Project Symphony

Our energy future

Test & Learn Results

Industry Briefing

10 October 2023

In partnership with:

western power

synergy

AEMO

GOVERNMENT OF WESTERN AUSTRALIA

Energy Policy WA

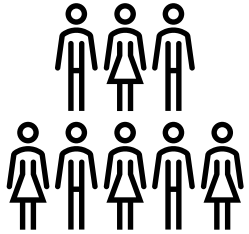
Acknowledgement of Country

We acknowledge the traditional owners of the land on which we a presenting to you from today, the **Whadjuk People of Perth**. We pay our respects to Aboriginal and Torres Strait Islander Elders past, present and emerging and we acknowledge their continuous connection to the lands, air and waters of this nation.

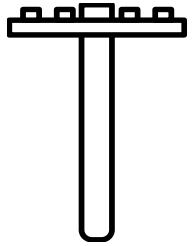
Agenda

Today we will provide an overview of Project Symphony and share our Test and Learn results across the four scenarios

Overview



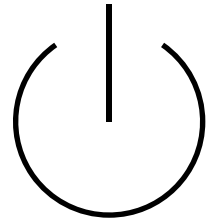
Customer Recruitment



Dynamic Operating Envelopes & Network Support Services

Bi-directional Energy – Balancing Market

Essential System Service – Contingency Reserve Raise



Constrain to Zero

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Overview

Brad Smart

Principal Policy Analyst (Distributed Energy Resources)

Energy Policy WA

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About the South West Interconnected System

2+ million
people connected

2GW
grid connected solar

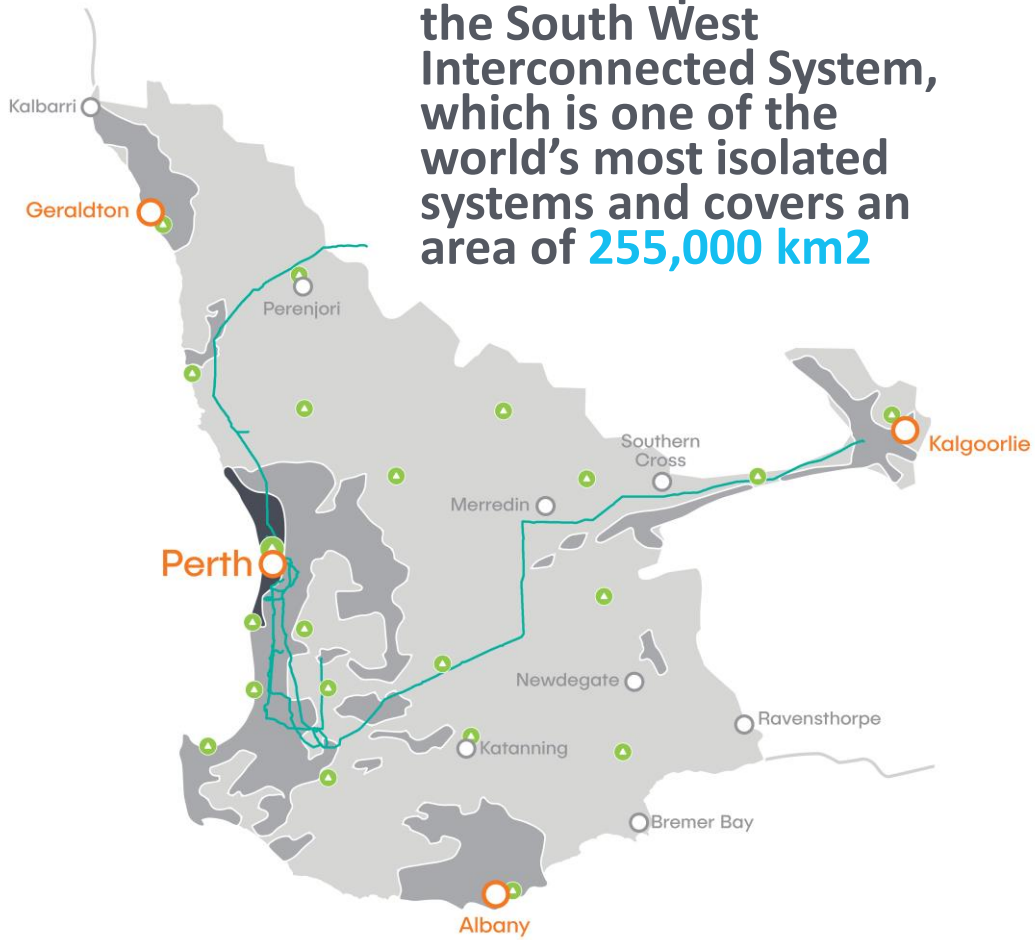
7800km
Transmission network

4006MW & 595MW
Demand peak & low

5798 MW
Capacity

Up to 75%
underlying demand

The WEM operates in the South West Interconnected System, which is one of the world's most isolated systems and covers an area of 255,000 km2



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Background - Emerging System Challenges

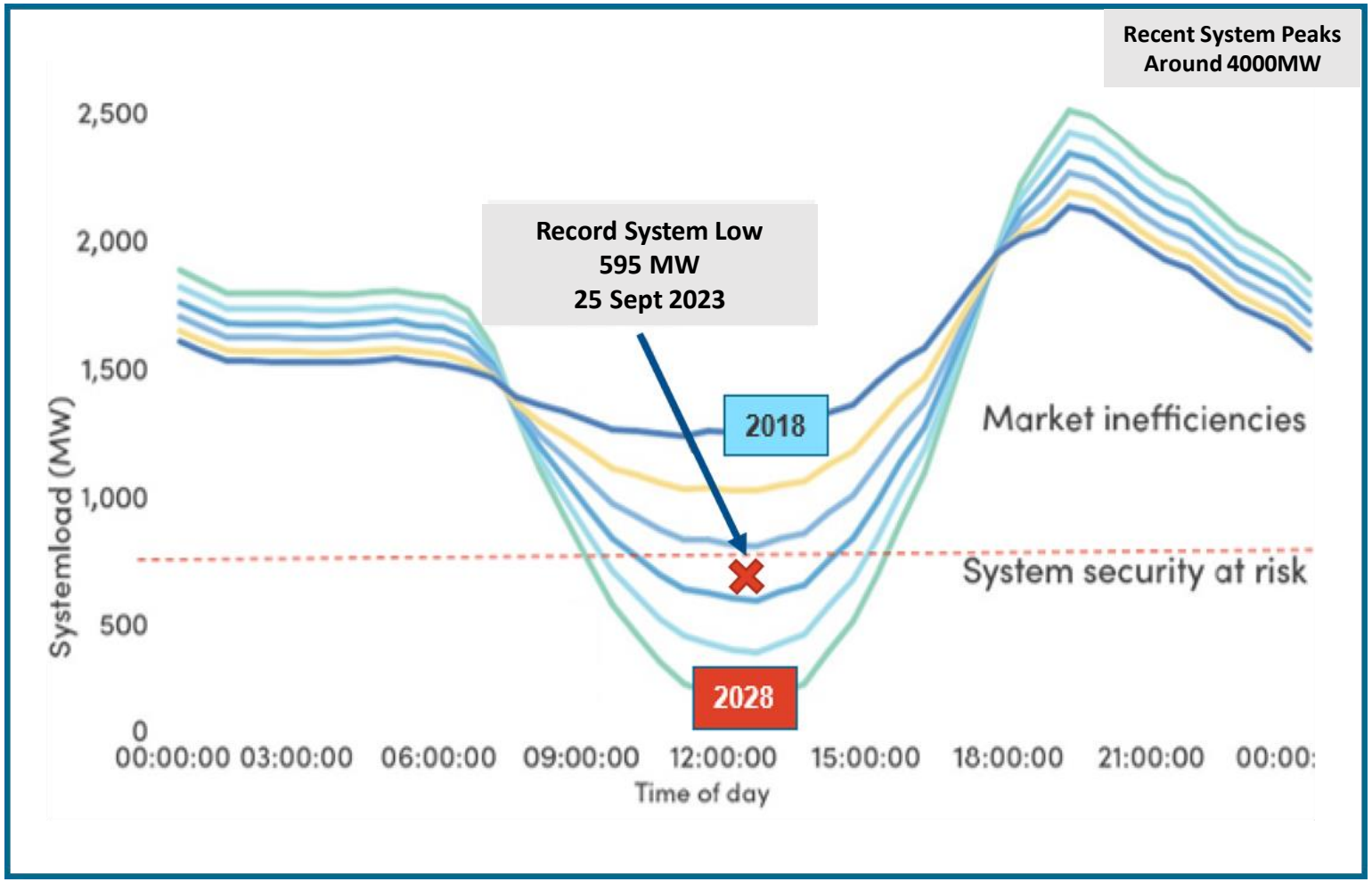
1 in 3 households have rooftop solar.

At current uptake rates, we will reach **1 in 2** by **2030**.

Rooftop solar can't be monitored or managed.

Displaces market generators (inc. wind and solar)

Supply will exceed **demand** in coming years unless addressed



Analysis of **EV** uptake suggests that there could be around **100,000 on WA roads by 2030**.

The **peak** typically occurs as consumers use power for their evenings at home. The is a risk that the peak could increase greatly with unmanaged EV charging and greater electrification.

The increasing **rate of demand change** from **low** to **high** puts further stress on system stability.

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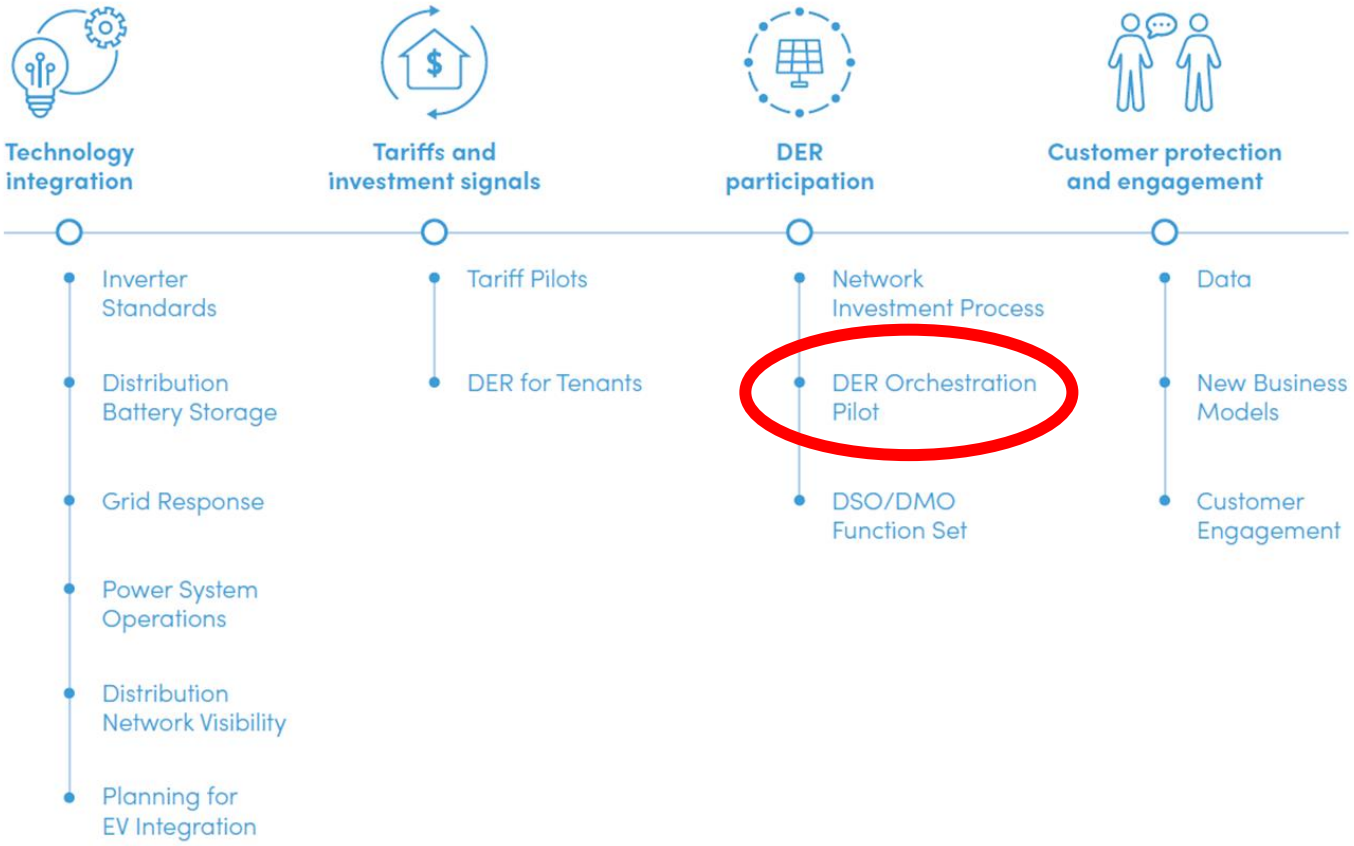
Energy Policy WA – Leading Energy Transformation

DER Roadmap covers many areas required to integrate distributed energy resources into the power system



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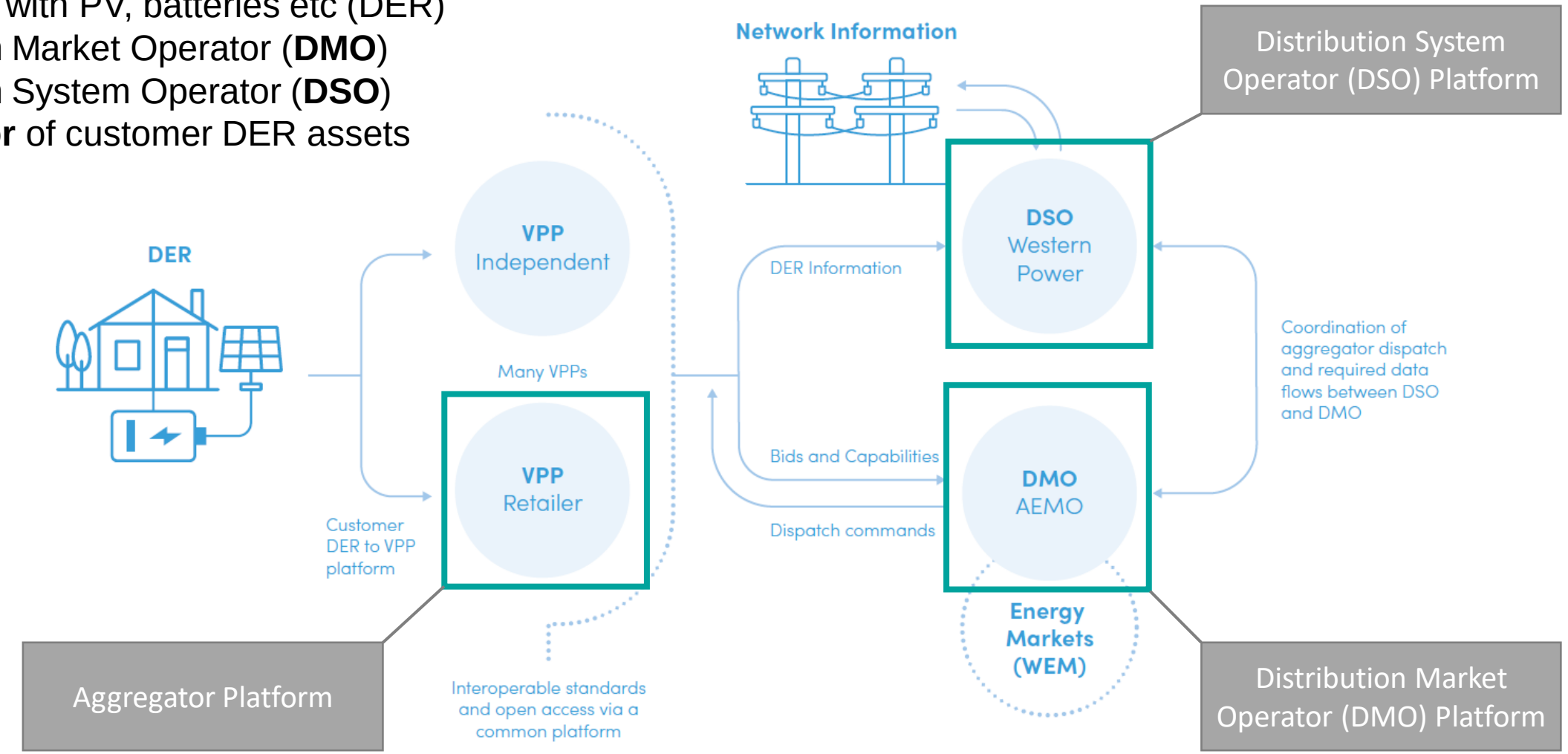
Project Symphony Model

- Customers with PV, batteries etc (DER)
- Distribution Market Operator (**DMO**)
- Distribution System Operator (**DSO**)
- **Aggregator** of customer DER assets



Open Energy Networks – Hybrid Model

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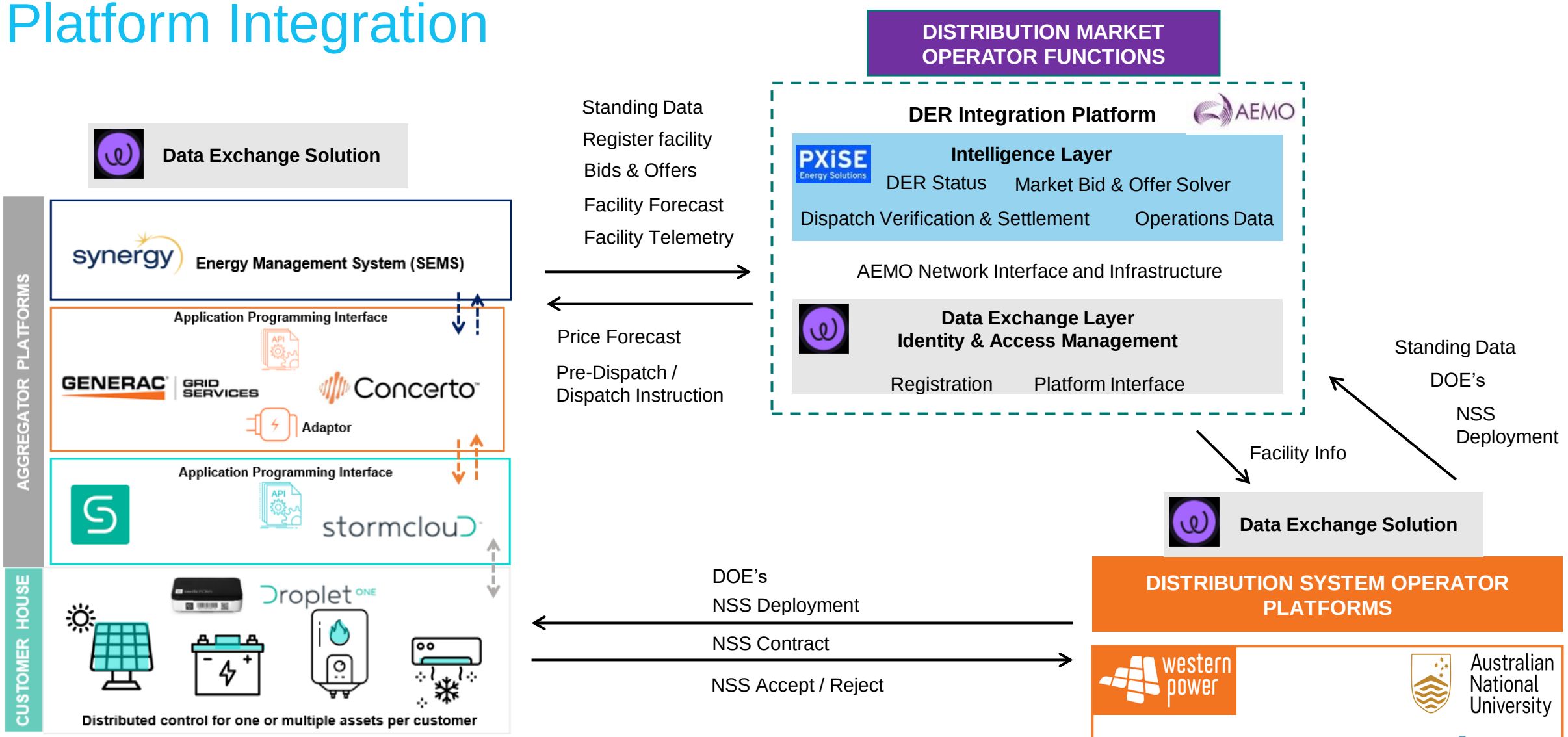
Platform Integration



