



Government of Western Australia
Energy Policy WA

DER Roadmap

DER Orchestration Roles and Responsibilities Information Paper

29 March 2022

Working together for a
brighter energy future.

Housekeeping

Ground rules and virtual meeting protocols

- Please place your **microphone on mute**, unless you are asking a question or making a comment
- Please keep questions relevant to the agenda item being discussed
- Please type questions or comments in the meeting chat. You can also email questions or comments to info@energy.wa.gov.au after the meeting.
- **The meeting will be recorded for minute-taking purposes.** Please do not make your own recording of the meeting. The slides will be made available to all participants following the meeting.
- Please state your name and organisation when you ask a question to assist with meeting minutes
- If you are having connection/bandwidth issues, you may want to disable the incoming and/or outgoing video

Acknowledgement of Country

We acknowledge the traditional custodians of the land we are meeting on, the Whadjuk Noongar people and their Elders, past and present.

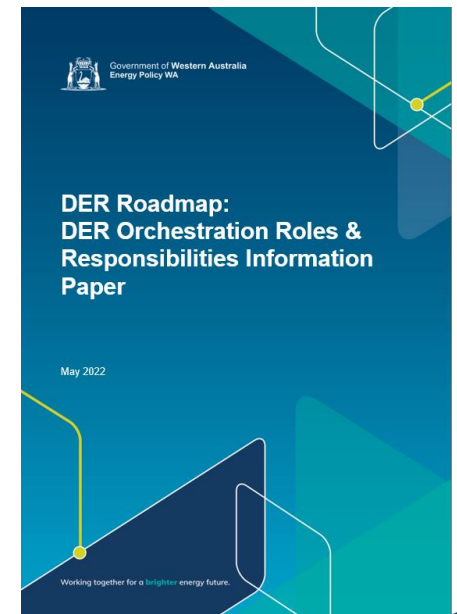
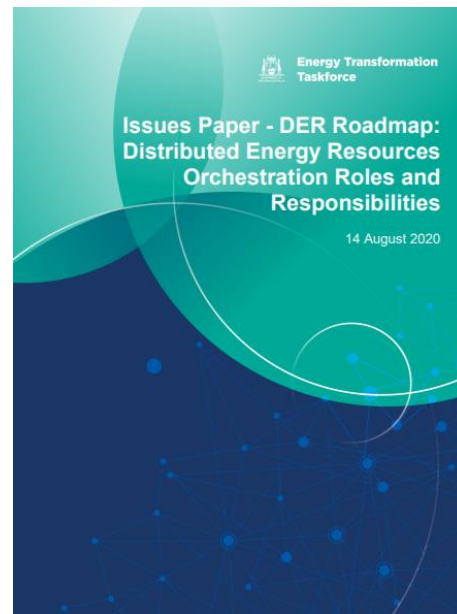
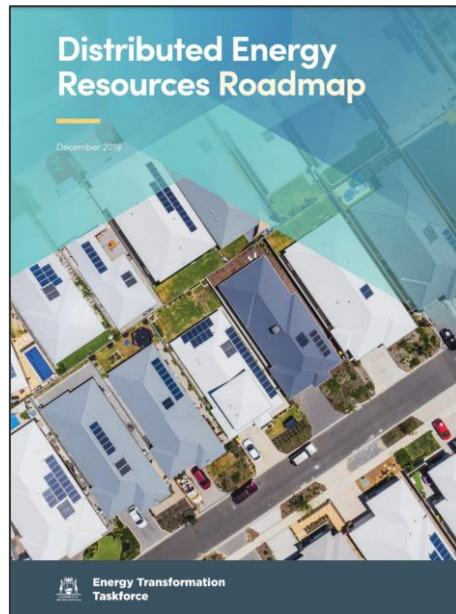
We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

Why are we here today?

AGENDA

1. Update on progress of DER Roadmap Actions 24 & 25
2. Overview of forthcoming DER Orchestration Roles & Responsibilities Information Paper
3. Q & A

How did we get here?



New Market start and timing

WEM reforms

- When Roadmap written estimated new market start 1 Oct 2022
- Now 1 Oct 2023
- Impacts on way DER would participate
- Focus on New WEM implementation

