WA DER Market Participation Forum

28 March 2024

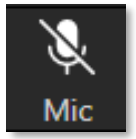
Welcome

Tom Butler – Acting Group Manager, WA Market Development and Energy Procurement

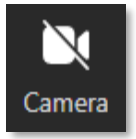
We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture.

We pay respect to Elders past and present.

Online housekeeping



- Please mute your microphone during the presentation.



- Please leave your camera off as well, but we'd love to see you during Q&A.
- We will pause regularly to give you time to comment in the chat or raise your hand to ask a question.

- We have a Q&A session at the end of today's session. Some questions may be saved for this session.

- We will share a copy of the presentation as a pdf after the meeting on our forum webpage: WA DER Market Participation Forum
- We welcome feedback via WADERProgram@aemo.com.au

Disclaimer: *Please note that this meeting will be recorded by AEMO and may be accessed and used by AEMO for* ***capturing meeting outcomes****. By continuing, you consent to AEMO recording the call and using the recording for this purpose. If you do not consent, you may exit the meeting. No other recording of the meeting is permitted.*

Agenda

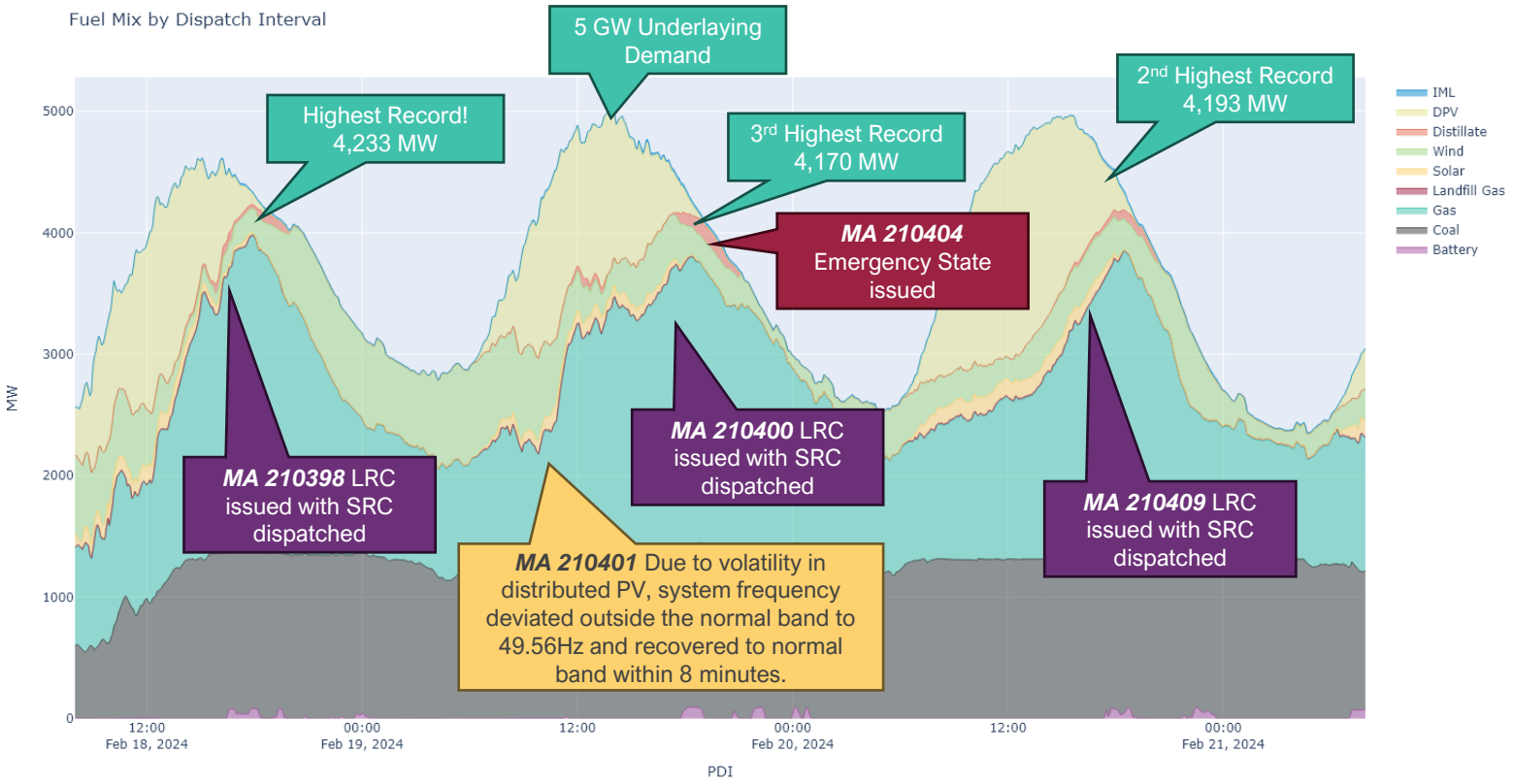
1. **Welcome** by Tom Butler
2. **Operational update from DER perspective** by Tom Butler
3. **Update from Energy Policy WA** by Aden Barker
4. **Progressing the DER Roadmap post Symphony**
   - **Key recommendations for the DMO** by Bruce Redmond
   - **DER Implementation 2024-25** by Bruce Redmond
   - **Project Encore** by JP Montandon
   - **Unregistered Equipment Portal** by JP Montandon
5. **DSO Update** by Andrew Blaver, Western Power
6. **Closing remarks and Q&A**

Operational update from DER perspective

Tom Butler

Record Operational Demand

Over 18 - 20 February the WEM experienced consecutive maximum operational demand records of 4,233 MW, 4,170 MW 4,193 MW respectively.



LRC = Low Reserve Conditions, MA = Market Advisory issued by AEMO,
SRC = Supplementary Reserve Capacity

Name	SRC Service Type	Quantity MW
Starling Energy	Energy Producing (DER)	1.5
AER	Load Reduction	3
Water Corporation	Load Reduction	50
Synergy	Load Reduction & Energy Producing (DER)	17.1
Enel X	Load Reduction	60
Shell Energy	Load Reduction	10
Cockburn Cement Limited	Load Reduction	7
NewGen Neerabup	Energy Producing	11.4
	Total	160

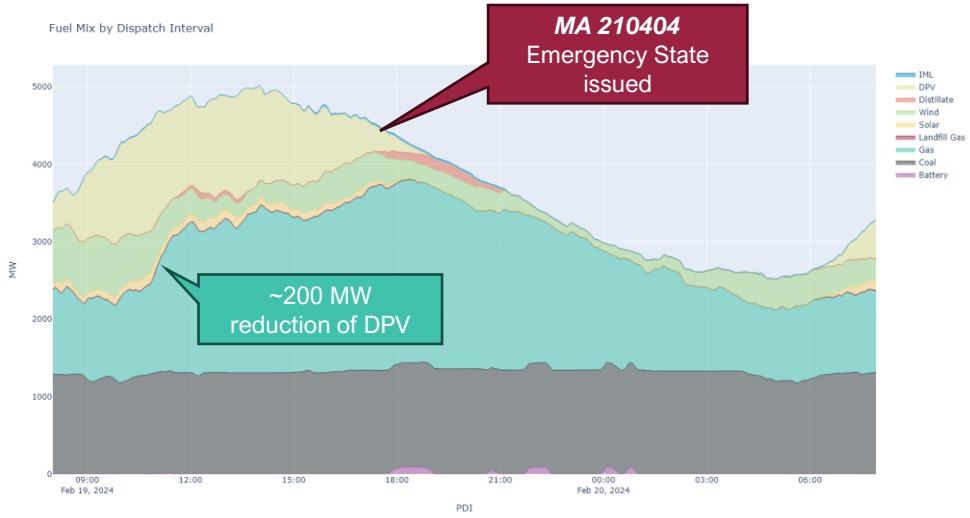
- DER accounts for 2.2% of the dispatched SRC contracted quantities.
- This action is required to maintain a secure reliable system in conjunction with other actions to maintain system security.