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Source: https://arena.gov.au/knowledge-bank/project-symphony-platform-functional-and-non-functional-requirements-report/

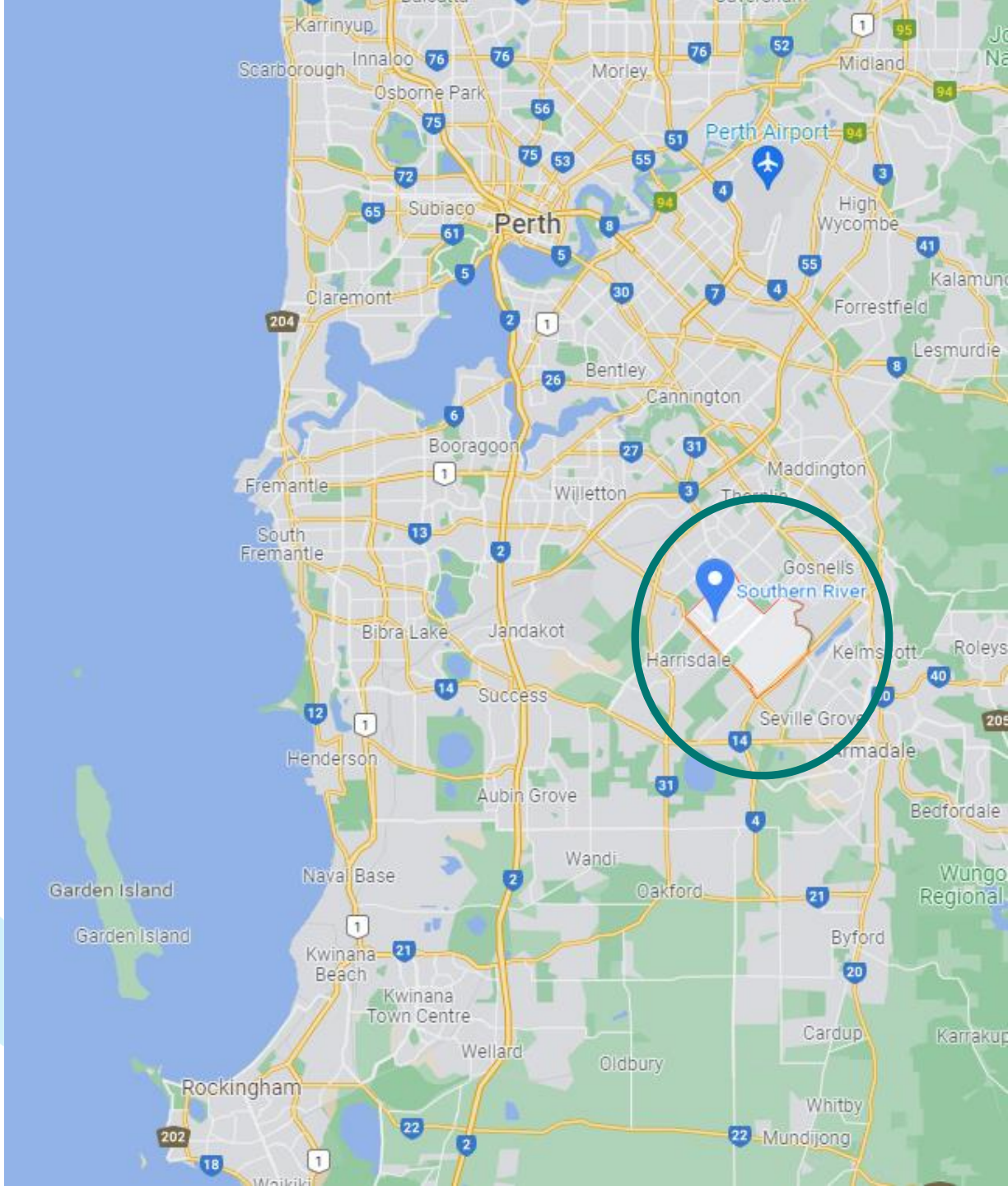
Project Symphony Area

Southern River area

55% Existing Rooftop Solar

~500 Customers

>900 Customer Assets



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Customer Recruitment

Anna Brandsma
Senior Product Manager DER
Synergy

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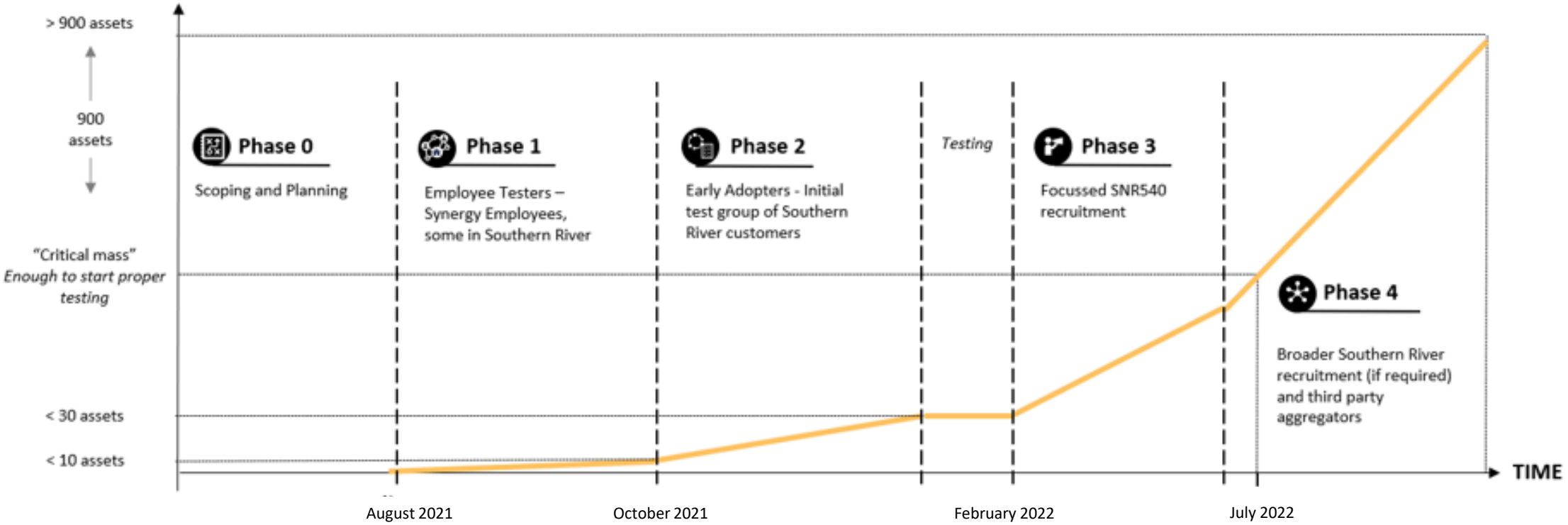
Phased Recruitment Approach



A phased approach was adopted for customer acquisition, using earlier phases to test and learn and later phases to rapidly scale up recruitment numbers to meet acquisition targets.

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Customer Incentives

- Customers could participate with a combination of existing assets such as solar PV and air conditioners or new assets such as a battery or hot water system.
- New assets were highly subsidised, which made them an appealing proposition.
- Existing assets attracted an incentive payment, that was applied as pro-rata credits on their Synergy bills.
- Customers who participated with their solar PV but who did not have a battery were also eligible for an orchestration payment, designed to offset any impact to their bill through asset orchestration.

Incentive payments for existing assets

Solar	$150 / year
Air conditioner	$150 / year

Incentive payments are spread across each electricity bill. i.e. $25 credit applied per bill with a bi-monthly bill cycle

Subsidies for new assets

	Subsidy proportion (%)	Subsidy value ($)	Customer's contribution ($)
Home battery	61% - 64%	$7,475 - $10,150	$4,250 - $6,500
Hot water system	50%	$2,475	$2,475
Air conditioner	39% - 64%*	$8,000	$4,500 - $12,500*

Orchestration payment*

(Solar participants without battery subsidy)

Solar system size	Daily payment ($)	Monthly amount ($)	Annual amount ($)
2 kw	$0.85	$26	$310
3 kw	$1.27	$39	$464
4 kw	$1.68	$51	$613
5 kw	$2.12	$64	$774

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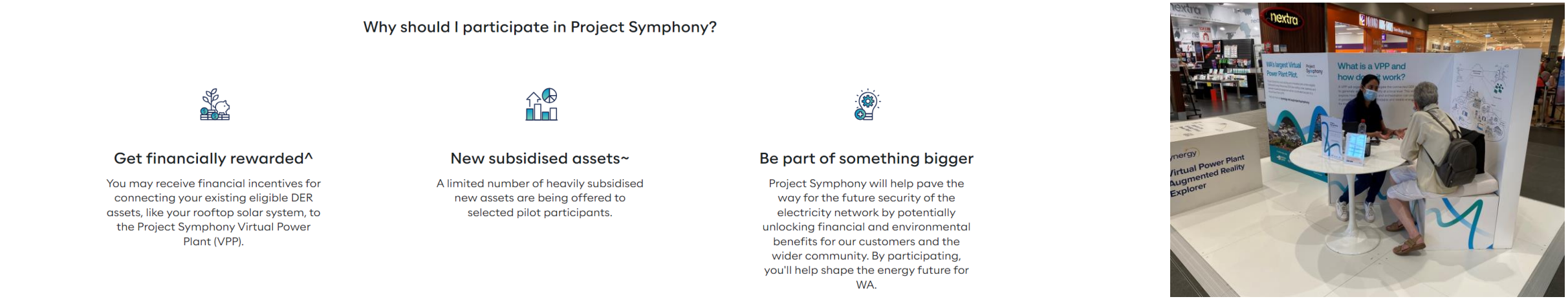
Campaign Approach

- Customer feedback from focus groups in May 2021 helped to shape key recruitment messages.
- Integrated and targeted marketing initiatives were developed that used channels such as emails, direct mail, website, outbound calls, targeted social media campaigns, and engaging community events.



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Recruitment Results

911
TOTAL ASSETS

514
TOTAL CUSTOMERS

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Test & Learn Overview
Dynamic Operating Envelope & Network Support Services

Mohamed Miyanji
Changing Energy Digital Product Manager
Western Power

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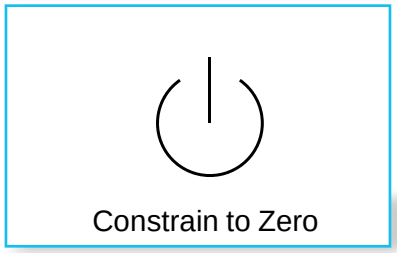
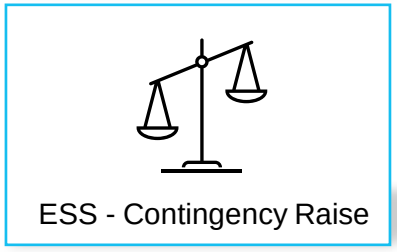
Project Symphony – Test scenarios





Energy Services - Bi-Directional - Balancing Market Offer (BMO): Offering (Sell) or bidding (Buy) energy into the balancing market, issuing, receiving & responding to dispatch instructions and settlement to determine the most economically efficient dispatch of generation to meet system electricity demand at a given time.

Network Support Services: a contracted service provided by a DER aggregator to help manage network constraints such as distribution level peak demand or reverse power flow and/or voltage issues as identified by the Distribution System Operator (DSO).

Constrain to Zero: AEMO dispatches an instruction to the Aggregator to constrain energy output from DER to zero export **(net)** or zero output **(gross)**. This could be offered as a market service, or incorporated into normal dispatch arrangements if customers are remunerated appropriately.

Essential System Services (ESS) Contingency Reserve Raise: Market provision of a response to a locally detected frequency deviation to help restore frequency to an acceptable level in case of a contingency event (such as the loss of a large generator or load).

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Project Symphony Testing Overview

Total Testing Duration

34

 # Weeks of Testing

"STABILITY PERIOD"
(Testing of all scenarios)

14

 # Weeks of Testing

145

# of Tests Executed

Energy Services Bi-Directional

5
 # Facilities Registered
(largest 2.96MW)

15,334,048
 # Dispatch Instructions
(5 minute intervals)

37,747
 # RTMS Variations
(Real Time Market Submissions)

ESS - Contingency Raise

197
 # Simulated Tests

13
 # Network Frequency Deviations

69
 # High Speed Data Recorders (HSDR)

Network Support Services

75
 # Simulated Tests

Constrain to Zero

68
 # Simulated Tests

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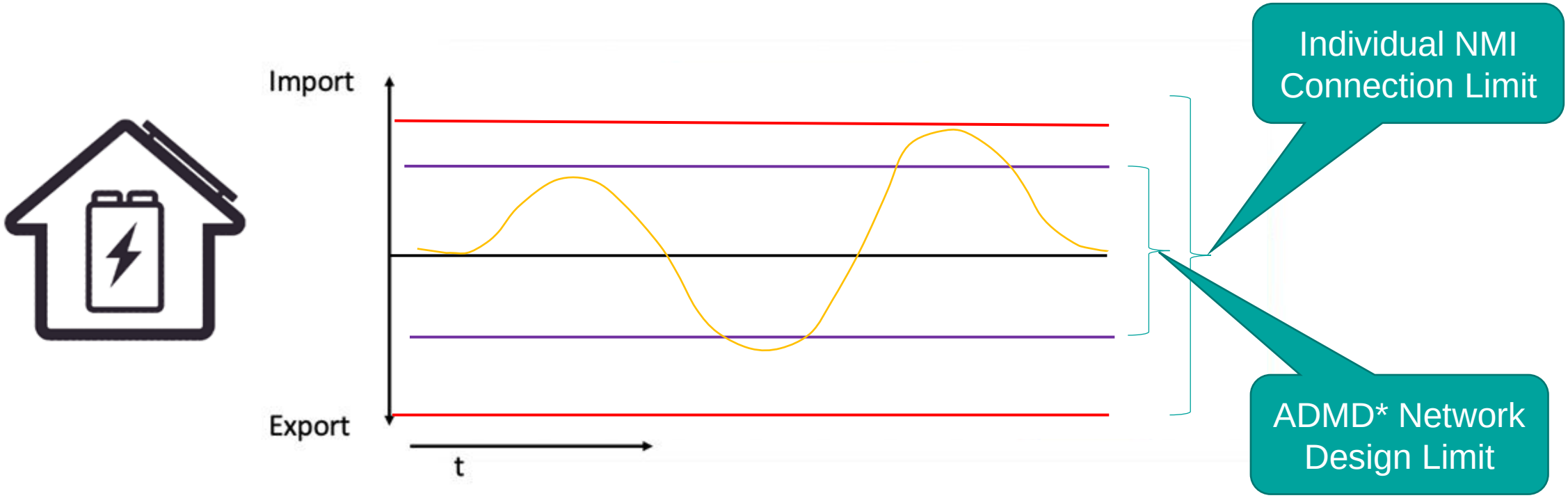
The Dynamic Operating Envelope (DOE)



*ADMD (After Diversity Maximum Demand) – The maximum demand which the electrical distribution network (local transformer) is capable of supplying expressed as an average per dwelling

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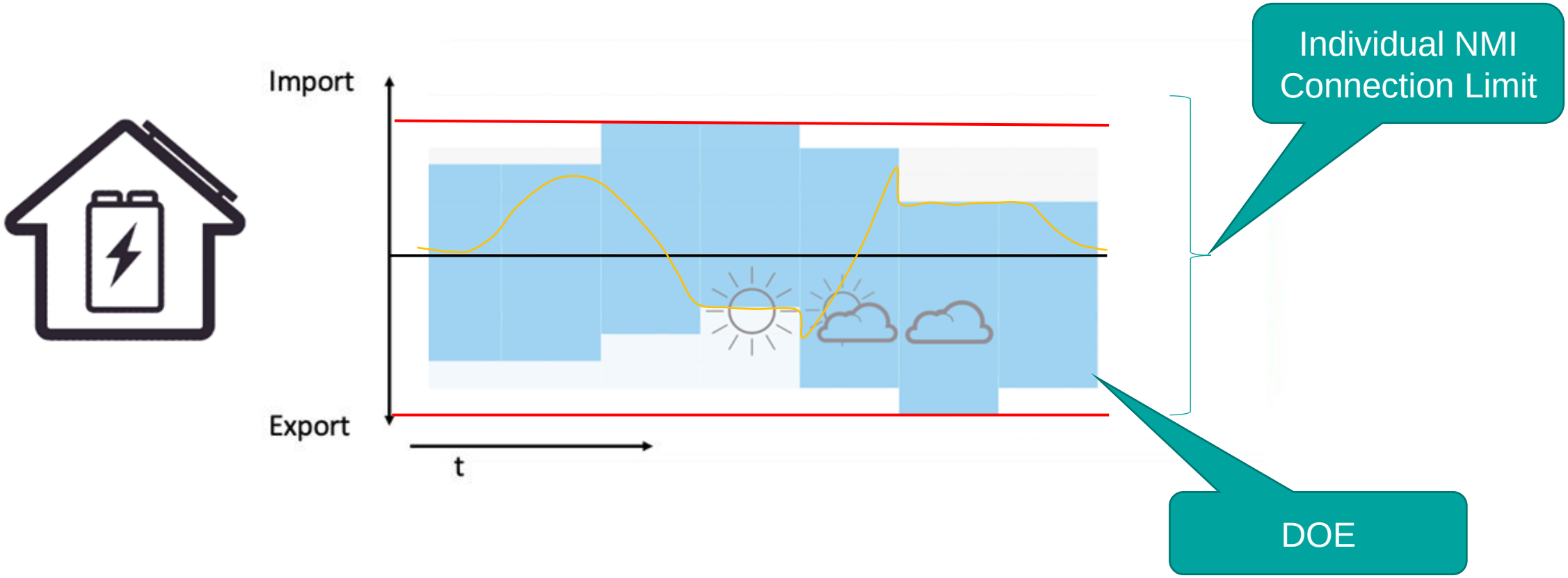
The Dynamic Operating Envelope (DOE)



Notional Operating Envelope showing the effect of **high solar generation shifting the envelope towards site import**, and **cloud cover** and **peak load shifting the envelope towards export**.

