on solar batteries combined with the Federal Cheaper Home Battery Scheme.*

Interest Loans
Eligible customers get access to a no-interest finance option for both solar and batteries.*

Buyback Bonus™
Be paid for exporting excess solar energy during peak times.

Bill Savings
Eligible customers can save up to $2,000 on your annual energy costs.

*eligibility criteria apply

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Community Wave Energy Events

Making the transition to renewables easier for regional households, businesses and installers

We're trialling localised, customer and community engagement events and campaigns to address town-specific barriers to solar and battery uptake.

These events are focused on removing barriers, building trust, and improving the experience for customers and installers. As part of this, we're trialling ongoing improvements to the renewables application process. Some of these initiatives include:

Item	Change	What's changing?	Benefit/outcome	Status
Faster approvals • Basic EG	Permanent	• **Faster approvals** on **Basic EG applications up to 10 kVA** and battery-only applications smart connected to existing approved EG systems.	• Improve efficiency and timeliness of system approvals for most common connection types.	• Completed
Faster post-install receipts • Battery installations	Permanent	• Faster turn around of post-install battery receipts for installers participating in the W.A Battery Rebate Scheme.	• Reduce difficulty/barrier for builders to install solar during development phase.	• Completed
SGD trial • Basic EG • LV EG	Trial	• Store small selection of SGDs at Nila Janyba • Update RESA Assessment to order SGD device 10 days before Installation date (instead of approval date)	• Reduce installation delays due to commissioning issues or missing SGDs • If trial is positive – will role out to all towns.	• Trial to commence in Broome 18 March 2026.
Power Quality trial • LV EG	Trial	• Horizon Power will undertake PQ testing to ensure risk to power system disruption is managed and regulatory obligations are met.	• Installers would no longer be required to complete PQ testing for any LV connection applications included in trial	• Trial to commence Broome 18 March 2026.

Solar and Battery Energy Event - Broome

Pilot event being held in Broome with the aim to roll out to other regional locations in the future.