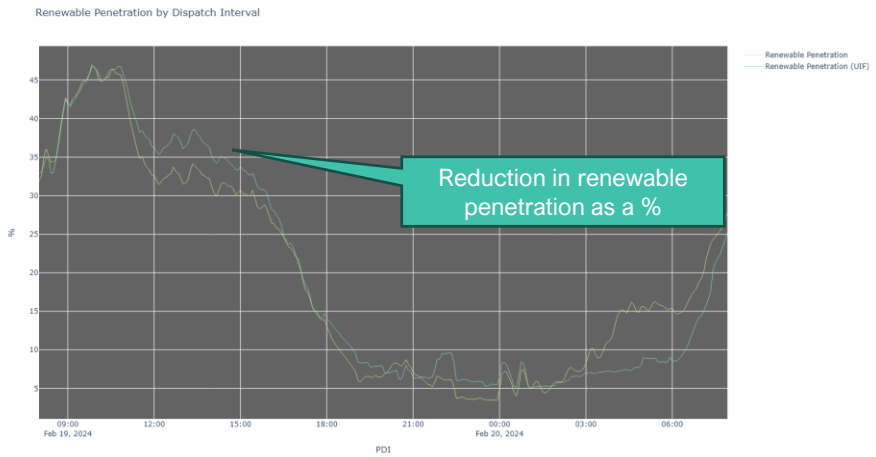
Volatility caused by DER

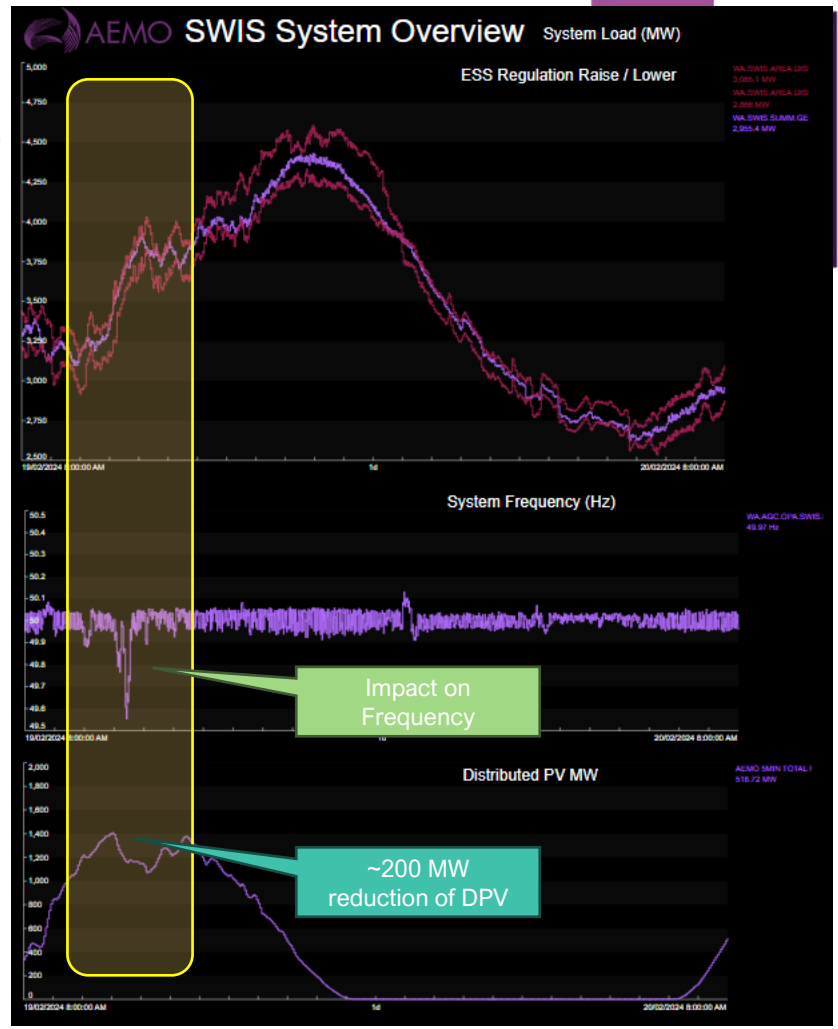
Example: Monday 19 February Event – Impact of Cloud on PV and record demand

The state of the system can change very quickly.

- A cloud band hit the Perth metro and greater SWIS that caused a ~200MW reduction which impacted the frequency (highlighted in yellow)
- AEMO issue a MA 210401 "***Due to volatility in distributed PV, system frequency deviated outside the normal band to 49.56Hz and recovered to normal band within 8 minutes***."
- This leads to the full utilisation of ESS Regulation services.
- Regulation services have incrementally increased with DPV penetration – but for this event ESS Regulation services were exhausted.
- Consideration of Symphony findings and recommendations highlight the inherent benefits of managing DPV volatility as batteries are introduced.







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

DER Participation and Market Integration – EPWA Update

Aden Barker

Director Electricity Networks & Customer Participation

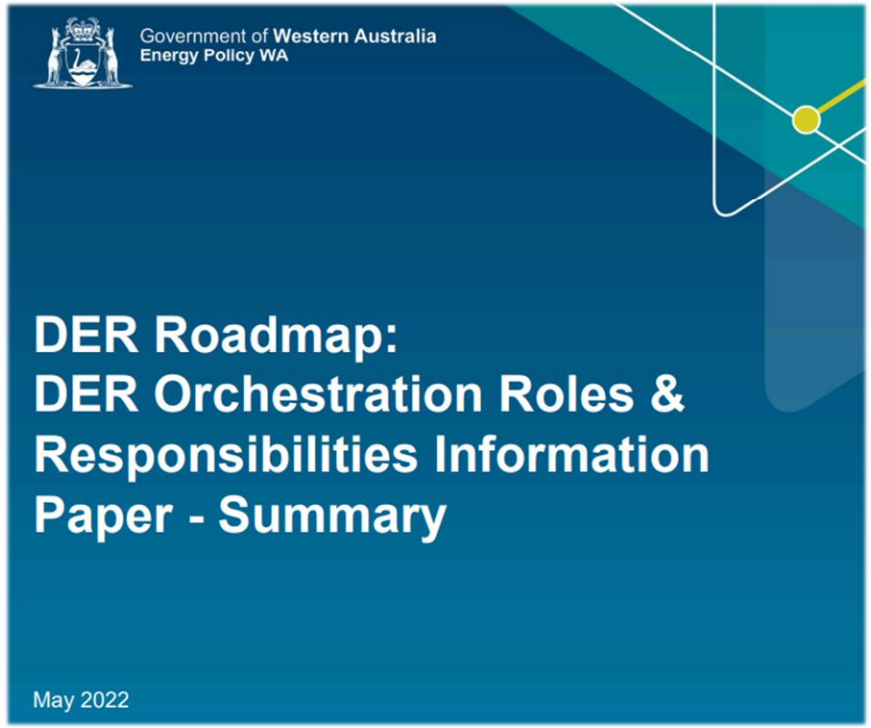
Energy Policy WA

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

DER Orchestration Roles & Responsibilities

Information Paper Phase 2 – overview

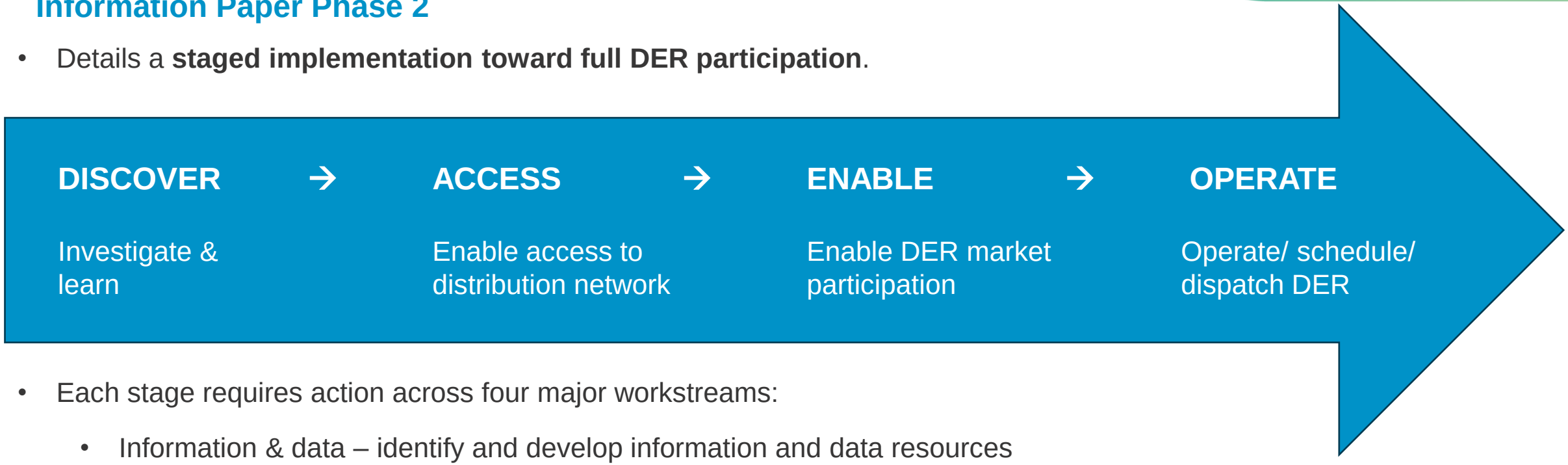
- Confirms DER orchestration policy positions and outlines the steps to implement them.
- Covers activity across five key themes:
    1. Installation standards & configuration
    2. Customer-Aggregator relationship
    3. Visibility of DER and DER activities
    4. NSS and WEM services
    5. DOE governance and capacity allocation
- Enables network and power system service provision by DER at scale.



DER Orchestration Roles & Responsibilities

Information Paper Phase 2

- Details a **staged implementation toward full DER participation**.



- Each stage requires action across four major workstreams:
  - Information & data – identify and develop information and data resources
  - Enabling processes – investigate, test and learn
  - Technical requirements – specific technical requirements
  - Regulatory settings – amend legislation and regulations to enable flexibility to be exploited

Electricity Industry Amendment (DER) Bill 2023

Improving existing arrangements and addressing new technologies

The Bill had three core elements (passed into law late-Feb 2024, Royal Assent 7 March 2024):

1. Introducing a single objective for the Act

As a result, decision-makers must now consider reliability; price; and for the first time, the environment (including GHG emissions).