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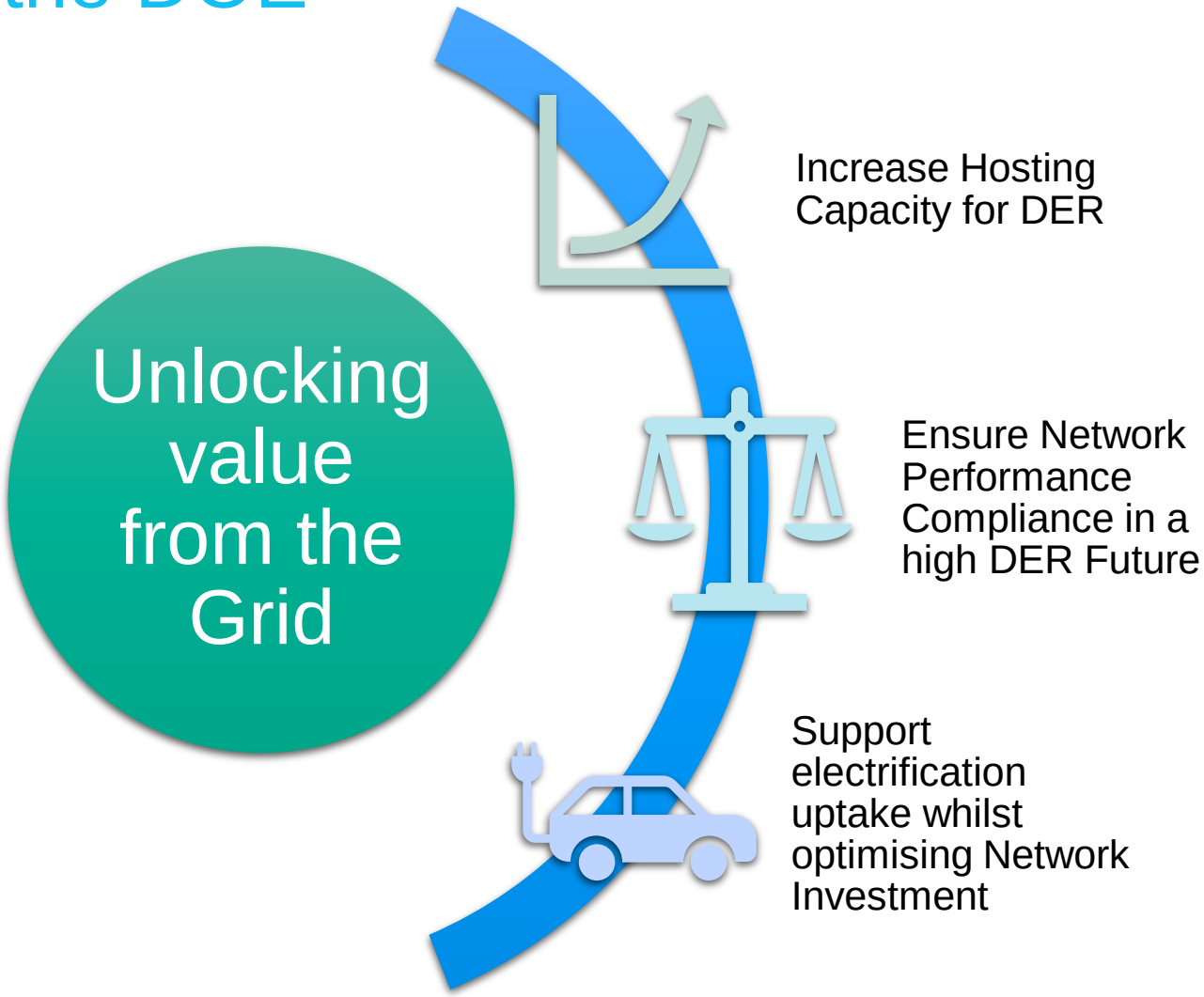
The value of the DOE



Increase Hosting Capacity for DER

Ensure Network Performance Compliance in a high DER Future

Support electrification uptake whilst optimising Network Investment

Support larger PV, Energy Services

Maintain safety for customer assets & network

Manage network cost

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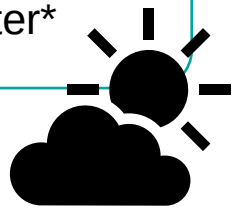
DOE Process Flow in Symphony

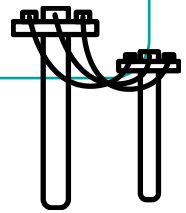
Forecast Load

- Weather
- Solar Irradiance
- Historical Behaviour
- DER Register*



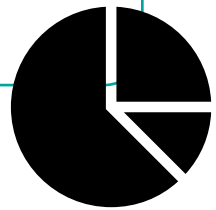
Calculate Spare Hosting Capacity

- Asset Data
- Network Topology



Allocate Spare Hosting Capacity

- Allocation Principles
- DER Register* - VPP Participant List



Publish DOE

- Integration API

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*DER Register – Enhanced for Symphony

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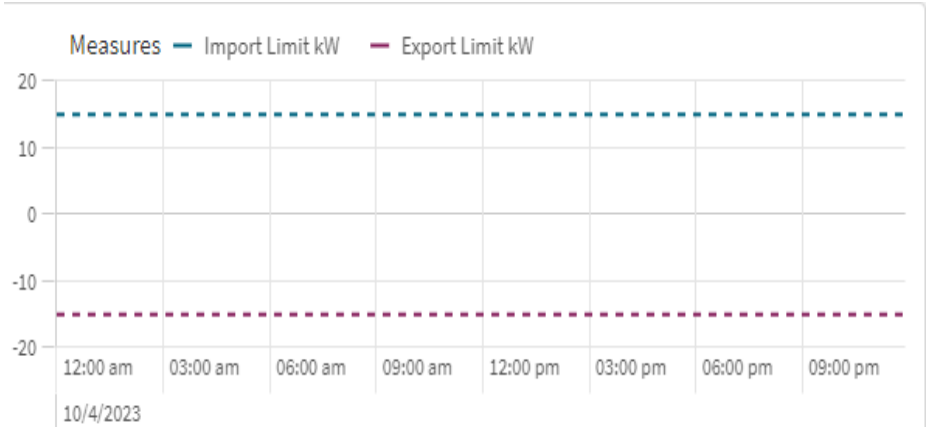
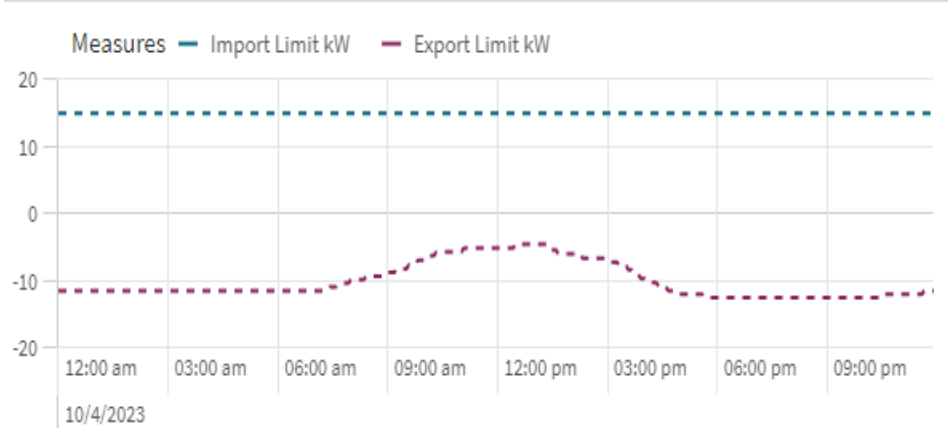
DOE Performance – Types of Operating Envelopes

- Consent & NMI registration process
- DOE Export Limit only
- Daily publication by 12pm for next day
- Various types: Calculated, Static, Default Failsafe, Short-Notice

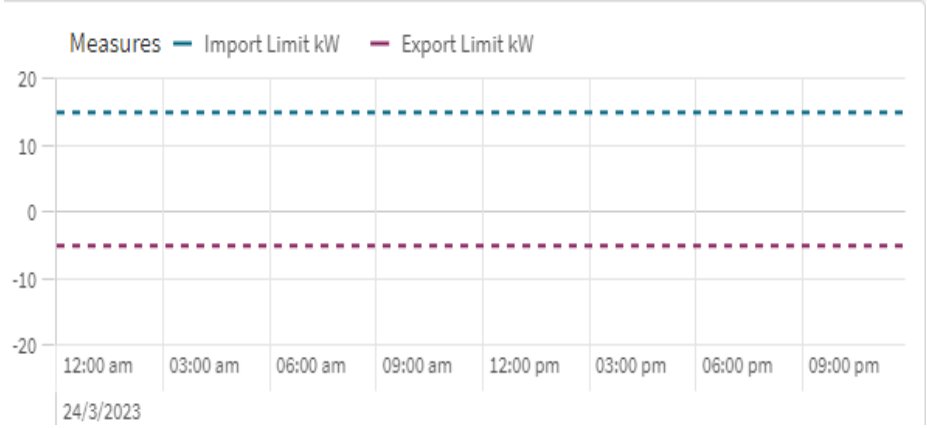
Unconstrained DOE – SNR 540



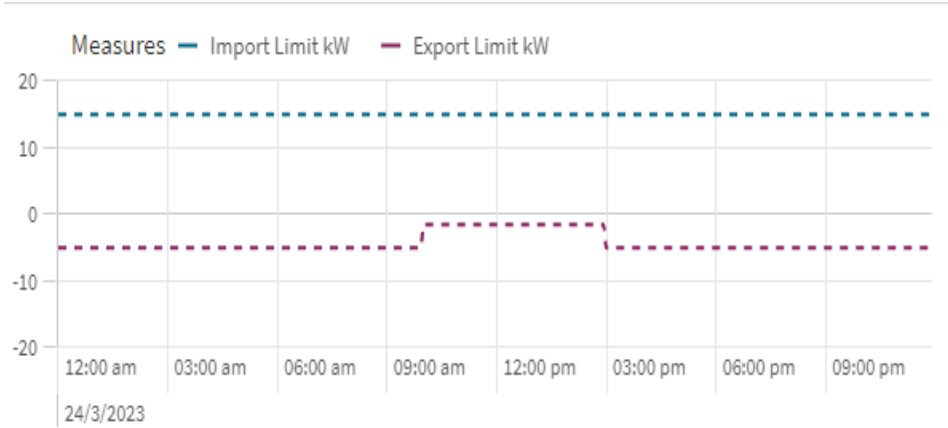
Constrained DOE – SNR 540



Static OE – Outside SNR 540



Default DOE



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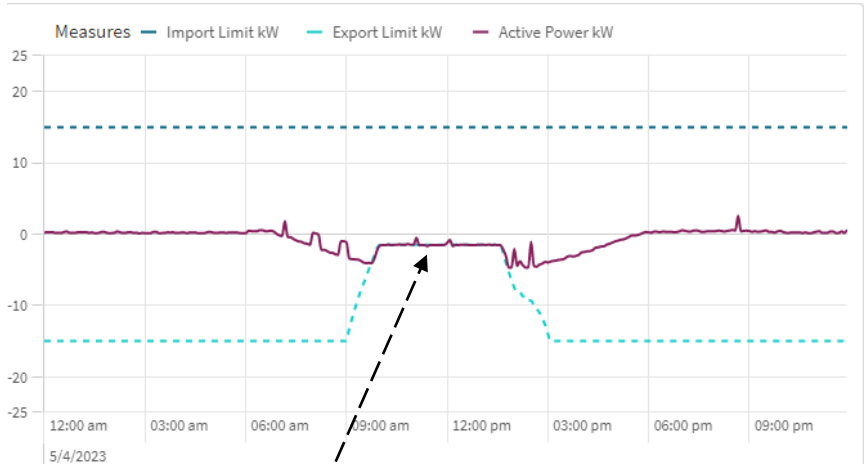
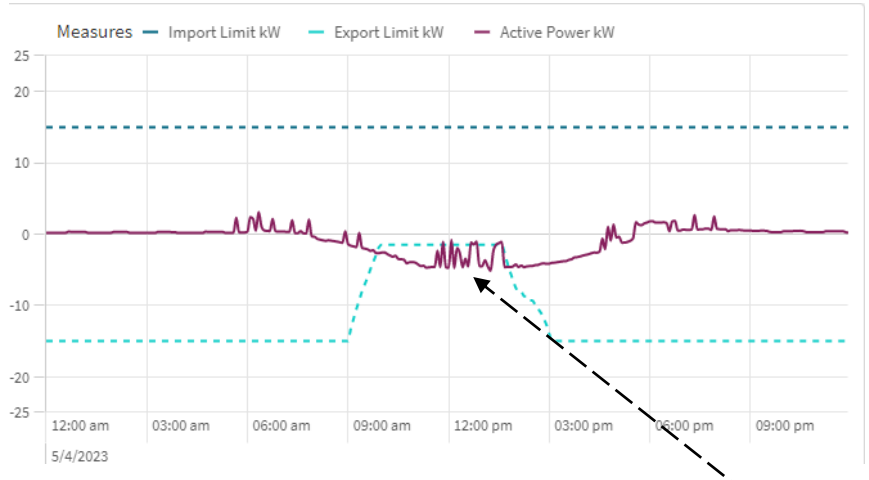
Dynamic Operating Envelopes – Outcomes

- Calculated DOE for SNR 540 using MV+LV network model and NMI level forecasts – flexible but complex and intensive
- Examples of good compliance but overall performance was inconsistent, especially when stacking service

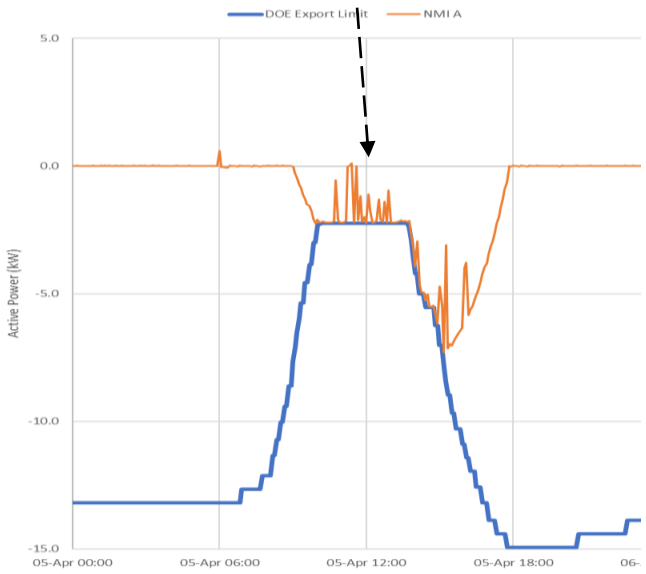


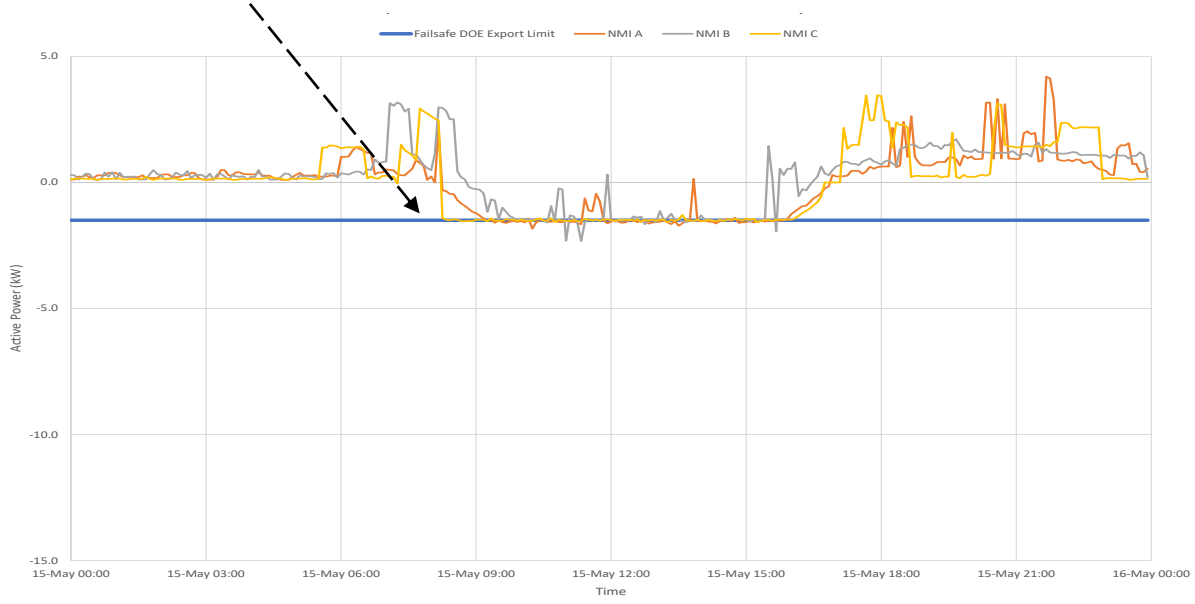


Good examples of DOE application

Example of non-compliance

Good example of Failsafe DOE application





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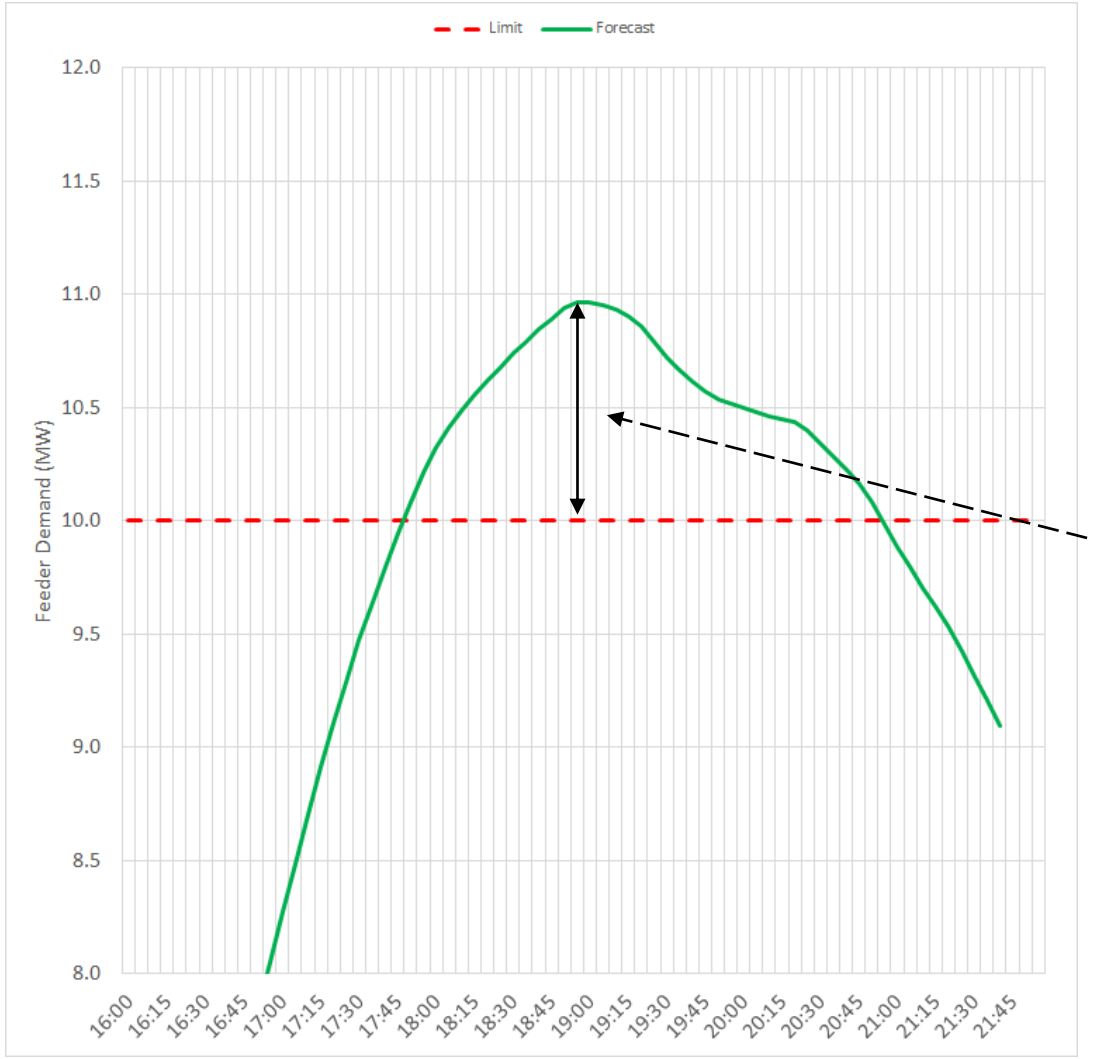
Network Support Services