Partnering with regional installers & communities

Increase awareness and confidence of the benefits of solar and batteries

Encourage uptake of CER for residential and business customers

Support & resources

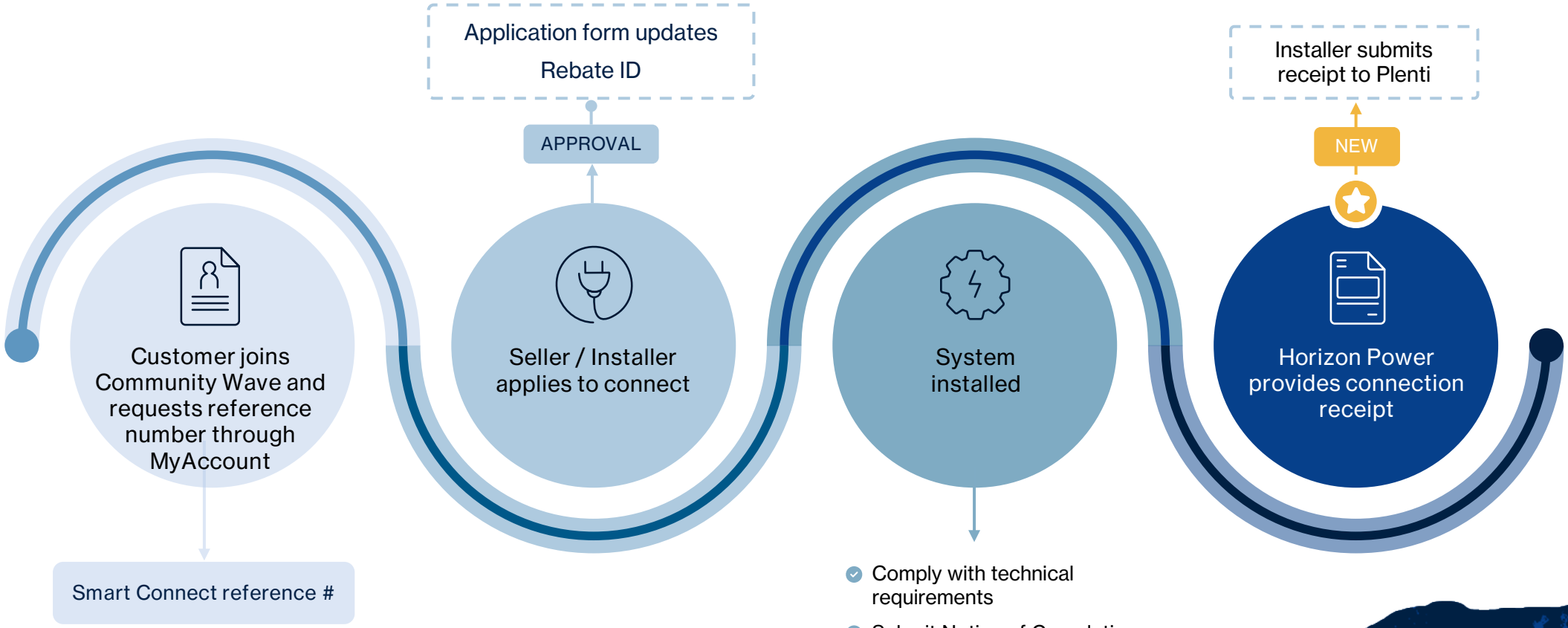
FAQs from the webinars

	Question	
Smoothing requirements	If a 100 kW solar PV system is installed, for the battery will you need 70 kW (AC) output?	Yes. The battery needs a power rating of at least 70 kW to meet the smoothing requirements. In this example, the battery must also have an energy rating of at least 14kWh (at least 20% of that 70 kW). Due consideration of battery C ratings must be applied when designing systems.
Smoothing requirements	There can be challenges with the Upper Frequency Reconnect settings with some inverters. Can we push that to 50.5Hz?	Yes. The required Upper Frequency Reconnect setting is 50.5Hz. This is now the standard setting for Region C inverter settings under AS4777.2. Manufacturers should be setting that to 50.5Hz out-of-the-box. This is worth checking with your manufacturer.
DERMS communication protocols	Will Horizon Power be adopting the CSIP-Aus (Common Smart Inverter Profile - Australia) protocols?	We're working towards this. It's on our roadmap – but currently unable to confirm timings.
SGD	Are technical challenges with the ethernet adaptor/cable being resolved?	Yes. SwitchDin have changed the design so that the usb-ethernet adapter is no longer required. The built in ethernet ports can be used instead on new devices.
Battery Orchestration	What type of orchestration events occur and will customers receive any additional buyback or credit if this occurs?	Battery orchestration principles are currently being confirmed. Once finalised, we'll notify you and customers of the changes. This is the next update to be delivered on our roadmap.

FAQs from the webinars

	Question	
Solar buyback	Will you consider buyback rates, like peak off-peak rates for commercial customers?	Yes. Most commerical customers could now be eligible for Buyback Bonus if they've agreed to the Community Wave Terms & Conditions and their solar and/or battery installation complies with our Technical Requirements. + Learn more about Buyback Bonus eligibility
Solar buyback	Are customers eligible for DEBs or REBS for system up to 30 KWs?	Yes. Residential, not-for-profit and education customers on the A2, K2, C2, or D2 tariffs – are eligible for DEBS for solar systems up to 5kW. Residential or businesses with systems greater than 5kW may be eligible for Buyback Bonus (excluding MyPower customers). REBS is no longer available. + Learn more about Buyback Bonus eligibility
Solar buyback	Can customers with larger system sizes access Buyback Bonus?	Yes. They would need to agree to the Community Wave Terms & Conditions and comply with our current Technical Requirements – including installation of an SGD with compatible inverter (by an accredited installer).
EV connections	Is there a timeline for Vehicle-to-Grid/Vehicle-to-Home Technical requirements?	There is a technical requirement specification for putting in class 2 or 3 EV chargers. Enabling Vehicle-to-Grid/Vehicle-to-Home connections and orchestration is on our roadmap – but currently unable to confirm timings. + Find out what we've been trialling around this technology