2. Expanding the scope of the Rules

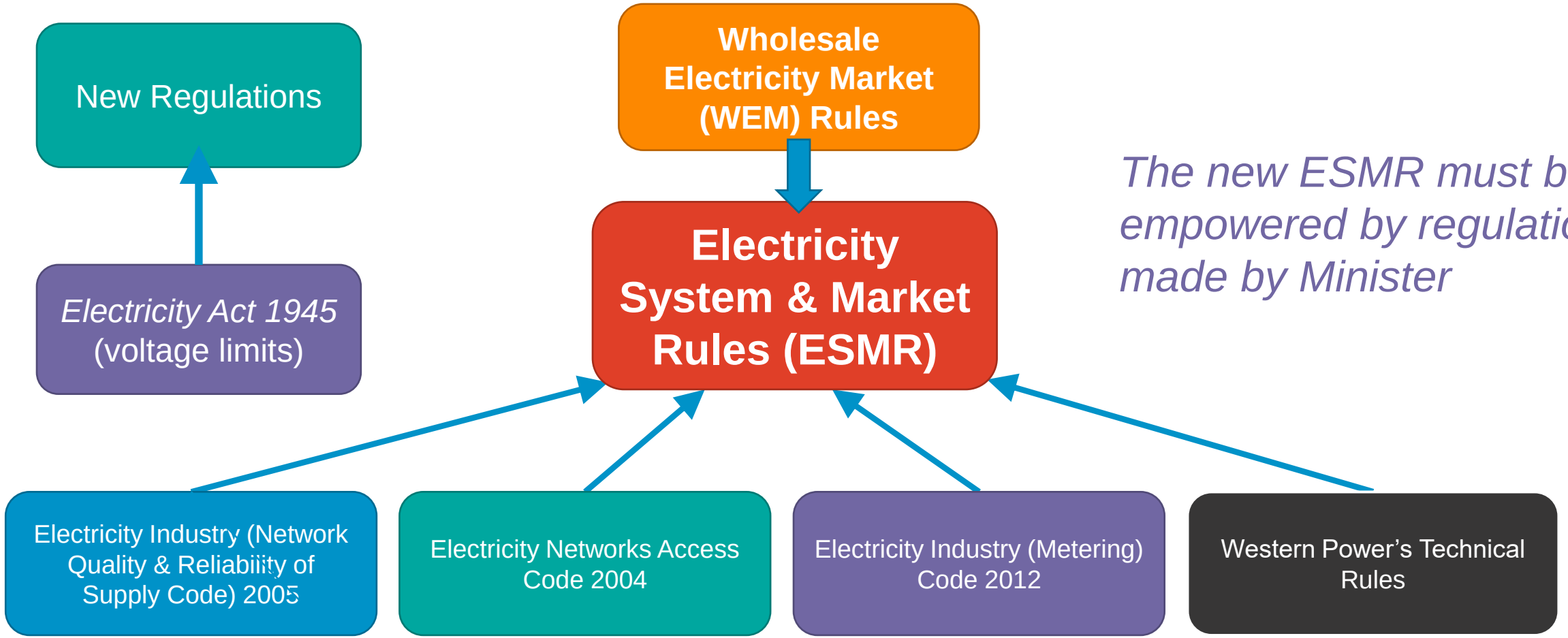
Existing legal instruments deal with similar issues in inconsistent ways – consolidating these within a single flexible instrument (the new Electricity System and Market Rules - ESMR) will allow for a clear and consistent framework

3. Improving arrangements to address new subject matter

There are limited powers, at present, to ensure Distributed Energy Resources (DER) are operating as they should. Regulation through the new ESMR can help manage the challenges DER poses to the power system and provide new opportunities for consumers to participate

This Bill addresses all three matters through new, enabling heads of power

2. Expanding the scope of the Rules



The new ESMR must be empowered by regulation made by Minister

DER Bill

Implementation

Direct alignment to the DER Orchestration Roles & Responsibilities work program

- **Empowers DER Orchestration policy** via enabling regulation of the distribution system.
- For example:
  - New defined terms eg *connected facility; electricity services; electricity system*
  - Directions to rectify non-compliance with technical and other requirements eg Standards
  - DSO function and governance
  - DSO and DMO interaction
  - DSO and network user, eg Aggregator, interaction
  - Etc

Next steps

- DER Orchestration Roles & Responsibilities Phase 2 Information Paper due for release **mid 2024.**
- Scoping for DER Bill implementation, including sequencing, is underway. Due for completion **end of April 2024**.
- First round of amendments and regulation are anticipated to come into effect **June 2024.**

Progressing the DER Roadmap post Project Symphony

Bruce Redmond, Workstream lead, WA Distributed Markets

Symphony Overview

Project Symphony Objectives

Four 'must-have' scenarios

- **Bi-Directional Energy – Balancing Market**
- **Constrain to Zero**
- **Network Support Services**
- **Essential System Service – Contingency Reserve Raise**

Project Symphony Pillars

Technical
Is it technically viable to orchestrate DER?

Customer
What do customers need to participate in VPPs?

Value
Do the benefits of DER orchestration outweigh the costs?

Policy and Regulation
What policy and regulation is required to support DER participation at scale?

Recommendations

Project Symphony
Our energy future

In partnership with:
western power
synergy
AEMO
Government of Western Australia
Energy Policy WA

ARENA Deliverables – Future entries to library

APPROVED & WITH ARENA FOR PUBLISHING

DER Participation Framework

Work Package 7

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

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

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

Project Symphony
Our energy future

Link: ARENA's knowledge sharing bank

In partnership with:
western power
synergy
AEMO
Government of Western Australia
Energy Policy WA

Key Recommendations impacting the DMO*

Pillar	1. Technical	2. Customer Experience	3. Value (New Energy Market)	4. Policy & Regulation
Overview	*Focused on maturing technical aspects of DER orchestration, including platform build, integration, data etc.*	*Focused on improving all elements related to achieving customer 'buy-in'.*	*Focused on creation / facilitation of all types of value from DER orchestration*	*Focused on changing / implementing regulation or policy settings to enable DER orchestration*
Tier 1 Recommendation *– Critical enabler*	1.1 Adopt a single communications protocol for all inverter-based DER (CSIP-AUS) to maximise asset interoperability. **1.2 Develop the business case for a 'DER Data Hub' to facilitate effective and efficient data exchange between the DMO, DSO and Aggregators.** **1.3 Develop specifications around parent Aggregator service delivery standards to accelerate compliance to service delivery standards in the WEM.**	2.1 Create simple, transparent and accurate customer facing information on VPP participation for communication throughout the customer journey to improve customer experience, buy-in and retention. 2.2 Develop end-to-end customer engagement tools to manage and improve the customer experience of VPP participation.	3.1 Commence work on policy solutions to establish market frameworks that support the participation of DER aggregations in the WEM. 3.2 Deliver a Network Support Service that achieves deferral of network augmentation, to confirm existing funding, recovery, incentivisation and coordination mechanisms are adequate at scale.	4.1 Support VPP visibility for the DMO and DSO through implementing amendments to wholesale electricity market rules as required. 4.2 Establish policy positions that appropriately incentivise aggregators to participate, and ensure value is passed through to customers. 4.3 Review and reform end to end DER installation, connection, commissioning and compliance processes.
Tier 2 Recommendation *– Enabler*	1.4 Explore opportunities to establish platform and communications solutions such as AMI to lower risk and achieve greater efficiencies. 1.5 Establish a 'DER Test Lab' accessible by DSO, Aggregator and DMO to prototype and test DER integration products and solutions prior to rollout.	2.3 Establish a SWIS-wide customer engagement strategy and plan to achieve a consistent and cohesive approach to improving general customer awareness of VPPs.	3.3 Quantify the actual value of DER asset participation for non contestable customers (>12 months data and without pilot participation costs) to better inform value streams and the distribution of value between DER owners and the aggregator. 3.4 Establish clear frameworks to enable 3PAs to engage with the parent aggregator Synergy for non-contestable customers, to reduce barriers of entry and ensure consistent customer experience.	4.4 Develop incentives to accelerate the take-up of energy storage, bringing forward power system and decarbonisation benefits. 4.5 Mandate adoption of *AS4755 Demand Response Standard* by OEMs to enable greater interoperability of air conditioners for load management by aggregators. 4.6 Introduce dynamic network connections to enable unconstrained connection of DER onto Western Power's network to improve customer choice and flexibility whilst contributing to decarbonisation.

Project Symphony
Our energy future

*Key recommendations to be published in Final Report on ARENA website

In partnership with:
western power synergy AEMO Energy Policy WA

Key Recommendations impacting the DMO*

Pillar	1. Technical	2. Customer Experience	3. Value (New Energy Market)	4. Policy & Regulation
Overview	*Focused on maturing technical aspects of DER orchestration, including platform build, integration, data etc.*	*Focused on improving all elements related to achieving customer 'buy-in'.*	*Focused on creation / facilitation of all types of value from DER orchestration*	*Focused on changing / implementing regulation or policy settings to enable DER orchestration*
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Project Symphony
Our energy future

*Key recommendations to be published in Final Report on ARENA website

DER Implementation 2024 - 2025

DER Aggregator Participation - SIPS

AEMO has submitted a second in period submission (SIPS) to the ERA that includes funding to continue the **WEM DER Aggregator Participation project** in year 3 (2024-25FY) of the AR6 period.