Network Support Services (NSS): a contracted service provided by a DER aggregator to help manage network constraints such as distribution level peak demand or reverse power flow and/or voltage issues as identified by the Distribution System Operator (DSO).

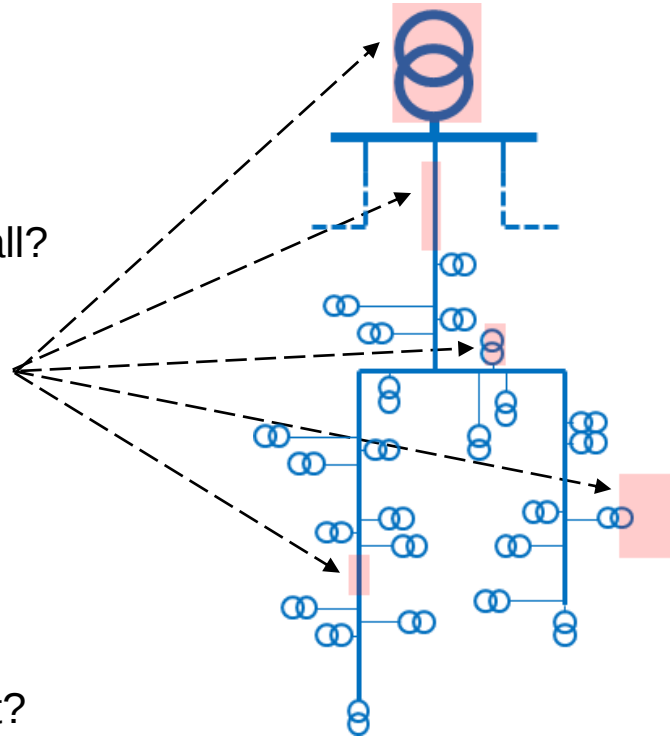
Network Constraints

What is the forecast?
What is the capacity shortfall?

Where in the network?

When does it occur?
How often does it occur?

What are the options?
How much does each cost?



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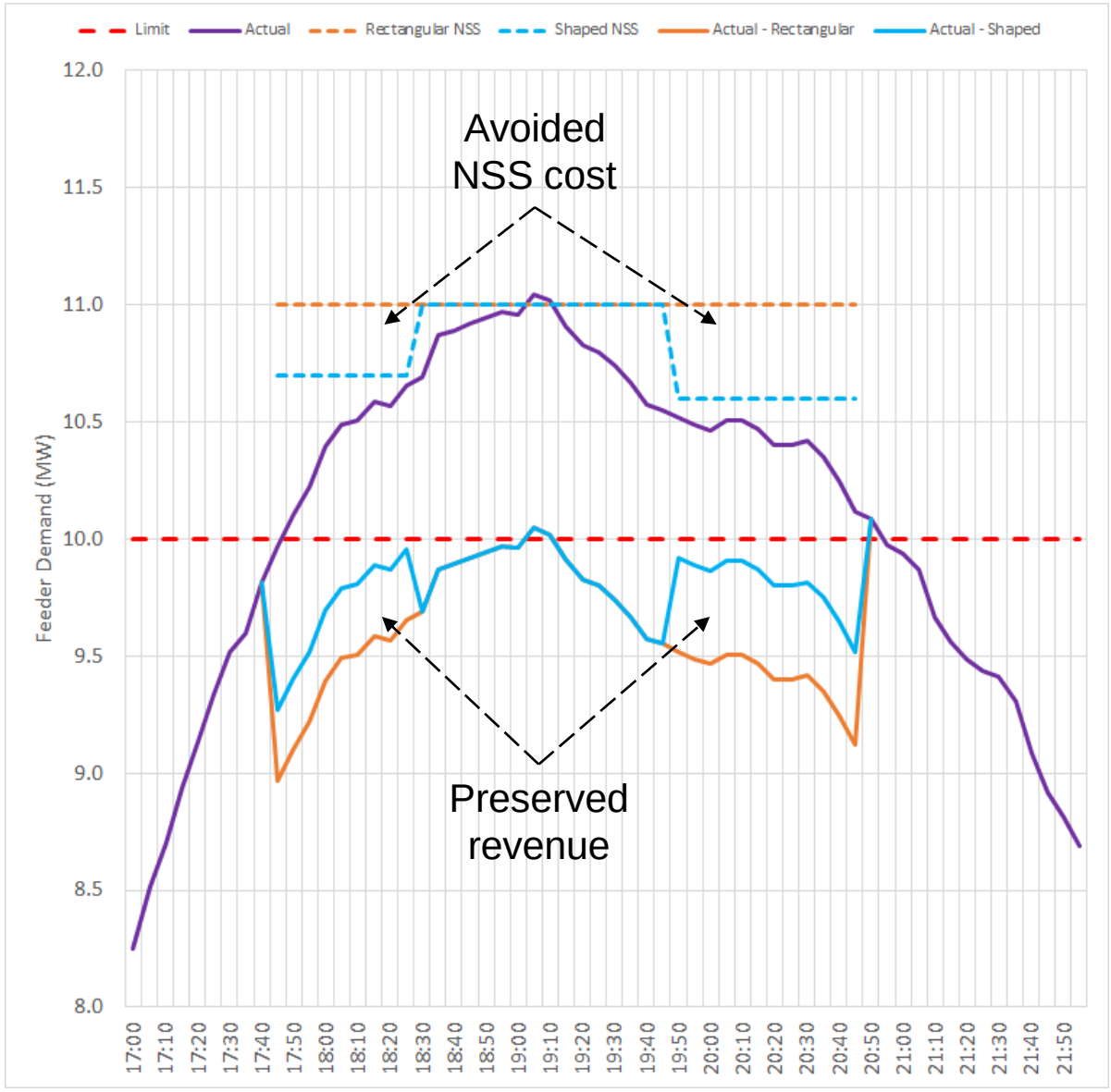
Network Support Services

Determine Requirement → Establish Contract → Deploy and Operate → Validate and Settle

3.0 MWh

This would need
250 x batteries
(5.0 kW / 12.0 kWh)



2.5 MWh

This would need
208 batteries
(5.0 kW / 12.0 kWh)

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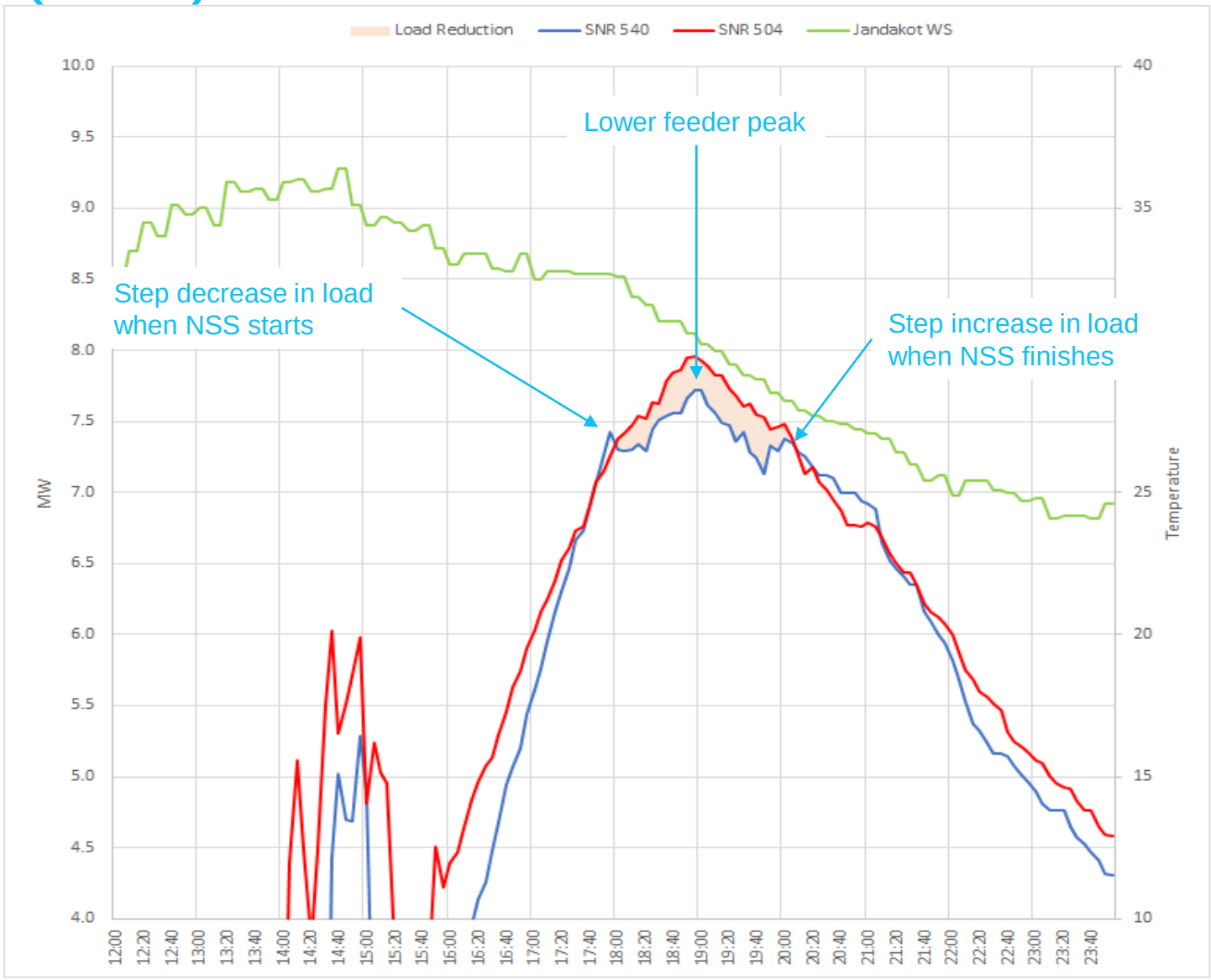
Network Support Service (NSS)

- 20 Jan 2023: Firm NSS (18:00-19:20)
- Blue line SNR 540
- Red line SNR 504 – no DER orchestration; similar peak load to SNR 540
- Green line – Jandakot Weather Station temperature
- Observable stepped change in SNR 540 at start and end times of NSS provision
- This is one of the better examples; actual observability of NSS will vary depending on feeder activity



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Bi-directional Energy – Balancing Market (BMO Scenario)

Bruce Redmond

Principal DER Product Owner

AEMO

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BMO Operating Unassisted – Easter Monday

- 10 April 2023: BMO (8:00-16:00)
- Yellow line forecast balancing market price
- Orange line orchestration; VPP response
- This examples shows the VPP following the price signal whilst operating on its own on a public holiday.
- Assets are charging when the price was low and dispatching when the price was high.

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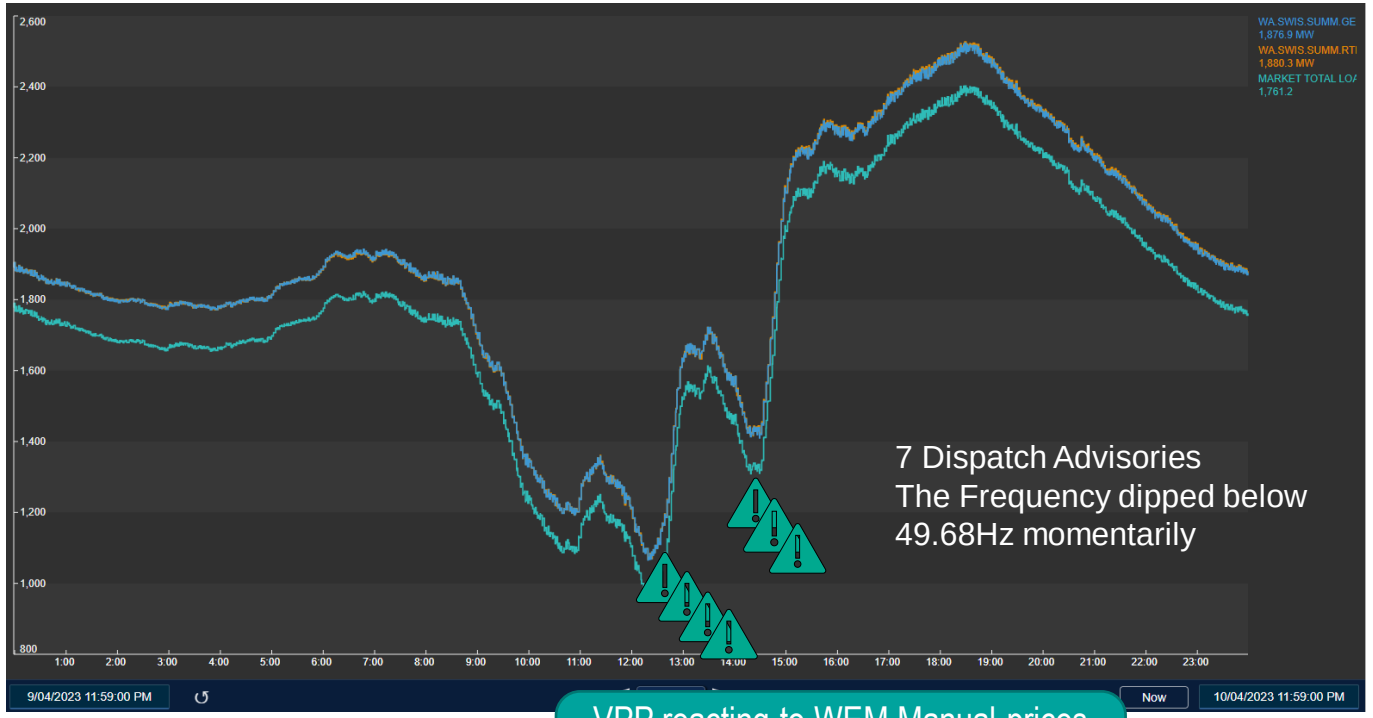
System Volatility

SWIS System View

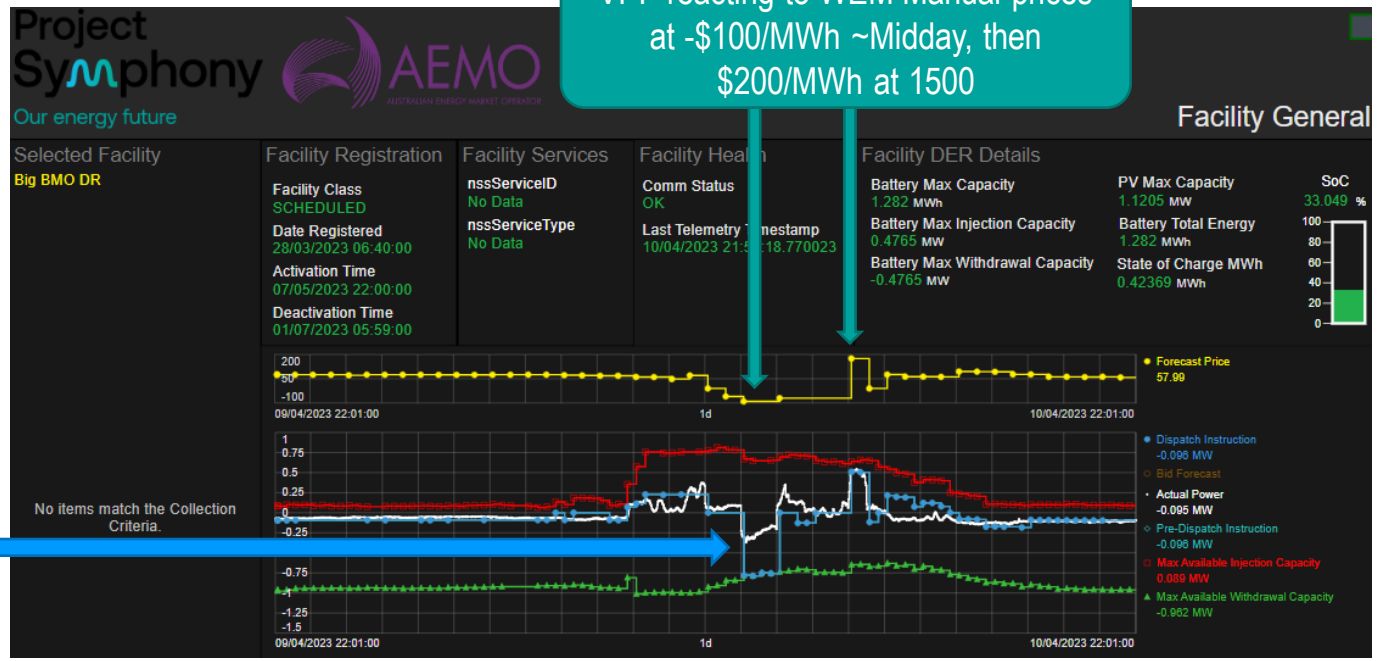
- Volatility due to weather that impacted System demand
- 7 Dispatch Advisories issued by AEMO
  - The Frequency dipped below 49.68Hz momentarily