Connecting a renewable energy system in regional WA



Don’t forget to complete our Smart Connect Solar training

- Before installing your first Smart Connect Solar system, you will need to complete online training via:
  - The Clean Energy Council , where you’ll receive 30 CPD points, **OR**
  - The SwitchDin Installer Academy

- Training for Smart Connect solar consists of two modules and will take about an hour and a half to complete both:
  - Module 1- Smart Connect Solar – Overview
  - Module 2 - Smart Connect Solar – Installation deep dive.

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Tools to support households & businesses

Solar & battery calculator

Public website

Gives an average, indicative solar and battery bill savings potential – based on town and bill amount selected.

Personalised solar & battery calculator

MyAccount

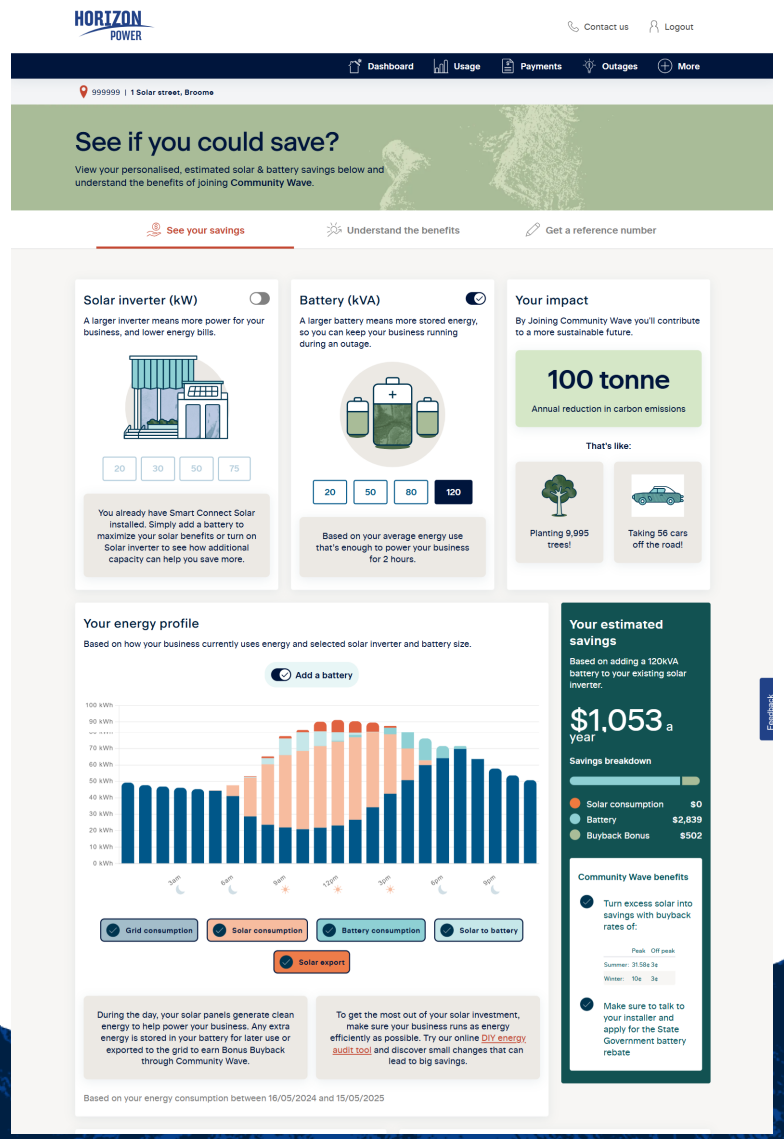
Customers can access a personalised solar and battery benefit calculator by logging in to MyAccount – based on their actual usage profile