This will encompass **Stage 1** of the project which establishes AEMO's role as the DMO to support actions from the DER Roadmap and Energy Policy WA's Roles and Responsibilities papers. As the DMO, AEMO will interface with the DSO and aggregators to enhance visibility of orchestrated DER while planning for future implementation in the WEM.

Stage 1 scope includes:

- Planning and implementation of data exchange solutions to ensure aggregators and the DSO can integrate with AEMO's systems.
- Incorporating foundational changes that would support future registration of DER aggregators, and data exchanges, such as evolution of the DER register.
- Enabling participation of DER aggregations in the RCM, including technology classes and CRC application categories and assessment as per the new WEM Rules to enable award of capacity credits in Stage 2.
- Support EPWA in development of WEM Rules and associated procedures and planning and design for Stage 2.

Visibility of large DER systems, VPPs & aggregations

Why does AEMO need visibility and predictability of orchestration of DER (aggregations) and large DER systems in a high DER future?

- Large MW contribution from DER systems, VPPs and aggregations which AEMO currently has limited visibility, representing a growing ‘blind spot’
- Growth in community and network BESS, residential BESS and VPPs is anticipated
- There are currently no control requirements, for <5 MW plant such as VPPs and community batteries
- With the growth of VPP’s AEMO anticipates significant retailer managed DER and VPPs (price responsive)
- ‘Visibility’ will inform AEMO of the existence and operation of VPPs and large DER systems in the SWIS that have the capability of moving material amounts of energy

Visibility of large DER systems, VPPs & aggregations

Why does AEMO need visibility and predictability of orchestration of DER (aggregations) and large DER systems in a high DER future?

- Visibility data will be integrated into AEMO's operational forecasting to ensure dispatch and market outcomes are not undermined by major changes in demand and generation forecasts
- This will enable effective and efficient decision-making when maintaining the supply-demand balance to ensure continued safe, secure, and reliable supply of electricity to consumers in challenging operating conditions, as the power system transitions to a highly distributed energy future

What's in it for VPP's?

- Enables a soft transition to future market participation and provides additional value streams for the customer and aggregators

Visibility of distribution level constraints & network support services

Why does AEMO need visibility of DOEs and Network Support Services?

- Volume of DER under Dynamic Operating Envelope (DOE) management and NSS is currently small but expected to grow rapidly. Western Power is committed to introducing DOEs and leveraging DER to provide NSS to reduce localised network constraints and defer network augmentation
- In a high DER future, with large volumes of aggregated DER capacity, Distribution network limits will become increasingly material and could impact flows in the Transmission system
- Currently there is no operational coordination or data exchange arrangements formalised between AEMO and Western Power, or a mechanism in place for AEMO to coordinate the NSS energy movements into system planning, thus AEMO is unable to adjust operational planning and forecasts in response to DOE updates and activation of NSS contracts
- Development of a NCESS unitary framework for both Transmission and Distribution level NCESS as per the Roles & Responsibilities phase 2 recommendations.

What's in it for Service Providers?

- Confidence in adherence to DOE's will improve network and system outcomes and enable connection of larger DER systems

NCESS: Non Co-optimised Essential System Services

Predictability of DER

Why does AEMO need DER performance specifications for large DER systems, VPPs and aggregations?

- Large MW contribution from DER systems, VPPs and aggregations currently have no performance specifications or obligations to adhere to. This creates an increasing risk to power system security when many of these systems have similar operating behaviour.

  For example, how do we reduce the system security risk of VPP platforms hosting 100MW's of capacity, and what operating guidelines (e.g. ramp rates) do VPP's need to follow when activating large portfolios?

What's in it for Service Providers?

- From the outset, Service Providers will have visibility of the technical requirements to operate large capacity fleets. This will enable development of control and optimisation capability, in readiness for future market participation and access to services

Incorporate DER into the Reserve Capacity Mechanism (RCM)

Why does AEMO want to incorporate DER into the RCM?

- AEMO's 2023 ESOO highlights longer-term forecasts of capacity shortfalls
- To encourage investment, DER aggregations should be encouraged to register in the market and be paid for the capacity they can provide. Unless there are incentives, Aggregators are unlikely to participate unless they can receive capacity revenue
- Currently there is no DER specific requirements in the RCM, or a suitable facility class for DER aggregations

What's in it for Aggregators?

- Earn capacity credits for providing capacity to the system, and pathway to participate in the Wholesale Electricity Markets (WEM)

DER Implementation 2024 / 2025

What are we doing?

- Implement a Visibility Framework to enable visibility of active DER and aggregations
- Implement a Data Exchange Solution to enable DER data to be shared with AEMO
- Determine data sharing requirements with Aggregators and Western Power
- Define performance specifications for DER systems, VPPs and aggregations

Support EPWA deliver policy, development of new procedures & processes

- DER inclusion into the RCM for 2025 EOI (yr1)
- Continue stakeholder engagement and consultation
- Planning for market participation (2026-2028)

ENCORE

Jean-Philippe (JP) Montandon

Acting Manager, WA Distributed Markets

About Project Encore

Project Encore bridges the gap between the end of the Project Symphony to further inform key WEM implementation activities to enable the continued advancement of the DER Roadmap towards registration and participation in the WEM.

In partnership with:

western power synergy AEMO GOVERNMENT OF WESTERN AUSTRALIA Energy Policy WA

Project Objectives – Why did we do Encore?

1. Integration & Orchestration of DER

- Focus on supporting a safe, reliable, lower carbon, and more efficient electricity system, with the goal of demonstrating feasibility and **performance in the wholesale energy market**, whilst developing a **performance standard** that communicates the requirements for Aggregator performance when integrating and providing energy in the WEM.

- Improve partner-specific platform functionality and reliability, focusing on seamless integration with existing interfaces. **Enhance forecasting** and **dispatch capabilities**, including the integration of third-party aggregators, for increased operational efficiency.

2. Technical & Financial Feasibility

Show the technical and financial feasibility of DER orchestration in a simulated market for Energy, ESS-CR, and NSS, and technical viability of compliance with **dispatch instructions** and **dynamic operating envelopes**. In doing so, it will provide;

- **DER Visibility**, Project Encore will provide the opportunity to further develop AEMO's approach to visibility through data provided by the DSO and the Aggregator. Considering the VPP Visibility Framework, constraints derived by the DSO, visibility of the deployment of network support services and VPP registration information AEMO will seek to further refine requirements and use cases for this information and inform how key assets, such as the DER Register should evolve.

- **Reserve Capacity Assessment** of the appropriateness of settings and processes for certifying the DER Aggregation for Reserve Capacity in the WEM, drawing on specific testing of Reserve Capacity Requirements in Encore to understand aggregator performance and identify key changes to WEM rules and/or procedures to enable certification of this technology in the future.

3. Orchestration for NSS

- Simulate addressing a forecasted **0.9MW overloading** on SNR zone substation during the 23/24 summer.
- Test the feasibility of a **direct DSO to Aggregator deployment** and dispatch of NSS signal to clarify the Roles and Responsibilities gap that was identified and not tested in Symphony, whilst maintaining adherence to dispatch instructions for the facility issued by AEMO as per the Hybrid model.
- To quantify to what extent aggregated **residential air conditioner** demand management is technically feasible and cost effective in reducing peak demand in a localised segment of the Distribution network.
- Assess the viability of BESS to provide an available and reliable NSS capability.

4. Customer Experience

Investigate customer **perceptions** and **receptiveness** towards implementing demand management strategies for air conditioners during peak summer periods, assessing whether customers are likely to notice and accept such measures.

encore

In partnership with:

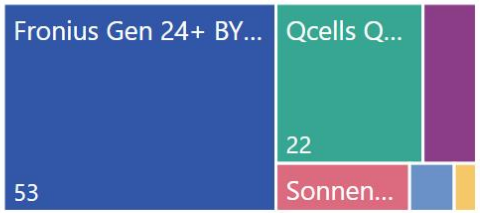
western power synergy AEMO Government of Western Australia Energy Policy WA