VPP Facility “Big BMO DR”

- The VPP reacted to the Dispatch Interval based on Market Price for Energy.
- The VPP was not enabled for ESS CR



VPP reacting to WEM Manual prices at -$100/MWh ~Midday, then $200/MWh at 1500



VPP reacting to WEM simulated price

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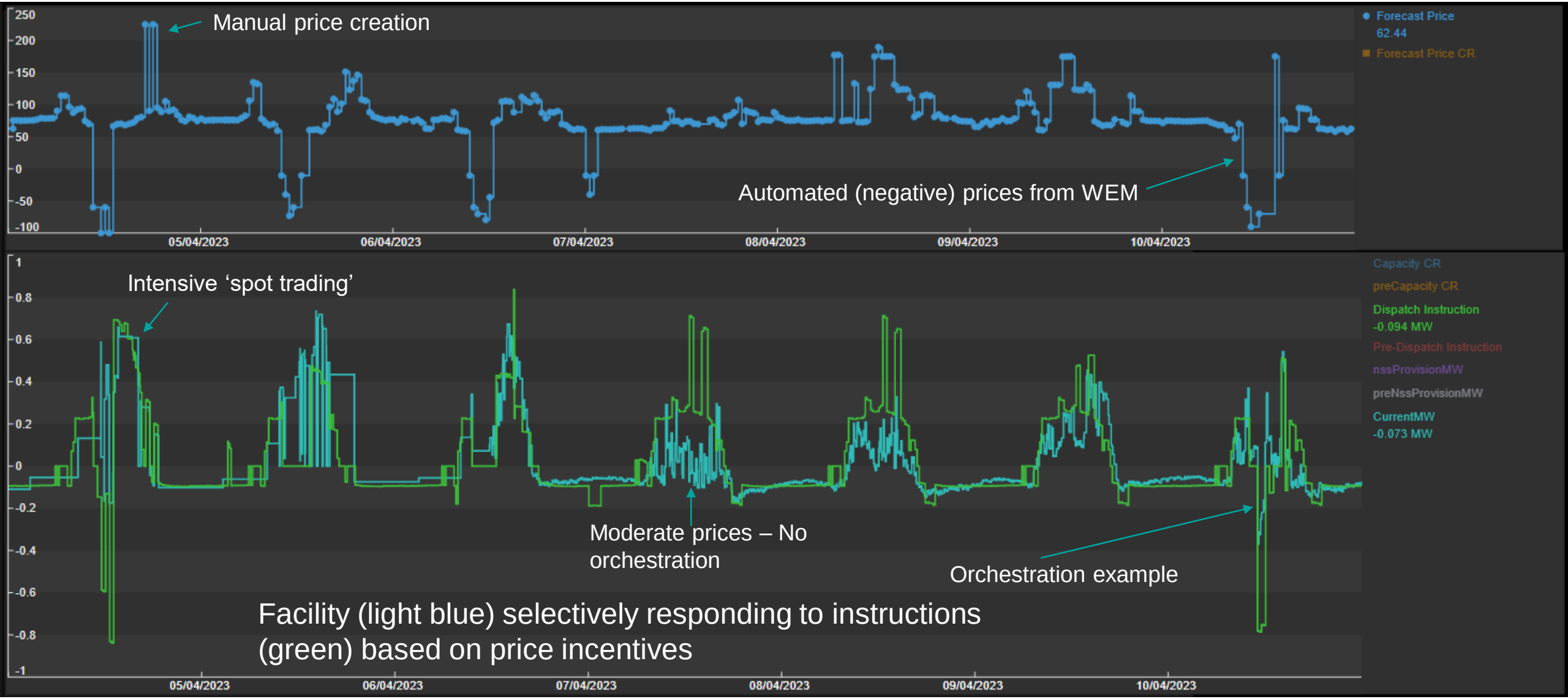
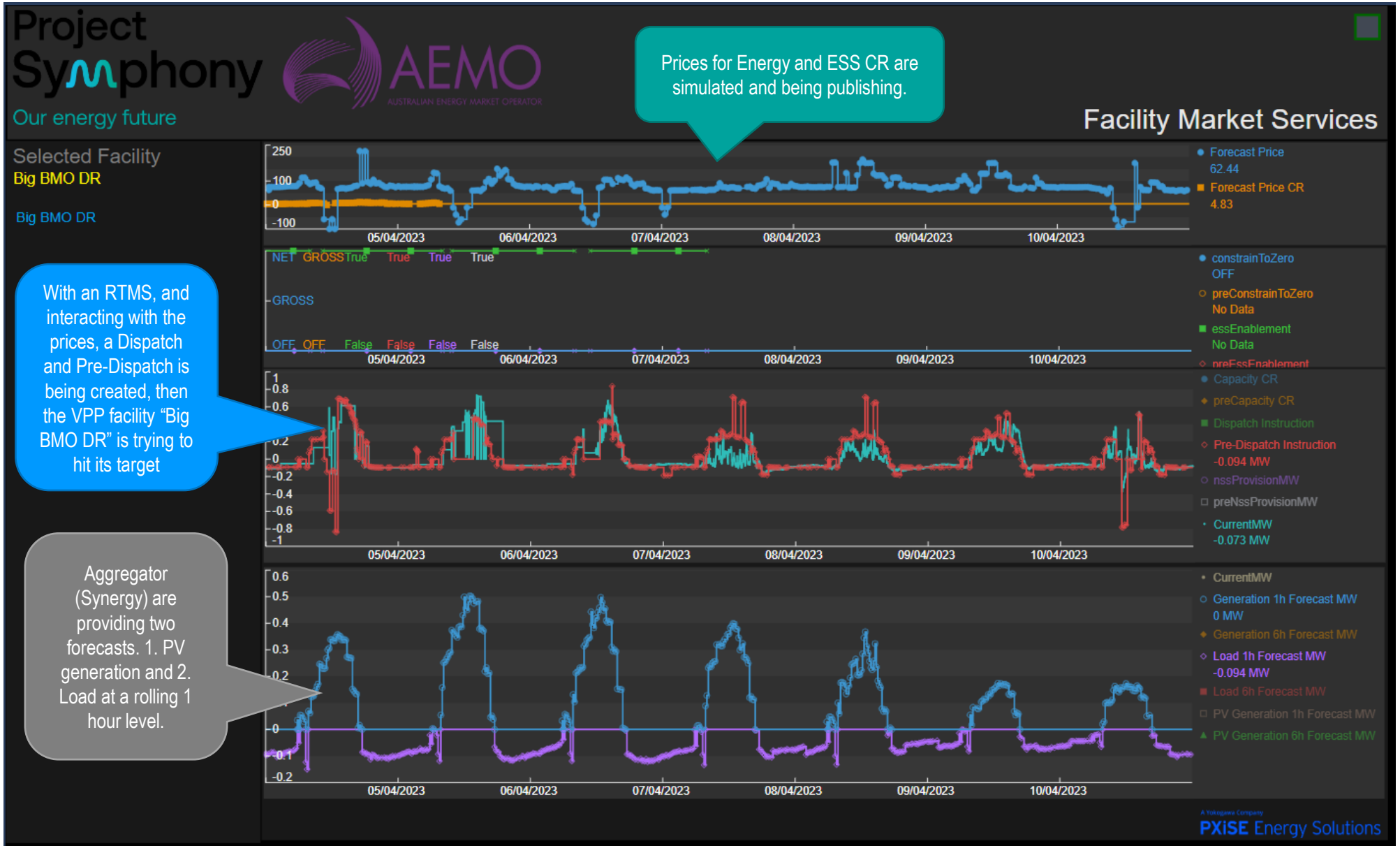
Systems operating and visible in real time via Market UI



Weekly View of Big “BMO DR” VPP Facility – The System Works !

- This view illustrates a full week of testing the BMO facility.
- Source AEMO Control room UI tool – Pi-Vision built specifically for Project Symphony



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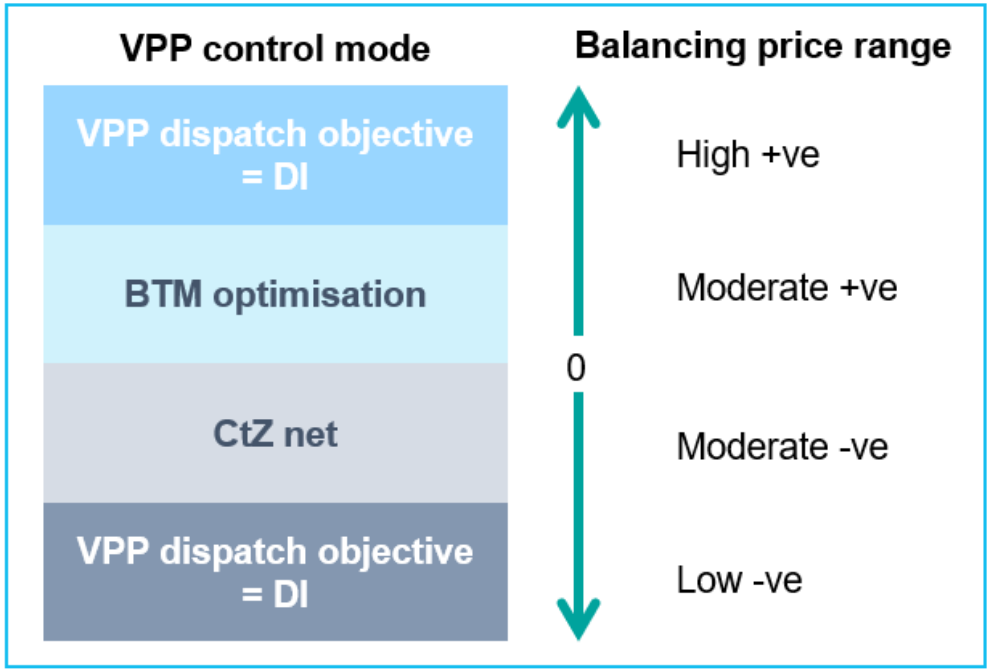
Improved Facility Control Enhancement

Smart, modal control

The improved facility control enhancement combines the following Project Symphony building blocks:

- DI-determined, VPP dispatch objective
- Behind The Meter (BTM) optimisation
- Constrain to Zero (CtZ) net

- Market submissions defined over four balancing price ranges (tranches)
- Balancing price forecast determines VPP control mode



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Dispatch Modes

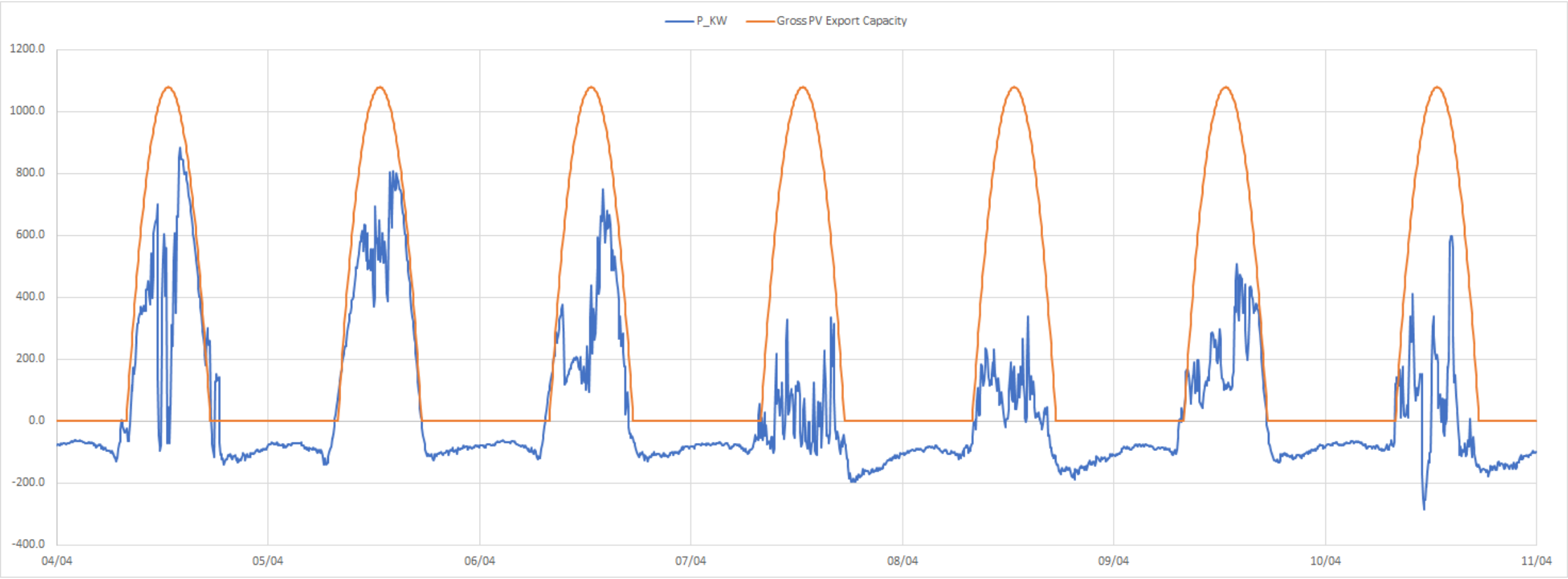
Implementation of the Dispatch Modes by the VPP for multiple scenarios during the 90 Day Stability Period shows that:

- The facility can control to market prices, but the appetite to do so is limited as high and low prices to trigger dispatch do not occur very often.
- The facility operates in BTM optimization most of the time, optimising value for the customer
- Dispatch performance is a function of forecasting accuracy. Dispatch performance across all modes is low.
- NSS dispatch mode is the most successful overall, showing that the facility can achieve some level of control, albeit over limited periods of time.

Dispatch Mode	BIG BMO DR 4th April – 7th July 2023	
	% of time	% within tolerance*
BTM Optimization	86%	49%
High Price Target	5%	21%
Negative Price Injection Cap	5%	28%
NSS Target	3%	40%
Negative Price Target	1%	23%
All Modes	100%	46%

* performance is assessed based on a tolerance set relative to 5% of the facility injection capacity

Market Dispatch Observations



- Gross PV export capacity is significant impacted by cloud cover (solar irradiance)
- Improved forecasting capability is important to support market integration

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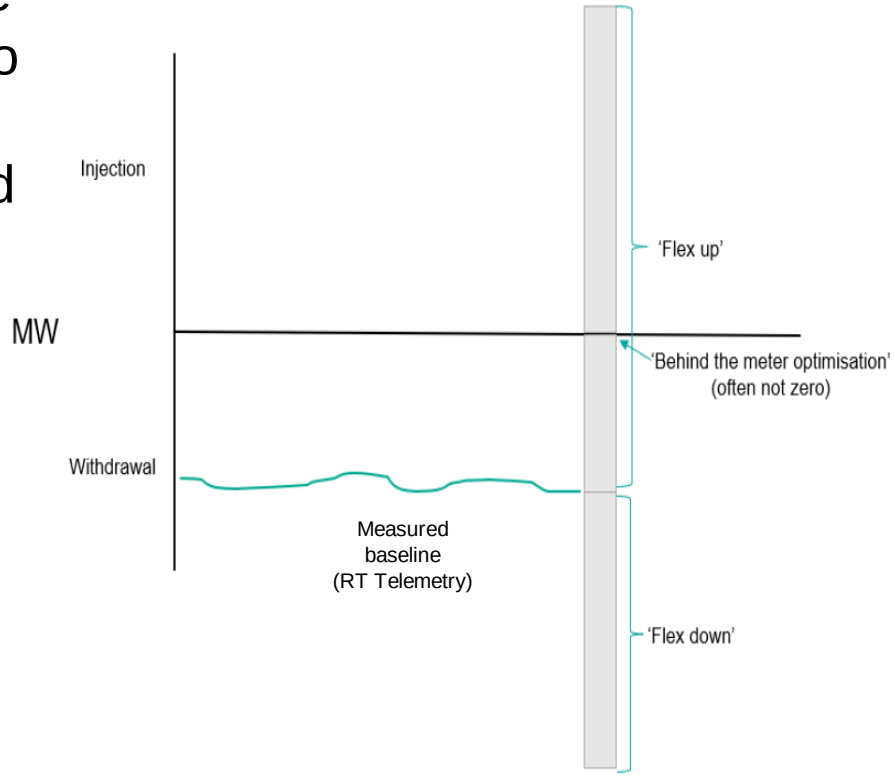
Lessons from participation in bi-directional energy services

- Aggregated DER portfolios are coordinated from a single central IT platform and can therefore act across many electrical locations, with the potential to span the entire SWIS.
- Aggregated DER facilities change incrementally and dynamically and require ongoing flexibility to change size, composition and even electrical location.
- Aggregations may be inclusive of passive DER and/or active DER and uncontrolled load and are therefore better-suited to participate relative measurement (dispatching to and from a measured baseline) rather than only the absolute (measured at the connection point).
  - Accounting for variability of controlled and uncontrolled load
  - Accounting for a diverse mix and capability of controllable assets
- The value that can be derived from Aggregated DER spans multiple operation modes, demonstrating capability similar, but not equivalent, to existing Facility Classes.



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Lessons from participation in bi-directional energy services

Core Aggregated DER capability demonstrated in the BMO scenario can be categorised as follows:

- Aggregated DER can provide energy and capacity at times when the customer needs it.
- Aggregated DER can provide, or curtail, energy and capacity in response to market signals.
- Forecast improvements in generation and load and increased frequency of market submissions coincided with improved dispatch performance.
- Testing demonstrated that Aggregated DER has the potential to participate in the WEM if amendments are made to accommodate the unique characteristics observed.