Access to Interval data

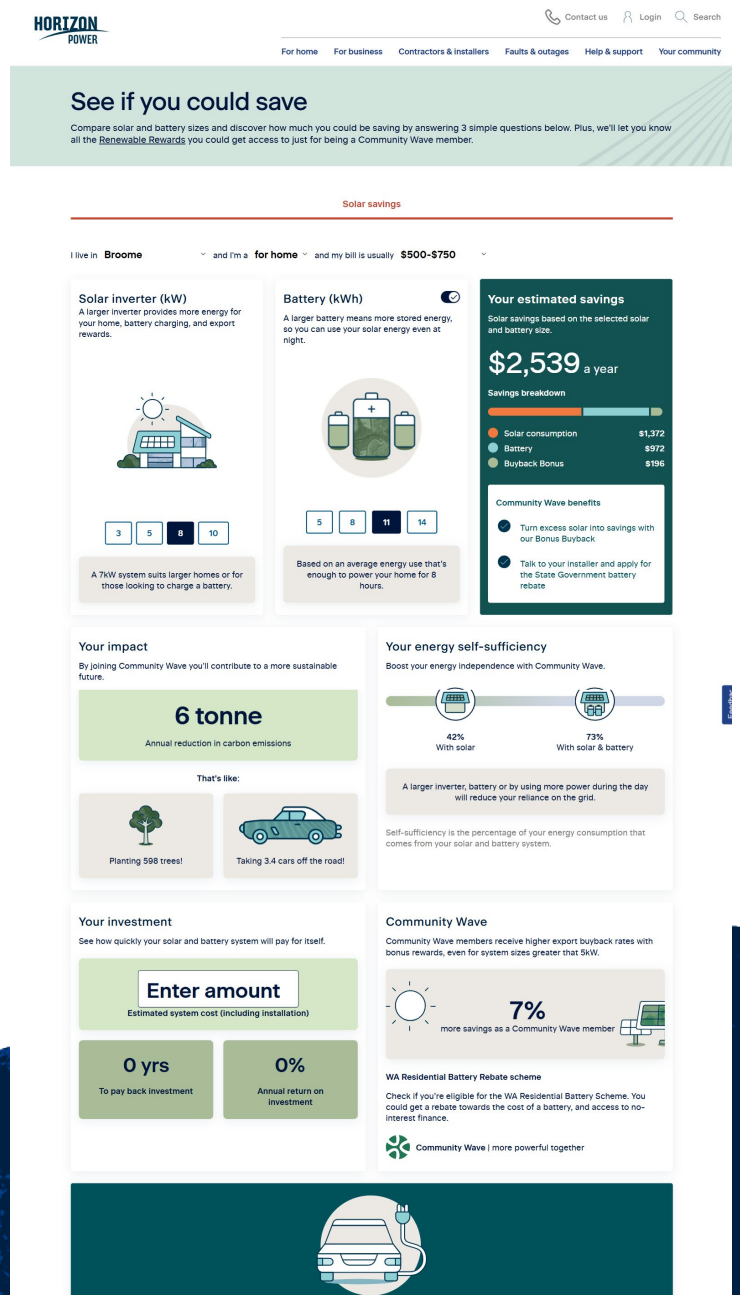
MyAccount

Customers can download up to 2 years of hourly interval data via MyAccount.

MyAccount



Public website



Useful Links & Contact Details

Useful Links

- DRAFT For Consultation - Low Voltage EG Connection Technical Requirements
- Community Wave- Info for installers | Horizon Power
- Connect solar and battery - Info for installers | Horizon Power
- Renewable Energy Connection - Technical Requirements | Horizon Power
- SwitchDin Help Guide
- Apply to connect renewable energy systems to the network

Contact Details

Horizon Power

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SwitchDin

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support@switchdin.com

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Questions

Thank you for joining us