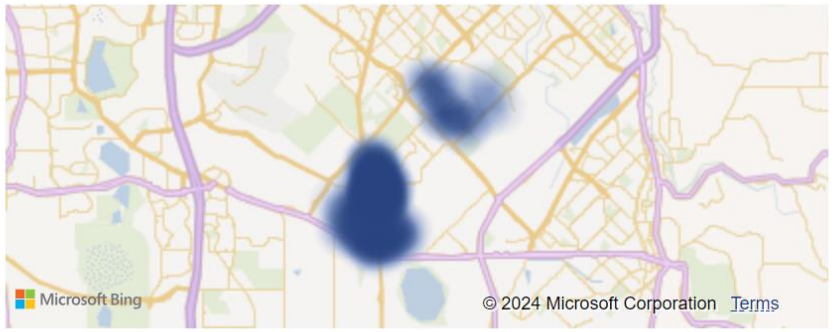
synergy encore

238
Contracts Signed

458
Total Assets Signed

BESS types signed



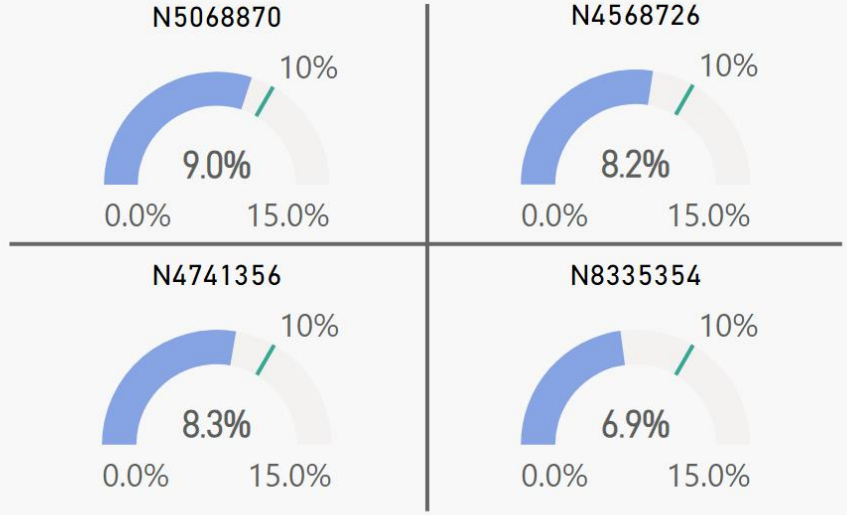


1,910
Total kW

200	152
Solar	AC
90	16
BESS	HWS

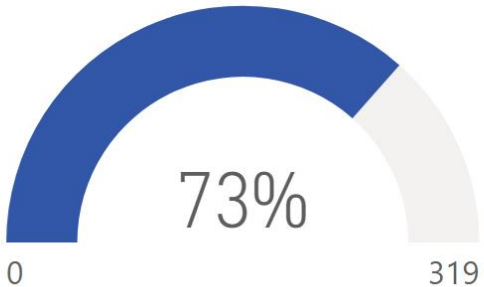
AC by Compatibility

DRM Reduction % of Demand



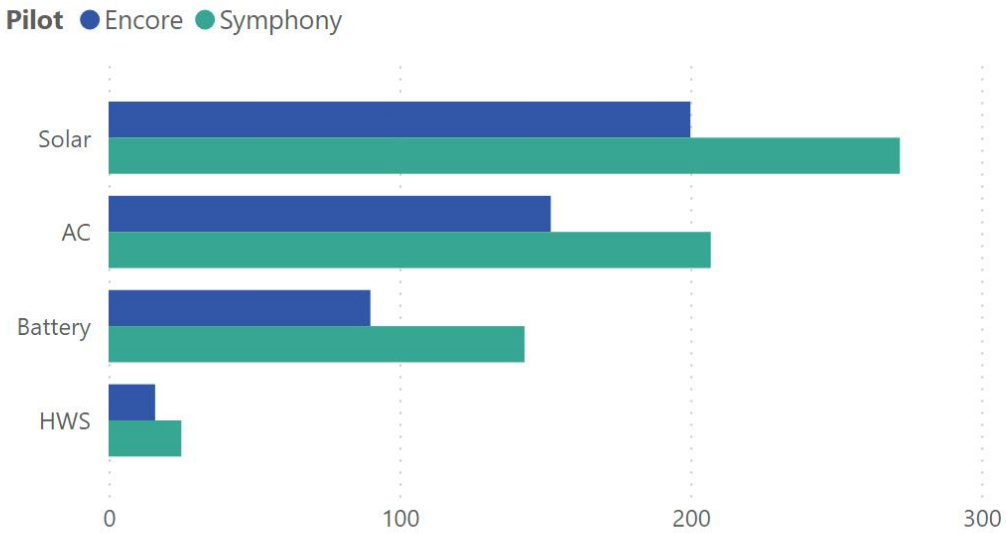
Project Symphony vs Encore

Eligible Customers Rolled Over from Symphony*



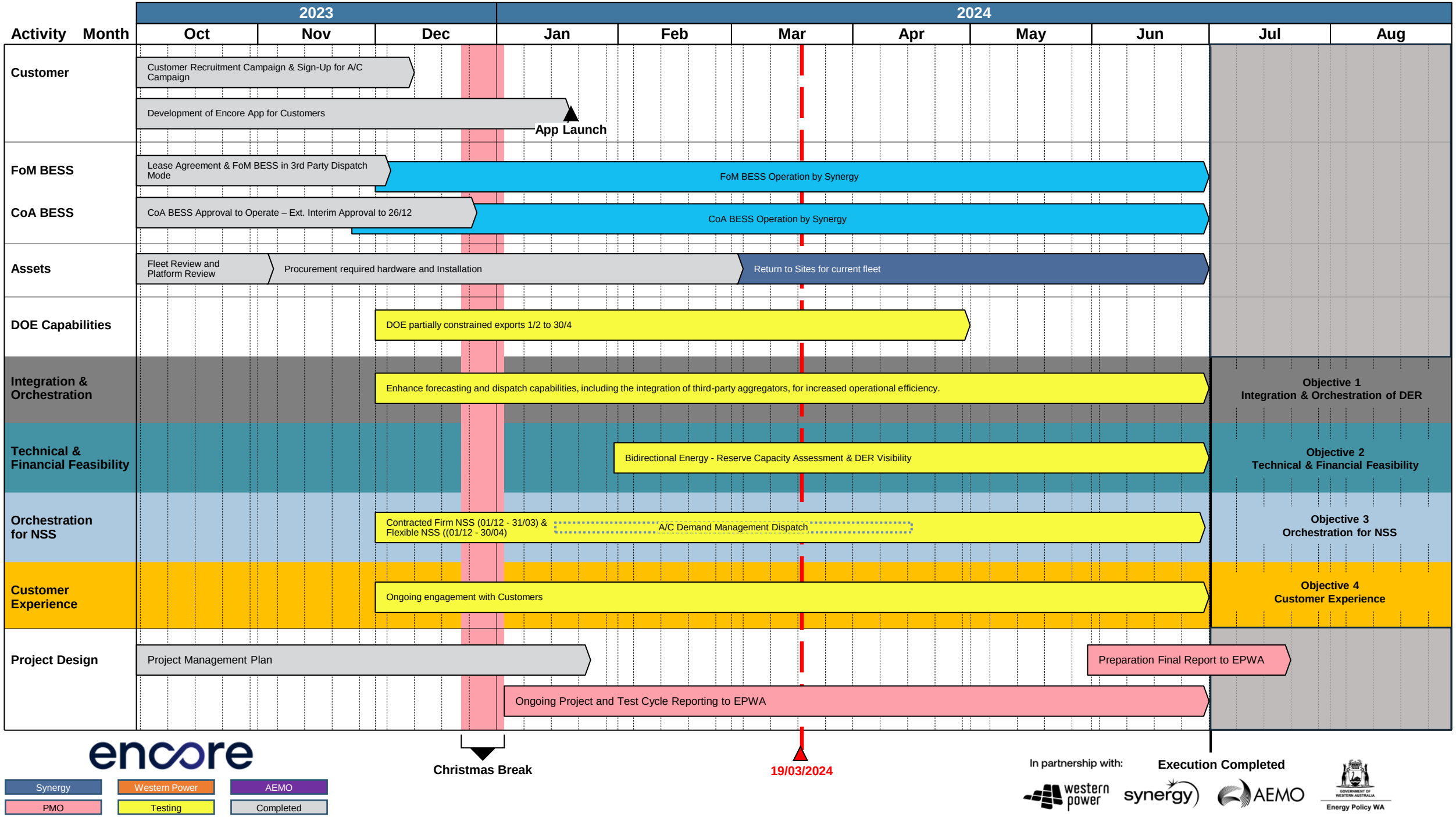
*319 of the 335 Symphony customers were assessed as eligible to roll over to Encore.

Assets per Pilot



DT	AC Count	Max Demand*	Controlled capacity**	DRM Reduction % of Demand (assumes 90% operational)
N5068870	13	436.3	43.68	9.0%
N4741356	10	321.5	29.68	8.3%
N4568726	8	314.8	28.78	8.2%
N8335354	7	279.9	21.34	6.9%

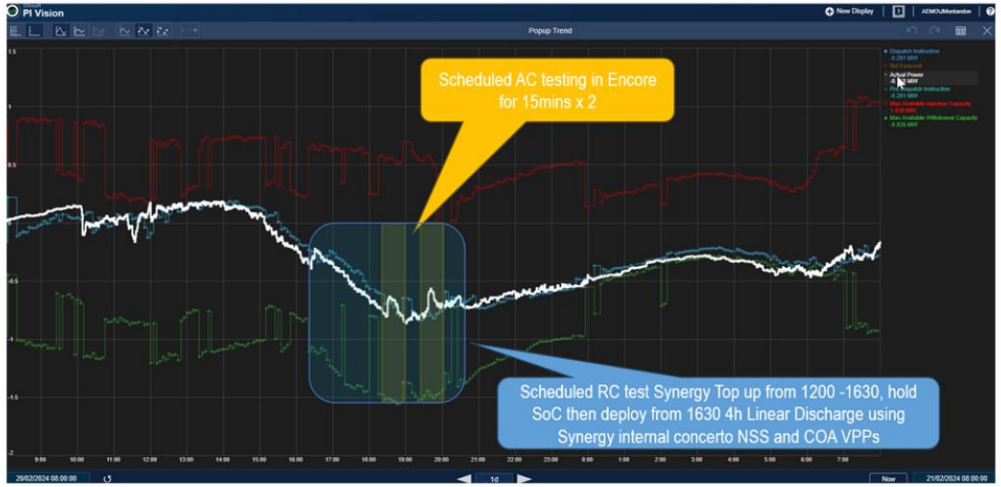
* Based data provided by WP 09/10/2023 ** Assuming operating at 80% of peak