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Essential System Service (ESS) – Contingency Raise

Jean-Philippe (JP) Montandon

Principal – Distributed Energy Resources (DER)

AEMO

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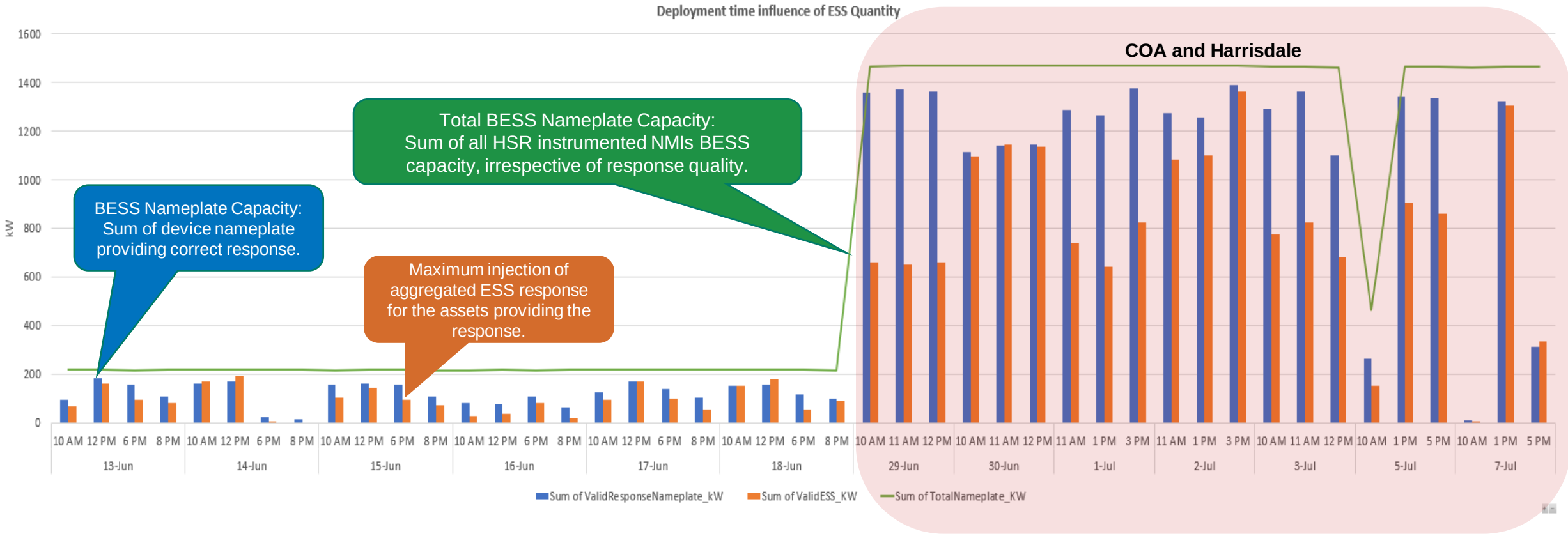
Contingency Reserve Raise

Response to Scheduled Tests:

- Residential assets CRR capacity is highly dependent on SOC and time-of-day since the assets operate mostly in BTM optimization and charge on excess solar.
- Massive increase in response through the addition of a total of 1.250 MW BESS assets (COA and Harrisdale BESS).
- Response quality and quantity remains highly variable, further analysis is required.



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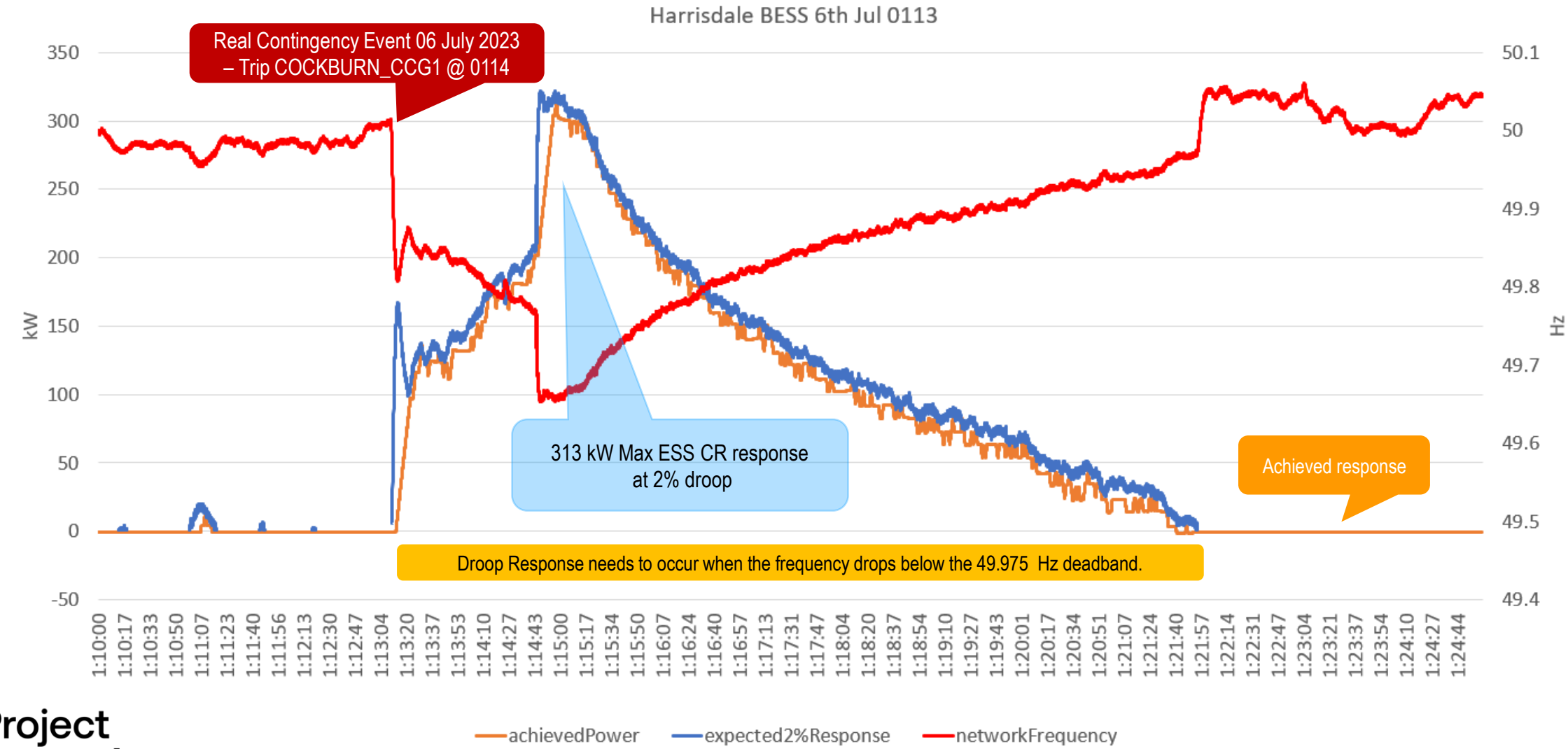
Contingency Reserve Raise

Harrisdale 1MW FOM BESS provides 97% of expected CRR response 06 July 2023 @ 0114



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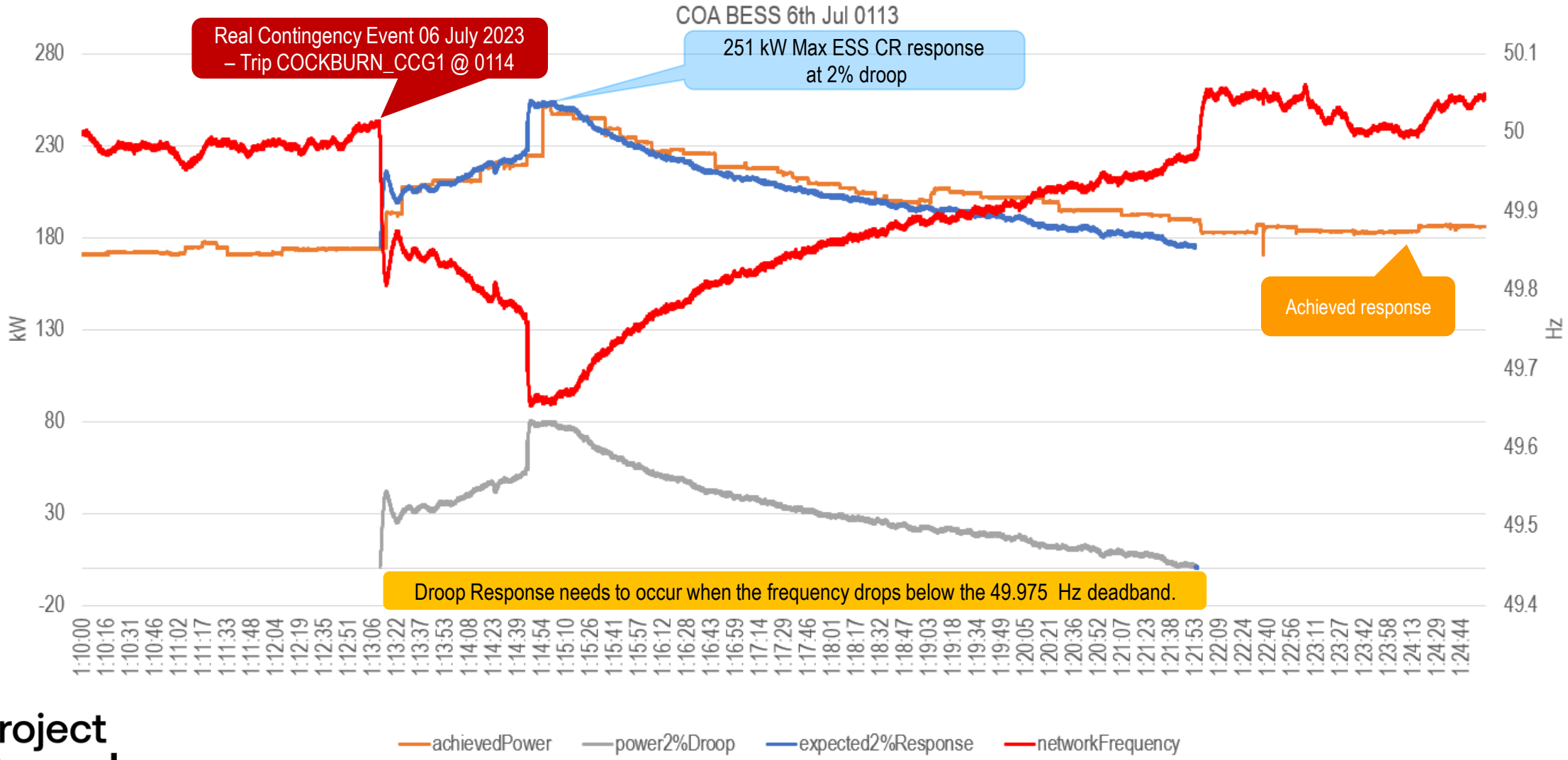
Contingency Reserve Raise

COA 0.25 MW BTM BESS provides 99% of expected CRR response 06 July 2023 @ 0114



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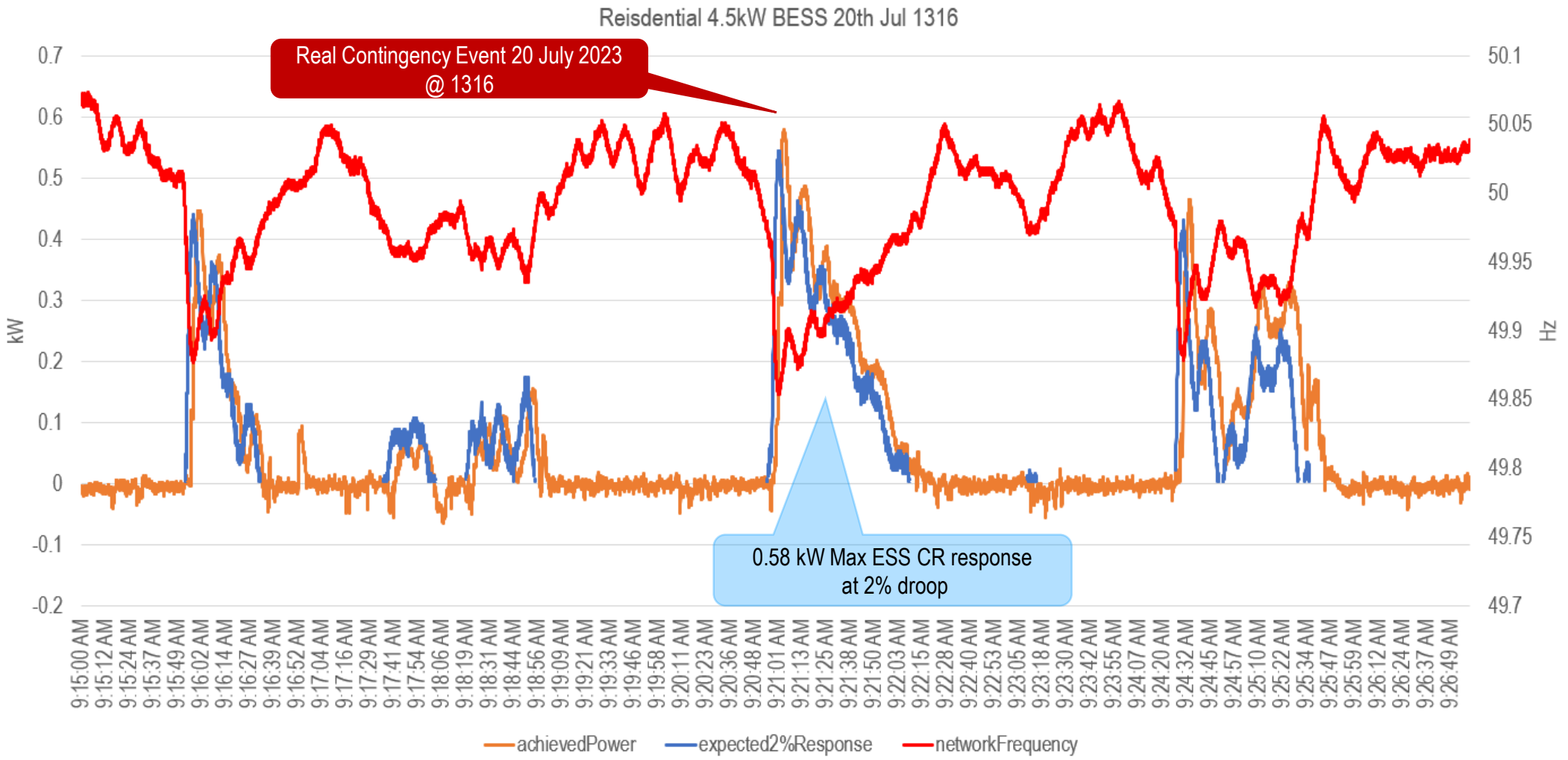
Contingency Reserve Raise

Residential 4.5 kW BTM BESS provides 107% of expected CRR response
20 July 2023 @ 1316



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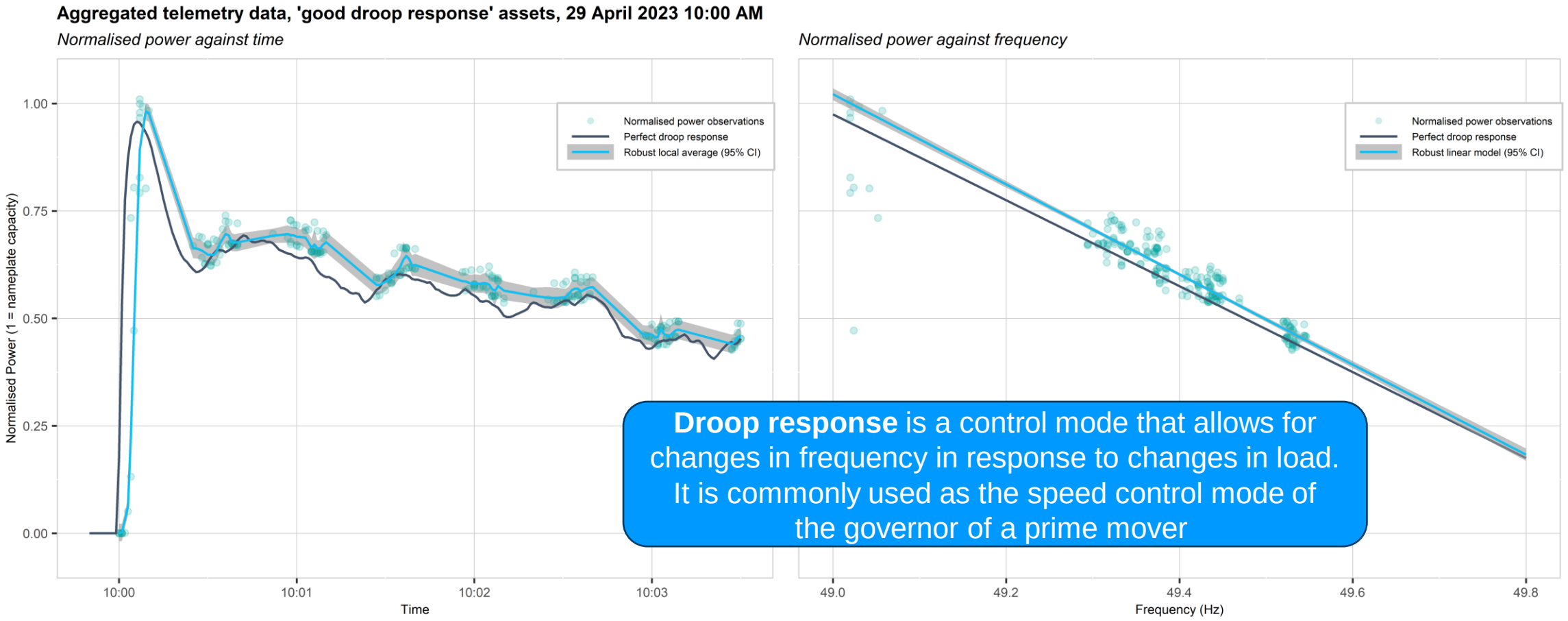
Synergy has found aggregated telemetry data can be used to assess facility-level ESS-CR performance

Note - The assessment of droop response



Droop response is a control mode that allows for changes in frequency in response to changes in load. It is commonly used as the speed control mode of the governor of a prime mover

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The key performance criteria for ESS-CR is to be capable of delivering the full enabled quantity in response to an event.

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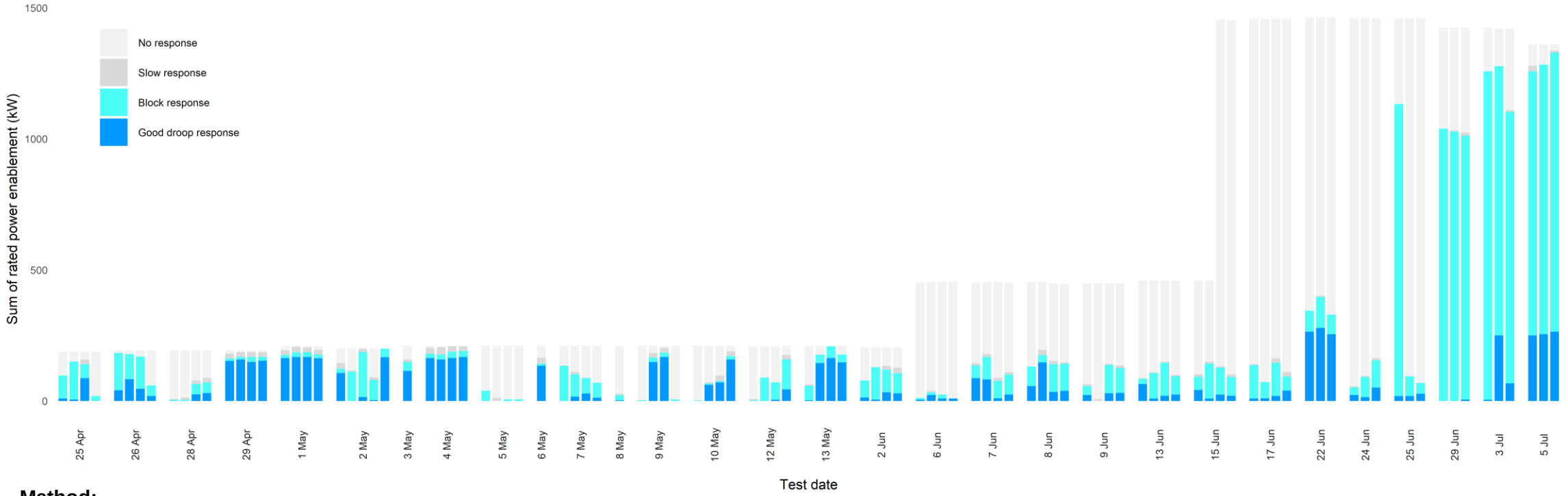
Synergy considers the evidence from the pilot points to viability of assessing ESS CRR performance using low speed data

The VPP's ESS performance was inconsistent over the stability period

Overview of ESS performance from 25 Apr to 5 Jul 2023 - assessment using telemetry data



Method:

- Comparison between each asset's normalised low speed data and the ideal droop response for the test, calculated at a lag that minimises the root mean squared error of the difference between the data
- Calculated root mean squared error (RMSE), absolute mean error (AME), maximum absolute error (MAE), and time correlation (TC) statistics
- The results above used the following allocation rules. Allocate to:
  - **Good droop response** if RMSE ≤ 0.1, and AME ≤ 0.1, and MAE ≤ 0.2.
  - **Slow response** if TC ≥ 0.85, and not a good response NMI
  - **Block response** if MAE ≤ 0.55, and not a good or slow response NMI
  - **No response** otherwise.

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ESS CRR Message sent to customers in the Pilot

synergy

$Firstname$, thank you for being part of Project Symphony

As you may remember, your participation in Project Symphony is due to end on 30 September 2023. Soon, we'll be sending you more information about this – and the possibility of an exciting opportunity to extend your participation to continue shaping WA's energy future.

Recognition for Project Symphony

We're pleased to let you know Project Symphony has been shortlisted as a finalist for the 'Innovation of the Year' award in the WA Energy Awards.

These awards recognise the people and organisations working to build a world-class energy industry. The awards selection process acknowledges the importance of innovation, best practice and continuous improvement across the sector. Winners will be announced on 24 August 2023.

The latest Project Symphony testing

In previous updates, we've shared three of the scenarios we have been testing as part of Project Symphony. Now, we have an update for you on the final scenario we have been testing, known as **Essential System Services (ESS)**.

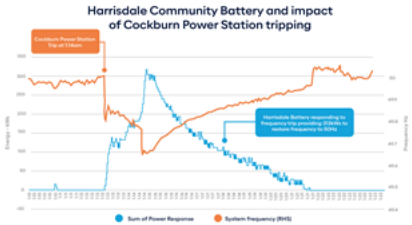
How this frequency response testing works

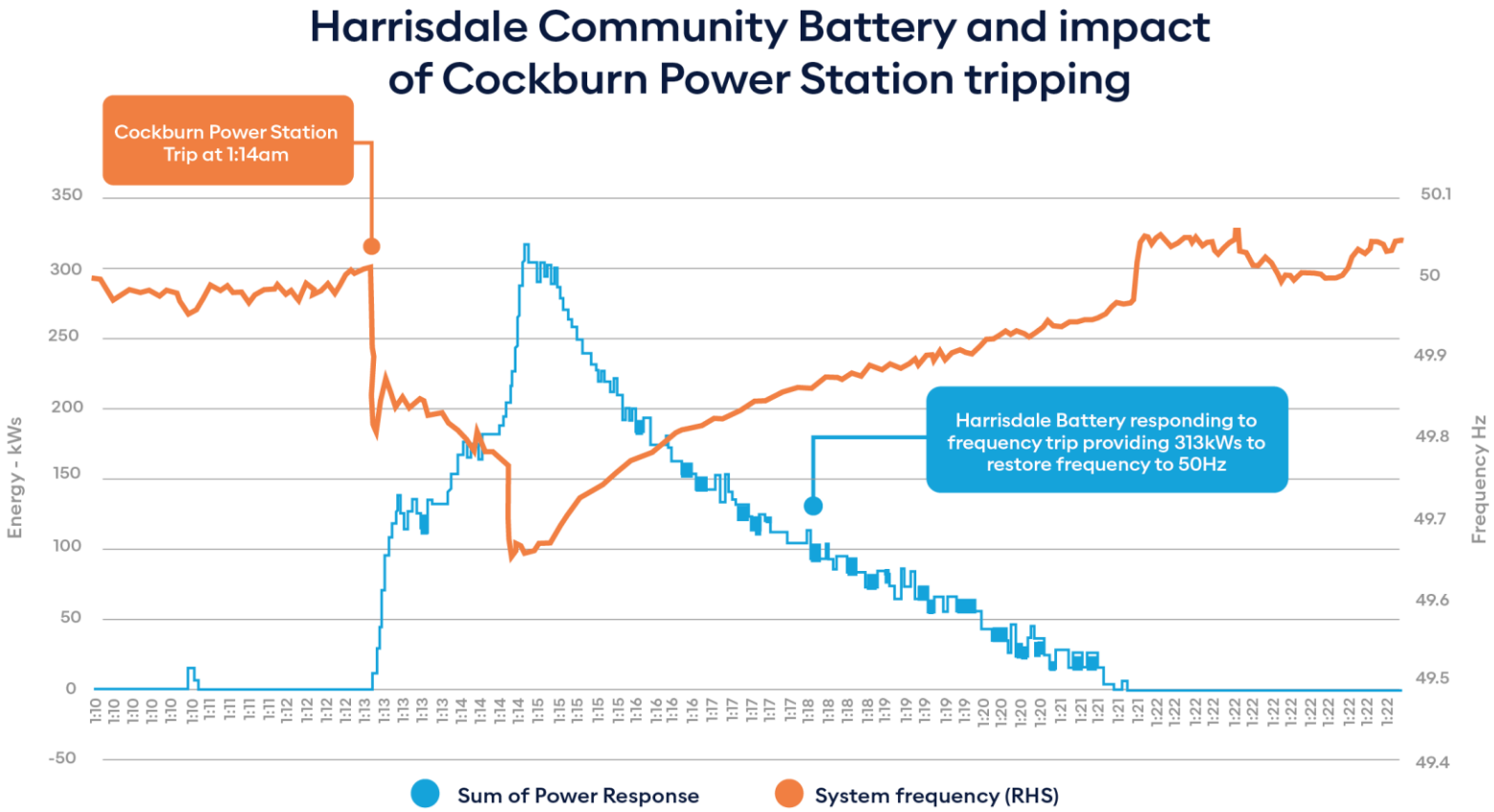
A VPP can be helpful in managing frequency events because of it can balance the supply and demand of electricity quickly and in real-time. Bringing together – or aggregating - distributed energy resources (DER with a VPP means we can use batteries to quickly support the grid if there's a frequency drop in the network.

Below is an example of the online generation of Cockburn Power Static suddenly experiencing a drop in power. In this real-life scenario:

- The Harrisdale Community Battery responded as a part of the Project Symphony VPP, rapidly supplying energy to help restore the balance in the system through our Contingency Raise service.
- Residential customer batteries were used, though did not respor as they did not have enough charge after the previous evening peak. At this stage, only residential or large community batteries can provide this response if they have enough charge.

In the figure below, you can see at 1:13am the system frequency drops from 50Hz to 49.8Hz and then again to 49.6Hz at 1:14am due Cockbur Power Station tripping. At the same time, the Harrisdale Community Battery kicks in to offer a Contingency Raise response to adjust to the change in frequency from Cockburn Power Station trip.
This happens within minutes to help keep the power grid and customer power supply stable.





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Constrain to Zero

Henning Bochenek

DER Project Symphony Product Owner

Synergy

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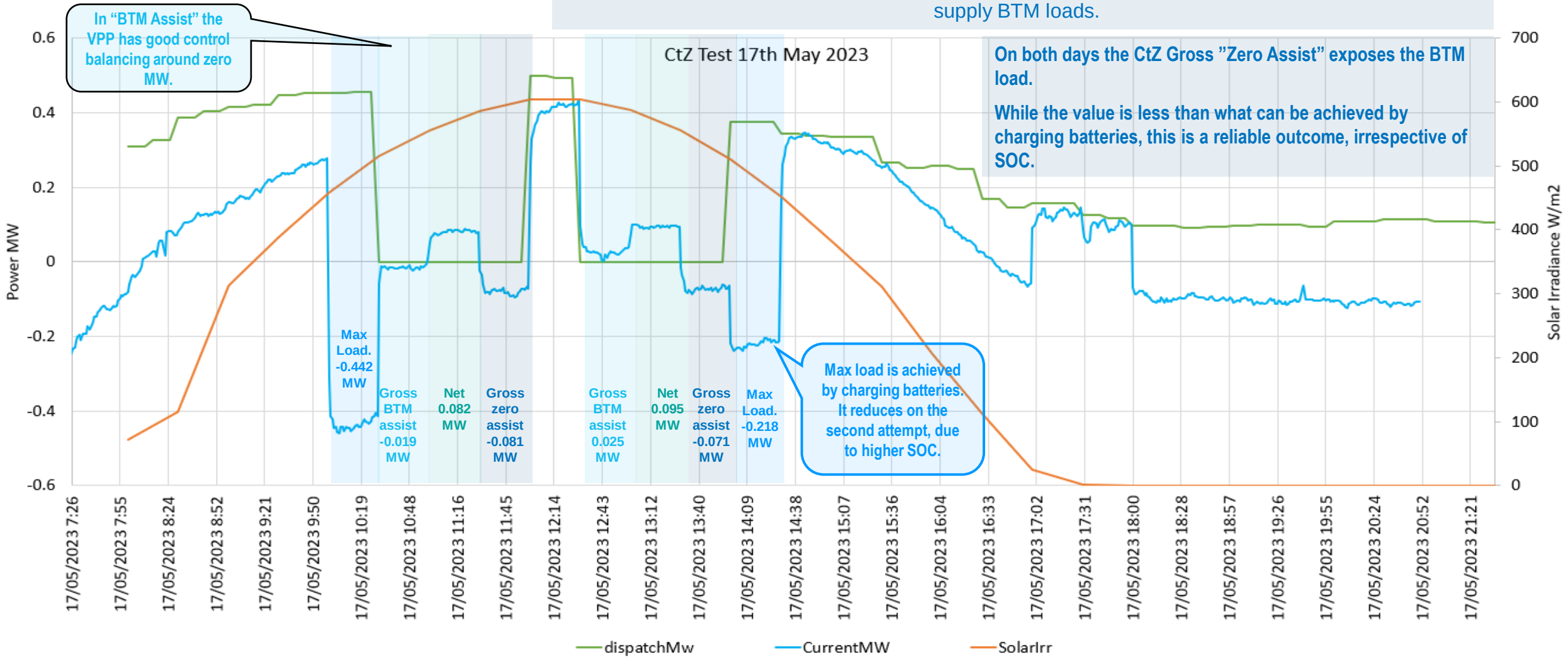
Constrain to Zero

17th of May 2023

CtZ Gross BTM Assist: Represents instruction to curtail PV generation to cover BTM loads for PV systems only, while allowing the BESS assets to continue to supply the BTM load where such system exist.

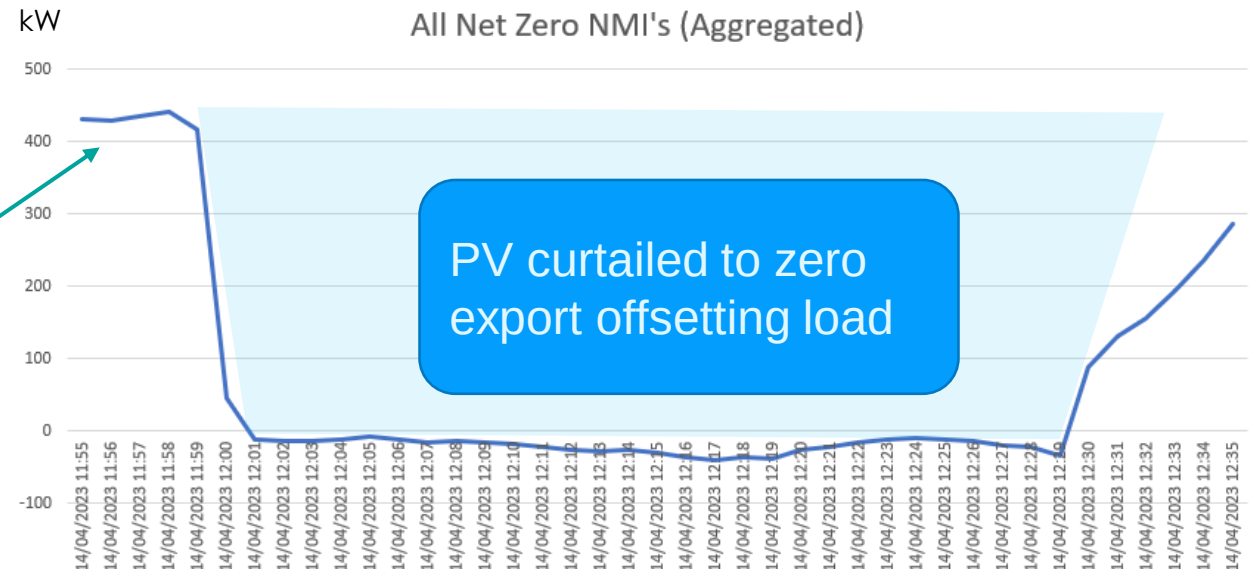
CtZ Net: Controls all available assets via the gateway device to achieve a target measure of zero net injection at the connection point.

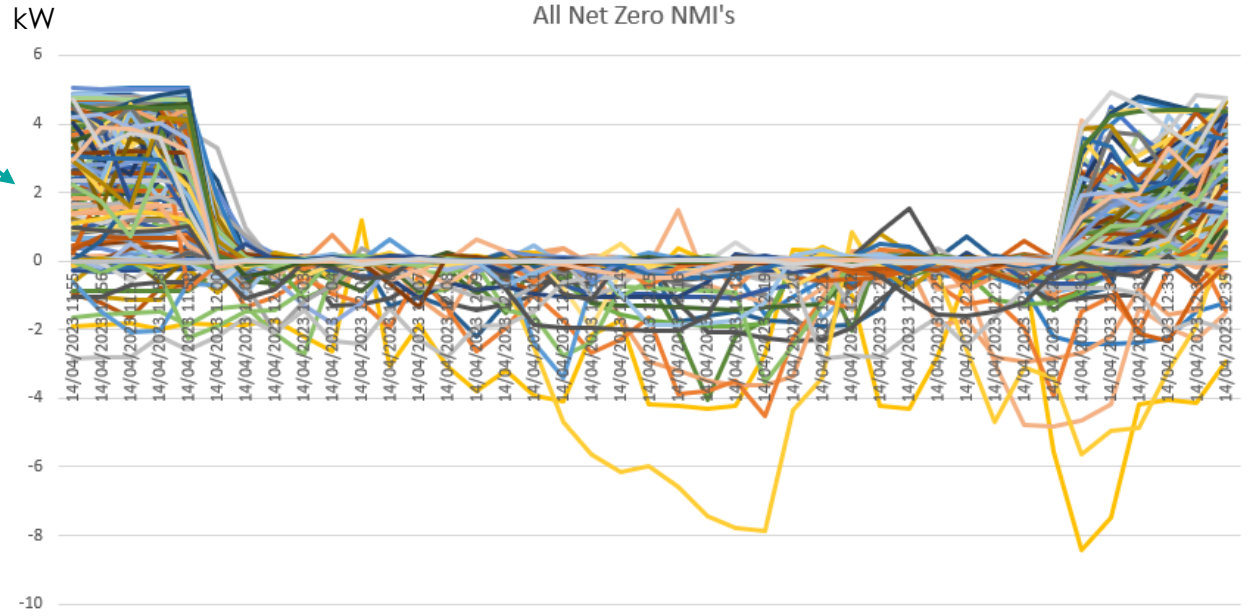
Gross zero assist: Represents a PV and BESS resource level response via the gateway device in an attempt to achieve load at the connection point through full PV curtailment and zero battery discharge to supply BTM loads.