2023
2024
Activity
Month
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Customer
Customer Recruitment Campaign & Sign-Up for A/C Campaign
Development of Encore App for Customers
App Launch
FoM BESS
Lease Agreement & FoM BESS in 3rd Party Dispatch Mode
FoM BESS Operation by Synergy
CoA BESS
CoA BESS Approval to Operate – Ext. Interim Approval to 26/12
CoA BESS Operation by Synergy
Assets
Fleet Review and Platform Review
Procurement required hardware and Installation
Return to Sites for current fleet
DOE Capabilities
DOE partially constrained exports 1/2 to 30/4
Integration & Orchestration
Enhance forecasting and dispatch capabilities, including the integration of third-party aggregators, for increased operational efficiency.
Objective 1
Integration & Orchestration of DER
Technical & Financial Feasibility
Bidirectional Energy - Reserve Capacity Assessment & DER Visibility
Objective 2
Technical & Financial Feasibility
Orchestration for NSS
Contracted Firm NSS (01/12 - 31/03) & Flexible NSS ((01/12 - 30/04)
A/C Demand Management Dispatch
Objective 3
Orchestration for NSS
Customer Experience
Ongoing engagement with Customers
Objective 4
Customer Experience
Project Design
Project Management Plan
Preparation Final Report to EPWA
Ongoing Project and Test Cycle Reporting to EPWA
Christmas Break
19/03/2024
Execution Completed
encore
Synergy
Western Power
AEMO
PMO
Testing
Completed
In partnership with:
western power
synergy
AEMO
Energy Policy WA

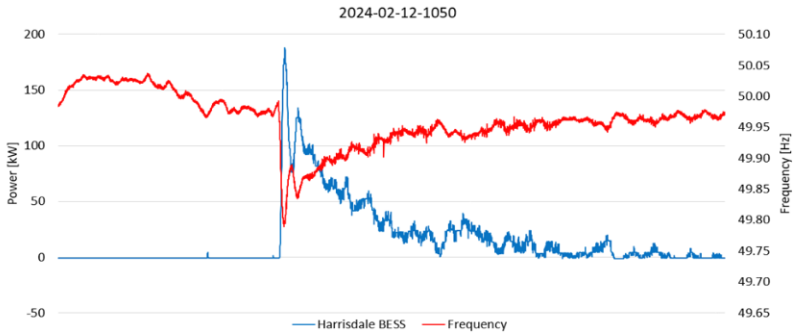
Project Update - Partners

- A consideration of **Aggregators** as opposed to the current Generator Performance Standards;
- **Reserve Capacity Recommendations** with the inclusion of Aggregators and Virtual Power Plants against the current Certified Reserve Capacity Accreditation process;
- **Credible ESS CRR response** analysis including AS4777 and Droop;
- **Visibility of the DER Ecosystem** and recommendations for post Encore. Recommendations for how AEMO can build all the related visibility information into operations (such as operational forecasting, registration, dispatch to registered aggregators for example).

Reserve Capacity testing high level outcomes

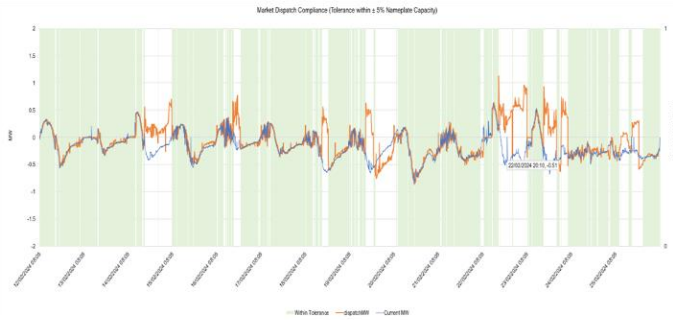


ESS Response analysis i.e. HBESS



Visibility of VPP – Market and Technical Outcomes

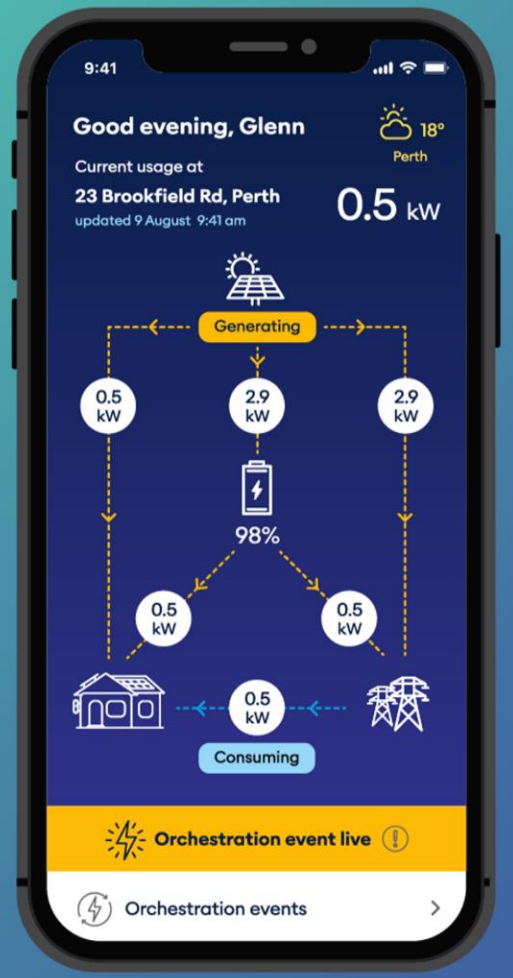
Dispatch Instructions Compliance

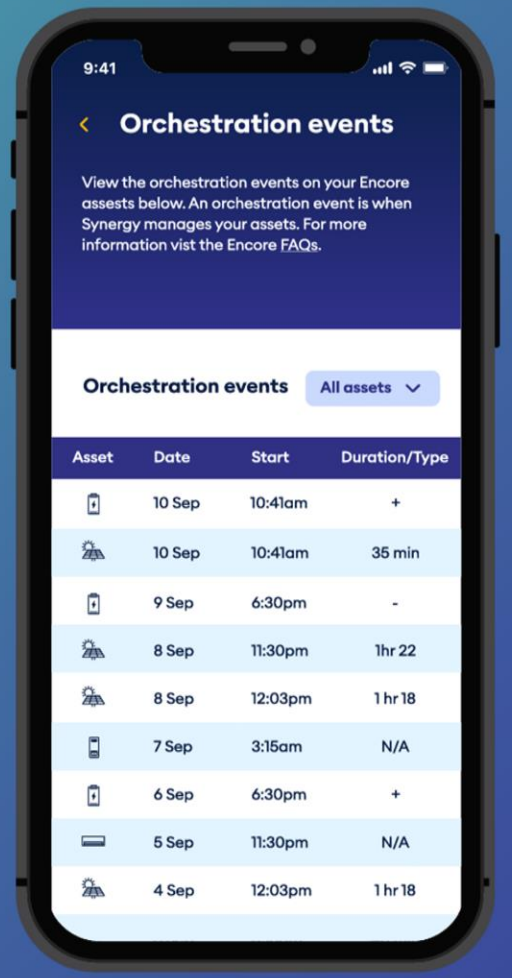


synergy

- **Enhance Orchestration and Value capabilities** as a stepping stone towards optimisation of assets to service allocation, supporting partner goals via asset orchestration, and driving value
- **Implement real time data** flows that can support forecasting and optimisation, as well as building capabilities for an improved dispatch performance in a real time environment
- **Demonstrate reliable provision of NSS as aggregator**
- **Assess A/C demand management** reliability and effectiveness and understand customer experience and sentiment towards A/C DRM
- **Increase visibility of the DER** orchestration for customers via Encore App as proof of concept for project duration
- Utilise Encore for **continued Third Party Aggregator integration and increased testing**