Overall CTZ response – 200 homes

PV generating





DER devices include PV & batteries

Measured at connection Point (NMI)

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Value Stacking

Jean-Philippe (JP) Montandon

Principal – Distributed Energy Resources (DER)

AEMO

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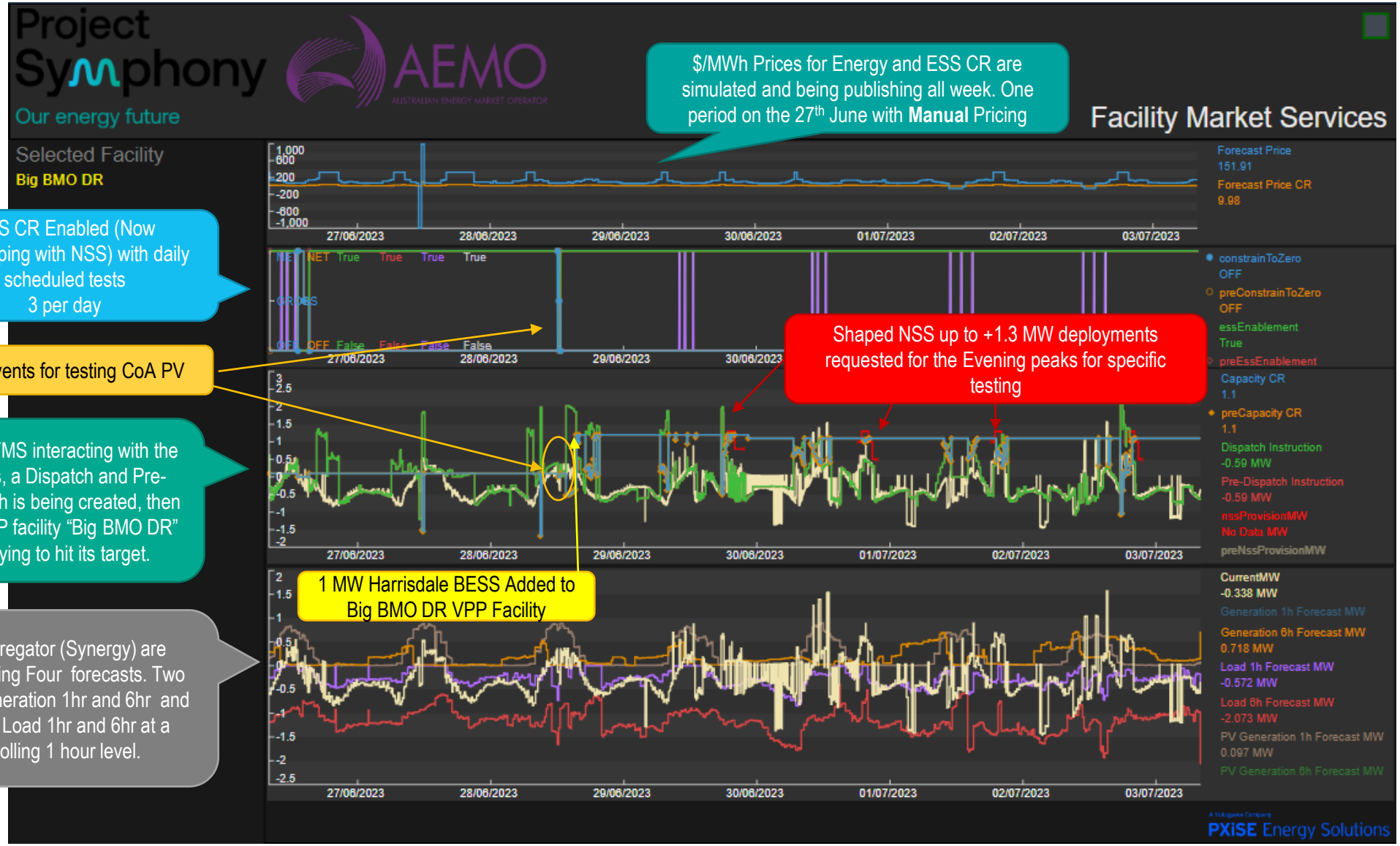
Weekly view Facility Value Stacking – All Scenarios

Big BMO DR VPP Facility was composed of Residential customers with PV & BESS, CoA PV & BESS, Harrisdale 1MW BESS and TPA (Rheem and Evergen) with up to **±2.5MWs** of bi-directional energy.

The VPP was participating in 4 project scenarios, BMO, CTZ, NSS and ESS CR. The facility was cleared and enabled in the market to provide **1.1MWs** of ESS CRR

Symphony Scenario
BMO
NSS
CTZ
ESS CR



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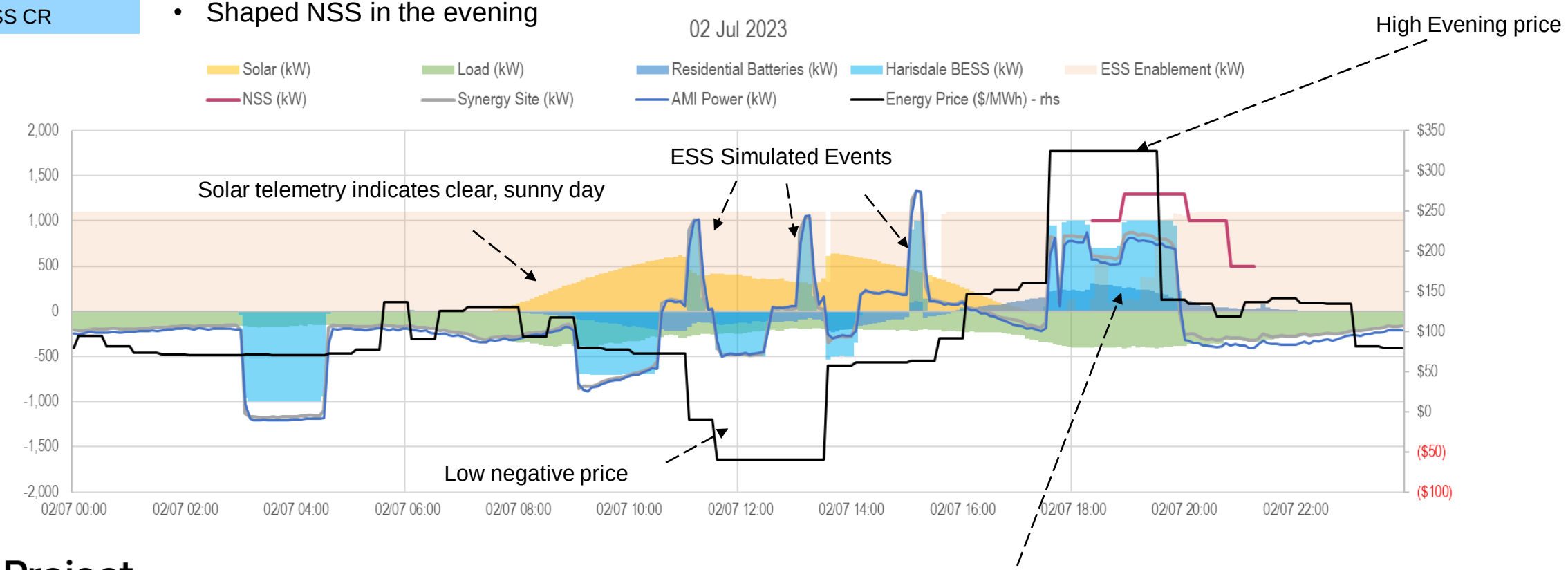
Value Stacking – Outcomes when testing 3 Core Scenarios

Symphony Scenario
BMO
NSS
CTZ (not tested)
ESS CR

- Solar telemetry indicates clear, sunny day.. The VPP was reacting to Wholesale Prices.
- Enabled for ESS CRR, and 3 x (15-min) tests – 11:00am, 1:00pm, and 3:00pm
- Market price fell to -$60/ MWh from 11:00am to 1:30pm – Charge BESS
- Market price rose to $345/ MWh from 5:30pm to 7:30pm – Discharge BESS
- Shaped NSS in the evening



NSS provided by orchestrating a combination of Residential BESS and Network BESS

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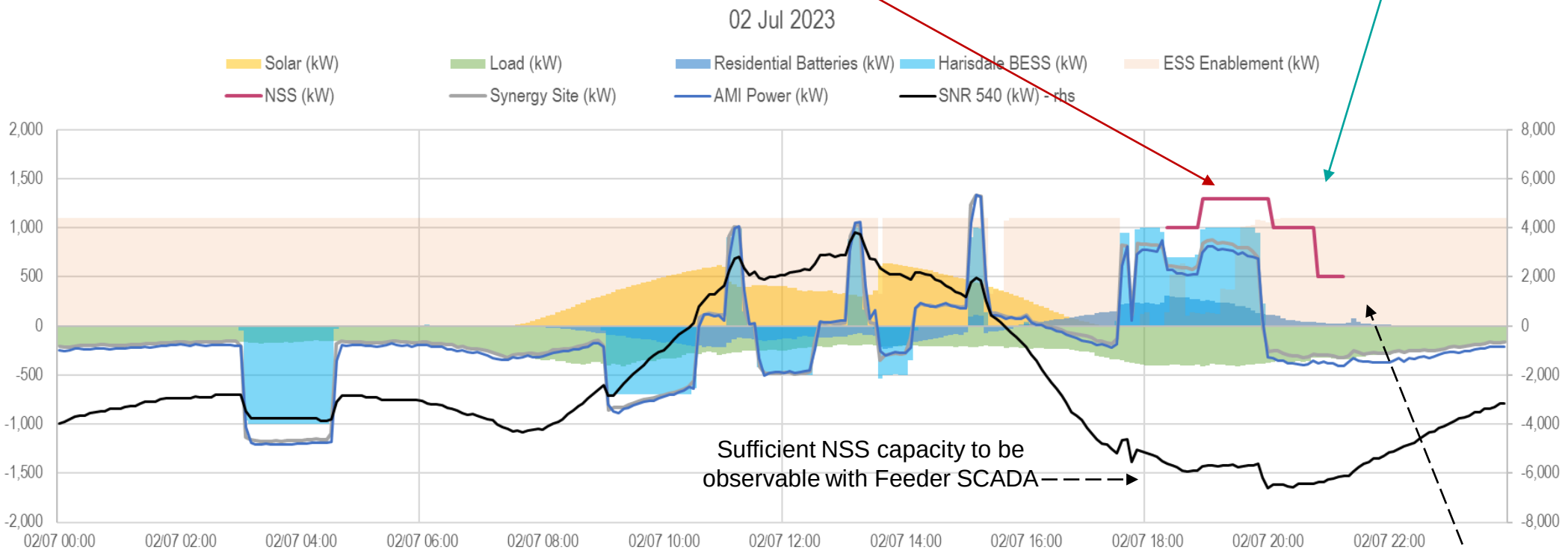
Value Stacking – Impact on the SNR feeder

NSS deployment signal sent with 24-hour notice and accepted; provision evident at start time

Shaped NSS
6:15 – 6:50pm : 1,000 kW
6:50 – 8:00pm : 1,300 kW
8:00 – 8:45pm : 1,000 kW
8:45 – 9:15pm : 500 kW

Energy prices drive the dispatch of Generation, prior to the NSS deployment



Sufficient NSS capacity to be observable with Feeder SCADA

Due to events earlier in the day, batteries reached minimum SoC and could not provide NSS after 7:50pm

Total net energy of all PV combined = 3,506 kWh generated

Total net energy of all Residential BESS combined = 81 kWh consumed

Total net energy of Harrisdale BESS = 415 kWh consumed

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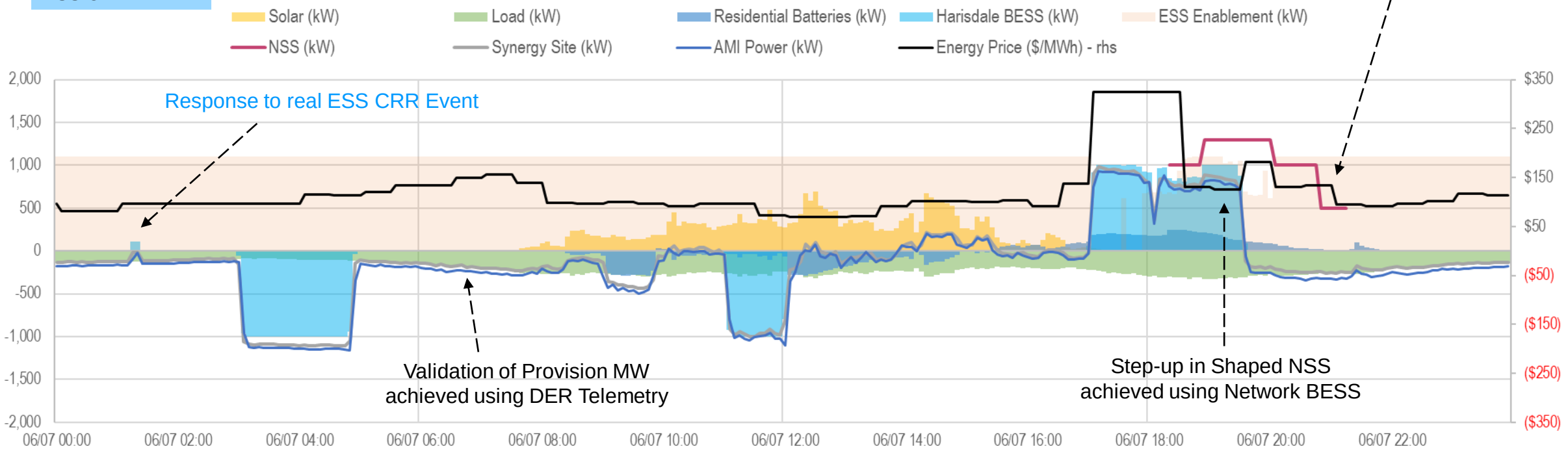
Value Stacking – Outcomes 3 Core Scenarios + Real ESS CRR

Symphony Scenario
BMO
NSS
CTZ (not tested)
ESS CR

- The VPP was participating in 3 project scenarios, BMO, NSS and ESS CR. The facility was cleared and enabled in the market to provide **1.1MWs** of ESS CRR. ***The VPP Facility responded as designed and all on its own***
- Initial analysis suggests the fleet of Residential BESS did not have enough State of Charge (SoC) to respond to the event as the BESS were depleted from the previous evening BMO and NSS discharge events.

Due to events earlier in the day, batteries reached minimum SoC and could not provide NSS after 7:50pm



- Fortunately, both the 1MW Harrisdale and CoA 300kW BESS had sufficient SoC.

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VPP Facility responded to real ESS CR event with Success.

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Q&A

Test & Learn

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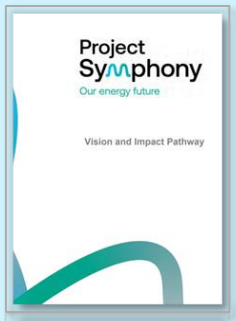


Vision and Pathway

Work Package 8.1

Outline of the economic value of a virtual power plant (VPP) in the South West Interconnected System (SWIS) of Western Australia.

Pilot area report

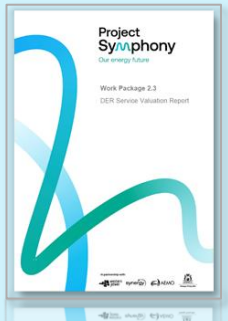
Work Package 1.1

Defines the selected pilot area that will be the focus of Project Symphony by using existing network data and possible future scenarios using Western Power's Grid Transformation Engine

DER Services

Work Package 2.1

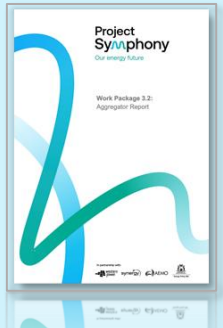
Outline of the economic value of a virtual power plant (VPP) in the South West Interconnected System (SWIS) of Western Australia.



DER Service Evaluation

Work Package 2.3

Valuation of Distributed Energy Resource Services:



Aggregator Report

Work Package 3.2

Results of two customer surveys to understand the sentiment of residential and commercial customers towards DER orchestration and Third-Party Aggregators.

Distribution Constraints Optimisation Algorithm Report

Work Package 4.1

This document compares four equitable allocation methods, or Distribution Constraint Optimisation Algorithms (DCOA),

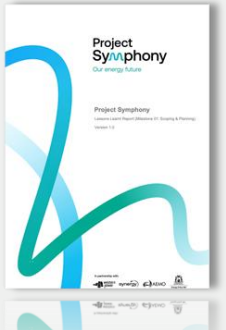
Aggregator Platform

Work Package 4.4

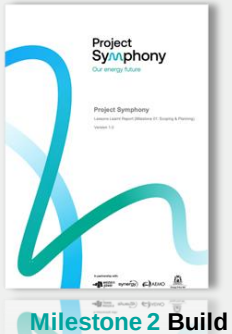
Describes the approach, requirements, and conceptual design for the Aggregator platform delivered by Synergy for Project Symphony.

*Combined with 4.2 & 4.3

LESSONS LEARNED



Milestone 1 Scope and Planning



Milestone 2 Build and Integrate

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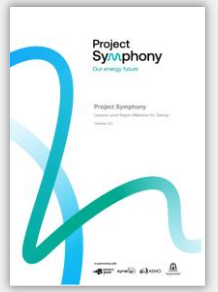
Platform (as built) Report

Work Package 5.1, 5.2 & 5.3

Documents the build of the Distribution System Operator (DSO), Distribution Market Operator (DMO), and Aggregator platforms, and the infrastructure required for them to communicate.

Assesses the build against the original platform requirements identified in the Project Symphony Platform Functional and Non-functional Requirements Report and shares key learnings from the build process.

LESSONS LEARNED



Milestone 3
Testing

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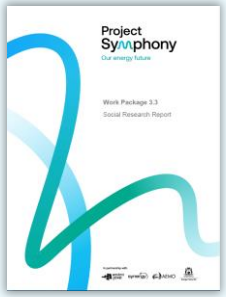
FUTURE ENTRIES TO LIBRARY

TO BE COMPLETED BY END OF 2023



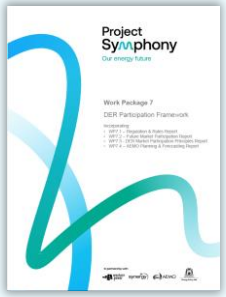
Social Research Report

Work Package 3.3

A study summarising the research conducted in partnership with the University of Tasmania aiming to address three key areas:

1. Assessment of what policy support needs to be considered to support the scaling of the Project from a pilot to mass market adoption.
2. Customer sentiment towards a variety of DER asset types and offerings.

The social equity implications of mass market adoption.

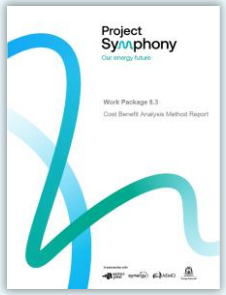


DER Participation Framework

Work Package 7

Recommendations for policy and rule changes to encourage and facilitate participation of aggregated DER in the WEM. Incorporates:

WP7.1 Regulation & Rules Report,
WP7.2 Future Market Participation Report,
WP7.3 DER Market Participation Principles Report,
WP7.4 AEMO Planning & Forecasting Report.

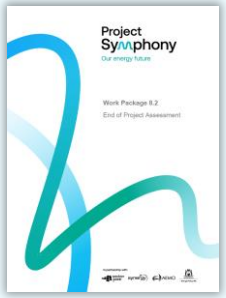


Cost Benefit Analysis

Work Package 8.3

A CBA report, that will provide the methodology and result by which the cost and benefits of the objectives of the Project and scalability to the rest of the WEM.

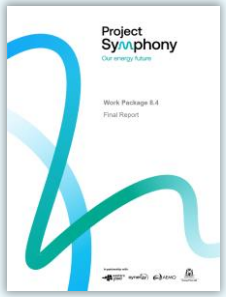
The CBA and learnings from Project Symphony will also provide insights and recommendations for the WEM to transition to the DSO, DMO and Aggregator models being developed within the DER roadmap, if applicable.



End of Project Assessment

Work Package 8.2

A report evaluating the status of the technology and commercial readiness of the pilot Project and transition into mainstream.

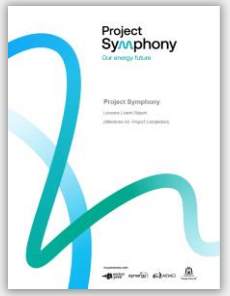


Final Report

Work Package 8.4

A close out report that will provide a summary of whether the Projects objectives were met; key learnings from each work package; and final Project costs against Budget. It will also conclude the evaluation of the status of the technology and commercial readiness of the pilot Project and transition into mainstream.

LESSONS LEARNED



Milestone 4

Project Completion

This will be an appendix to WP8.4

Project Symphony
Our energy future

In partnership with:
western power
synergy
AEMO
GOVERNMENT OF WESTERN AUSTRALIA
Energy Policy WA

Thank you