Customer Application released to Encore Customers



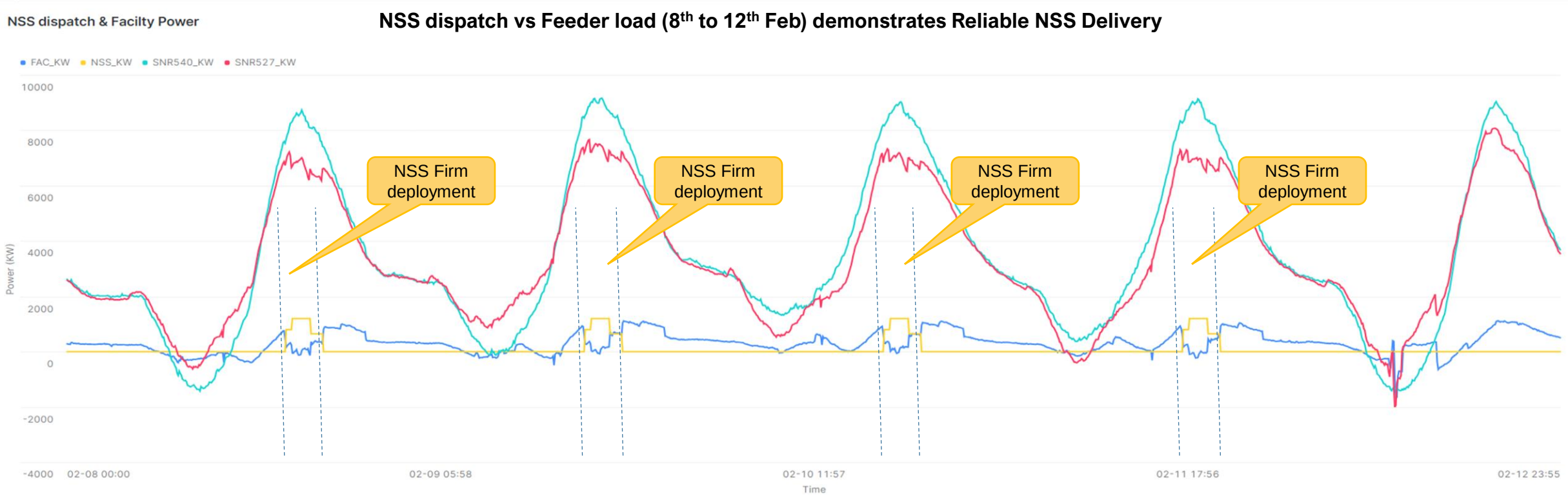


encore

In partnership with:

western power synergy AEMO Government of Western Australia Energy Policy WA

NSS dispatch vs Feeder load (8th to 12th Feb) demonstrates Reliable NSS Delivery



- Validate reliable DOE deployment and compliance on SNR 540 feeder, including the utilization of AMI
- Prove **NSS as a reliable and cost-effective** solution for SNR substation overload.
- Assess **residential A/C demand management** for peak reduction efficiency.
- Demonstrate Front of Meter (“FoM”) BESS's **operational reliability** and show capability for value stacking

In partnership with:

Unregistered Equipment Portal

A new **Transitional** DER solution

Unregistered Equipment Portal

What is the Unregistered Equipment Portal (UEP)?

- The UEP, delivered under the AEMO's DER workstream, is a secure and open-access business-to-business digital solution that:
  - Allows AEMO to send and receive Activation instructions, notification and confirmation with NCESS and SRC service providers in the WEM – in particular where we do not have existing integrations;
  - Facilitates the exchange of diverse datasets, ranging from 'real-time' telemetry to bulk file uploads, in support of multiple DER use cases (including EMS availability); and
  - Integrates with a central infrastructure (i.e. the message broker) to communicate via one:one channels – with expansion planned in the next stage of work to enable one:many transactions.
- To better enable and manage Virtual Power Plants (VPPs) in the WEM to provide contracted services to AEMO under NCESS and SRC contracts, the UEP aims to support AEMO's operational teams by reducing reliance on manual processes.
- Phase 1 of the project went Live on **Friday 15 March 2024.** Phase 2 may deliver additional minor enhancements if required.

What will it be used for?

Intended Usage for Internal AEMO Stakeholders and External Service Providers:

The solution will be used:

1. AEMO to store new & *current** SRC and NCESS contracts data and contact details.
2. As a new communication means that coordinates with phone and email exchanges (the UEP utilises AEMO's Whisper system) to provide activation communications to Service Providers for NCESS and SRC services.
3. To create a digital activation audit trail in a central location for all unregistered equipment provider activations, sharing this with AEMO's WA Settlements team to confirm payment under contract terms.
4. As a window to gain visibility of Service Providers' 'facility' telemetry data to provide insights into Service Provider performance (in the formats available).

* Current contracts use only email and phone call to activate contracts, UEP will be in addition.

Why should our Service Providers adopt the UEP?

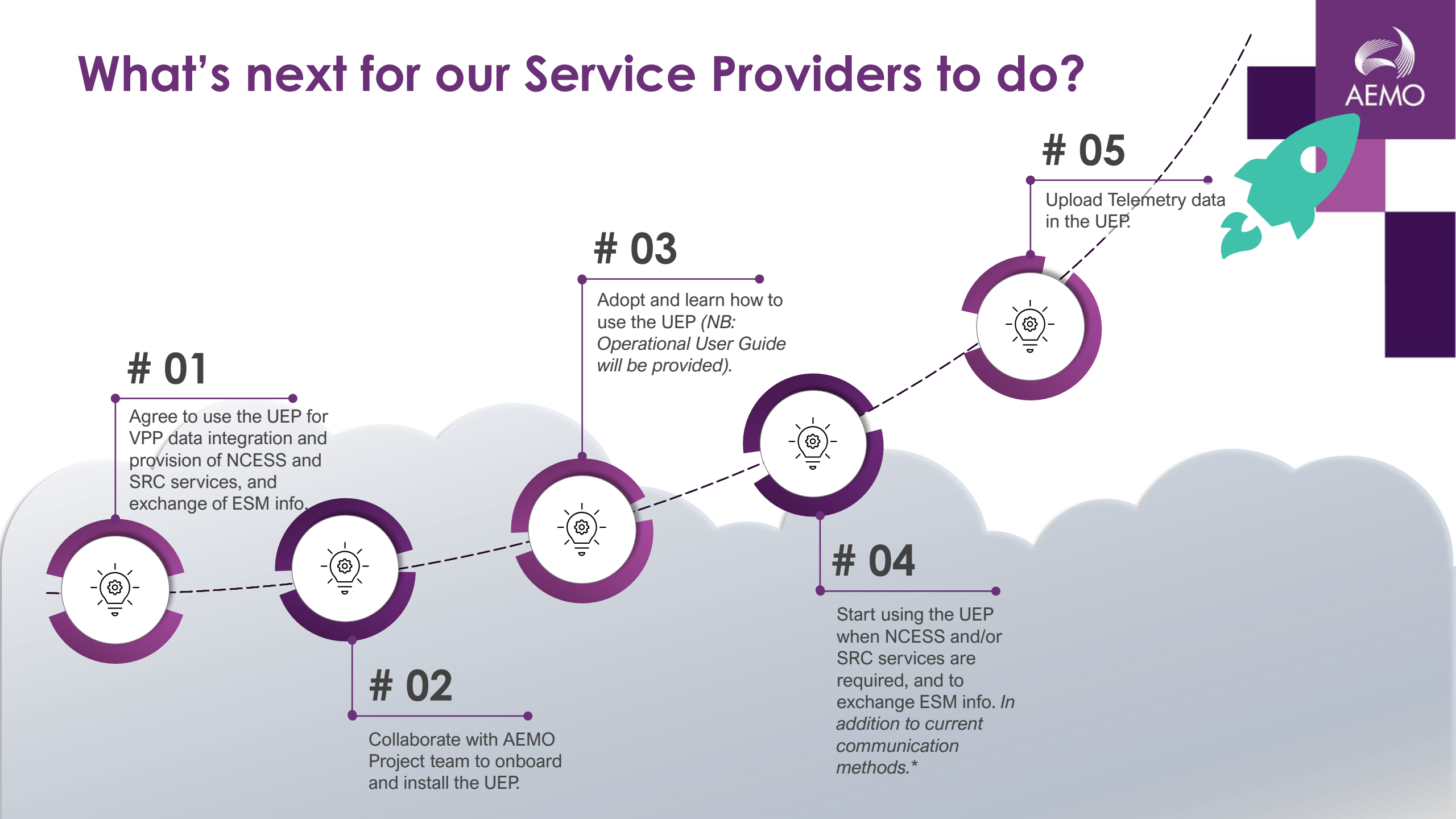
The UEP allows Service Providers to communicate with AEMO's WA Operations team in a more efficient and effective manner to activate NCESS and SRC services and exchange Emergency Solar Management information.

Utilising proven and existing investments in technology through Project Symphony/Encore to enable early integration with AEMO through standardisation of data exchanges and fewer integration requirements.

Lowering barriers to provide energy services that can reduce costs for all consumers.

The Transitional Data Exchange solution is a stepping stone for a more collaborative relationship between AEMO and Service Providers in the DER Roadmap to implement active management of DER through the WEM.

What's next for our Service Providers to do?



01

Agree to use the UEP for VPP data integration and provision of NCESS and SRC services, and exchange of ESM info.

02

Collaborate with AEMO Project team to onboard and install the UEP.

03

Adopt and learn how to use the UEP *(NB: Operational User Guide will be provided).*

04

Start using the UEP when NCESS and/or SRC services are required, and to exchange ESM info. *In addition to current communication methods.**

05

Upload Telemetry data in the UEP.

Distribution System Operator (DSO) Strategy & Roadmap

AEMO Market Participant Forum

28 March 2024

Andrew Blaver, Head of Distribution Energy Transition

Our Strategy 2023-2031

Strategic priorities

Distribution transformation

Maintain and transform the distribution network

- Support the growth of distributed energy resources and maximise the opportunity they present
- Deliver a climate resilient network
- Manage peaks and troughs of consumption on the network
- Improves focus on regional outcomes

Distribution imperatives

- **Distribution evolution:** augment distribution to future-proof for EVs; leverage PV opportunity to bring more online; DSO, low load management (after near-term challenges pass), manage effort to allow effective prioritisation
- **Deliver 'minimum viable' DSO capability** through Project Symphony by 2025 to future-proof for increasing rooftop PV, EVs, and *enable* DER participation.
- **Ensure felt reliability and affordability** meet residential, commercial and regulator expectations e.g. ERA's rural requirements
- **Continue modular grid roll-out:** 850 SPS sites by 2025 and 4,000 sites by 2031
- **Continue undergrounding of network**

DSO Outcomes & Use Cases

The Distribution Network as a platform to unlock greater benefit

Goal

DER Assets: from passive to active

How we will get there

	Project Symphony	Encore	Distribution System Operator MVP	Symphony 2.0
Technical	Feasible → Viable → Scalable			
Customer	Feasible → Viable → Scalable			
Value	Feasible → Viable → Scalable			
	2023	2024	2025	2028

Benefits

1. Unlocking greater customer value
2. Delivering services to WEM
3. Reducing Dx augmentation costs (NSS)
4. Lowering carbon emissions

Success

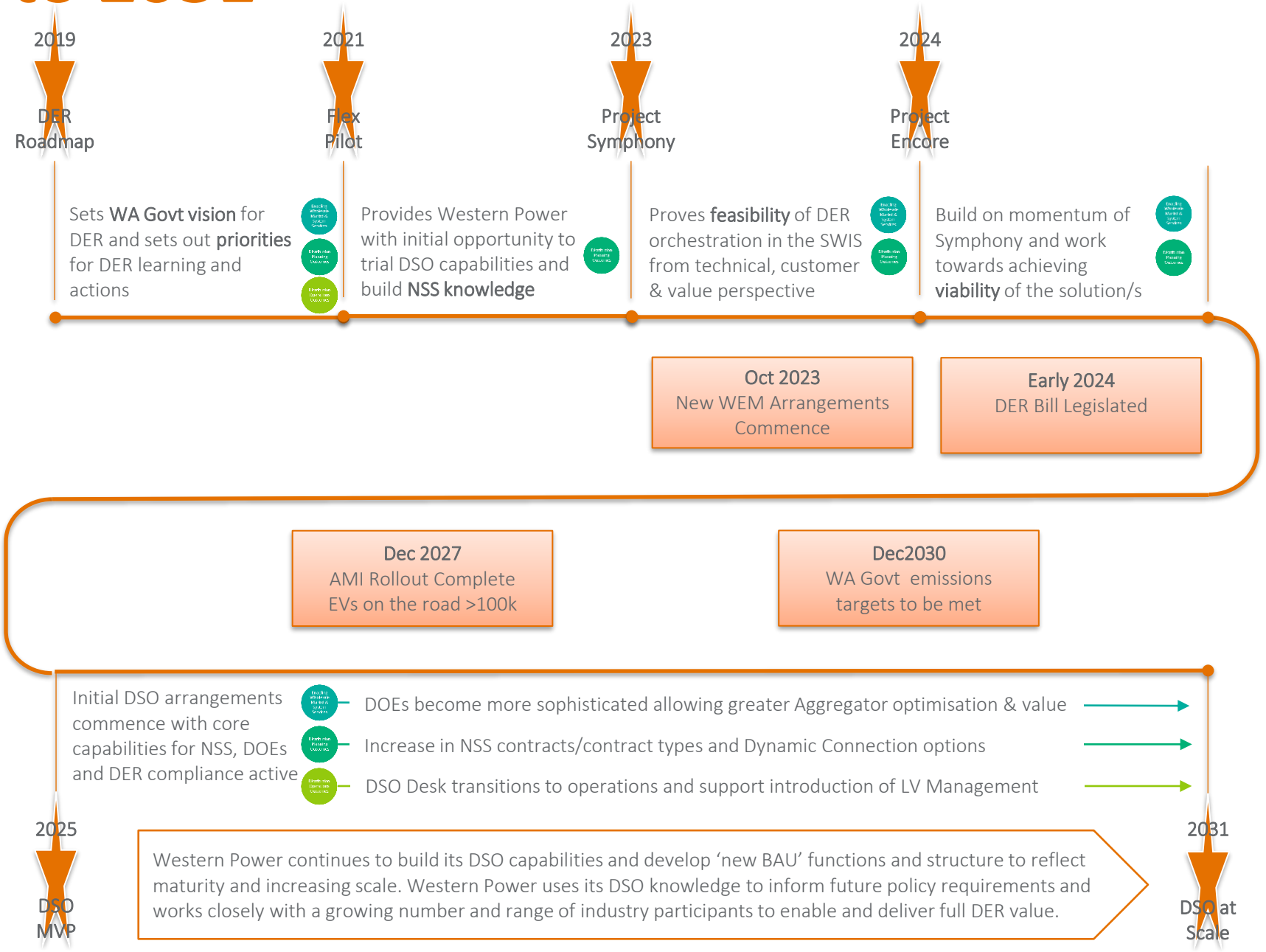
DER is integral to how we plan and operate the energy system

and

is providing value

Underway | Scoping & Planning

Roadmap to 2031



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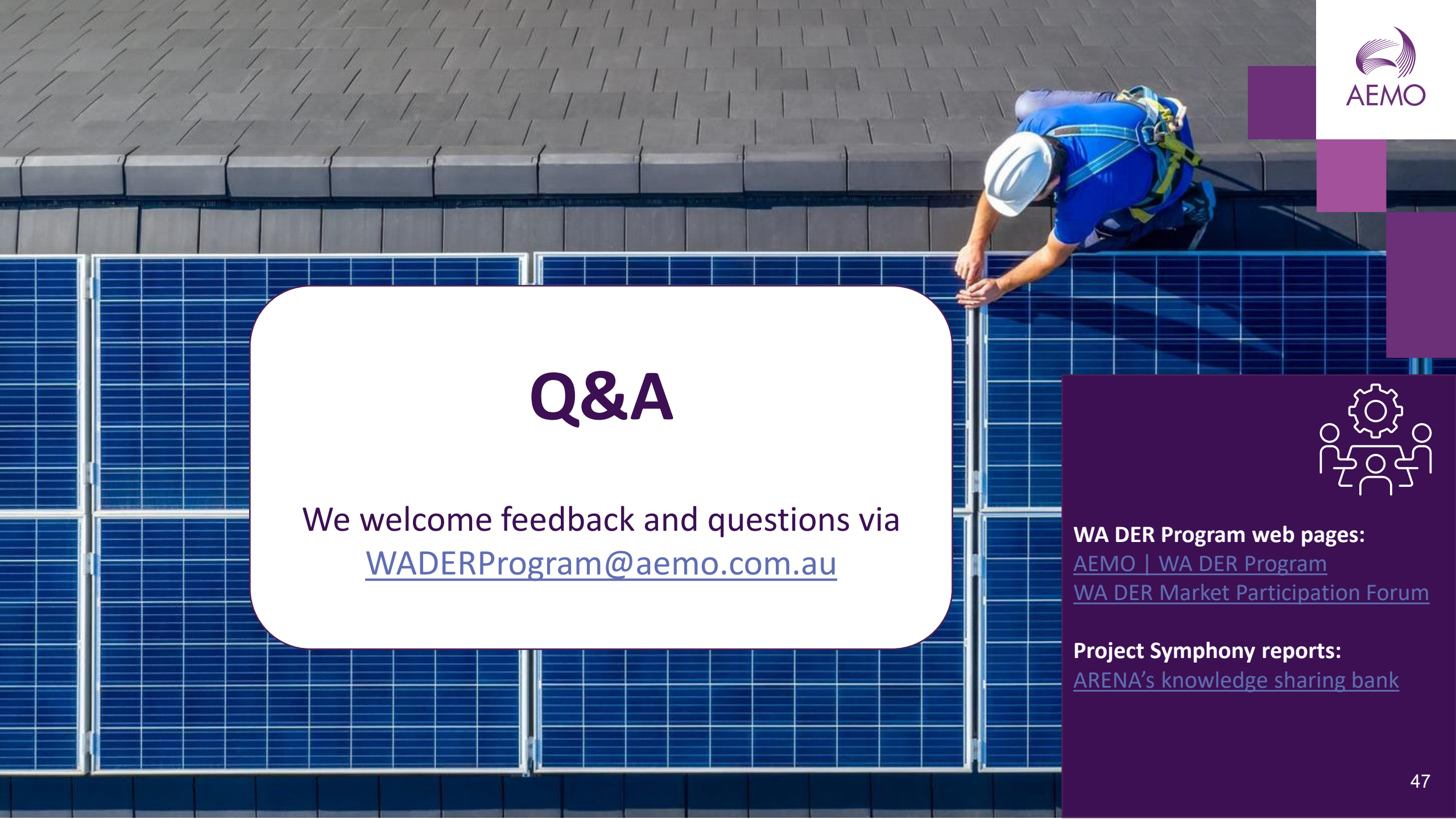
Closing remarks & Q&A

Tom Butler



Q&A

We welcome feedback and questions via
WADERProgram@aemo.com.au

WA DER Program web pages:
AEMO | WA DER Program
WA DER Market Participation Forum

Project Symphony reports:
ARENA's knowledge sharing bank

For more information visit

aemo.com.au