Phased approach for DER

- Simple → complex services over time

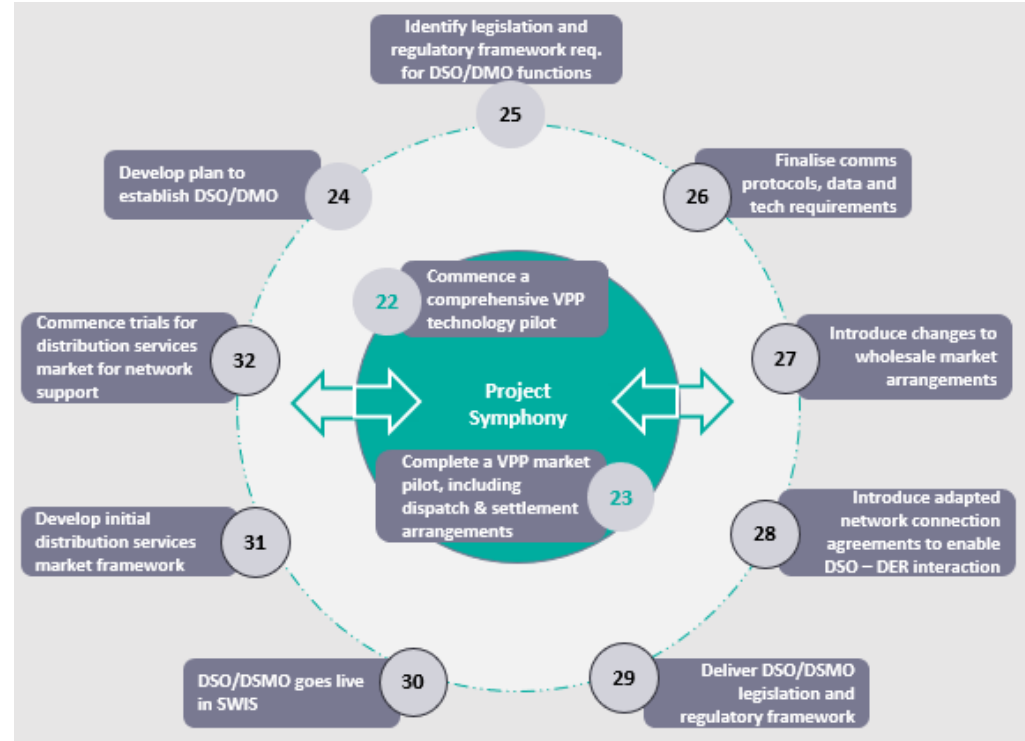


Role of Project Symphony

Project Symphony is critical to inform DER participation

Some policy positions need to wait for project learning outcomes:

- Technical / IT / Comms capabilities.
- Process DSO / DMO interaction.
- VPP data requirements.
- Unknown & unknowns ...



DER Orchestration Roles & Responsibilities Information Paper

Energy Policy WA engaged consultants RBP to assist with Actions 24 & 25 – DSO & DMO roles and responsibilities

- Series of themed workshops with Western Power (as DSO) and AEMO (as DMO) last year

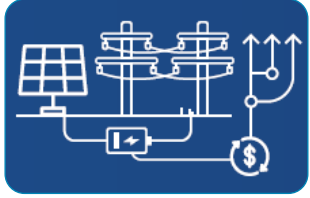
EPWA Information Paper

- **In draft – positions to be submitted to Minister for Energy for endorsement**
- Outlines background current context in SWIS/WEM
- Identifies many DER orchestration issues
- Sets-out settled & unsettled policy positions, detailing reasons
- Akin to WEM ‘Foundation Market Parameters’ Information Paper in August 2019 – Foundational policy settings
- Provides certainty in critical policy areas on forward direction to guide investment decisions – including around timing

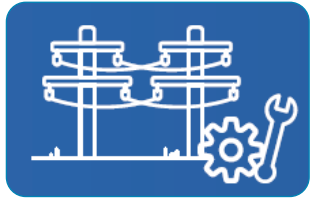
Does not describe detailed delivery or WEM Rules

- Significant work still needed to implement
- Consultation on detail and delivery of individual elements required

DER Orchestration Roles and Responsibilities Information Paper Themes



Integrate and phase implementation



Build required technology and market infrastructure

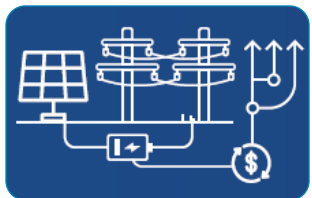


Align customer incentives and protect rights



Optimise distribution network access

Integrate and Phase Implementation



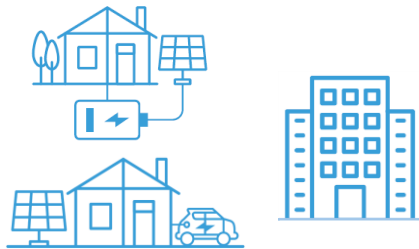
Coordination and WEM dispatch

- Approach remains hybrid model as per DER Roadmap – single energy market, co-optimised dispatch.
 - Western Power as DSO, extending network management capability
 - AEMO as DMO, extending markets to include VPPs
- Further consideration needed to determine responsibility for NSS dispatch
- NSS has priority over WEM services in dispatch
- Distribution switching or outages affecting VPPs - managed through DOEs (distribution system constraints)
- Further work needed to understand benefits and complexity of more dynamic facility operations

Extending complexity as technology and knowledge improve

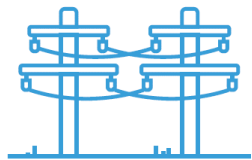
- DER capability and control system are rapidly changing
- Longer-term, other participation modes may be technically possible and cost effective

DER participation value opportunities



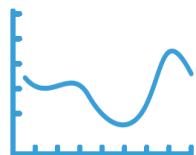
1. Retailer services

- 'Off market' services, no registration, some visibility needed



2. Network and System Support Services

- Local support services, non-cooptimised system services, procurement under NCESS framework



3. Direct WEM services

- Co-optimised WEM services, requires higher levels of metering, service specific.

Optimise distribution network access



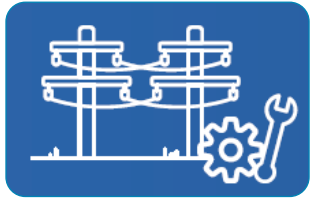
Network visibility

- Western Power to develop a plan in line with DER Roadmap Action 14

Dynamic Operating Envelopes (DOE)

- Project Symphony will guide DOE development, but not define the final form:
 - Where appropriate align with national approach
 - DOE applied at the connection point (NMI) – higher level of granularity currently not practical.
- Explicit criteria will be developed around design and use
- DER needs to be 'active' for a DOE to be applied – avoids retrospective application

Build Required Market and Technology Infrastructure



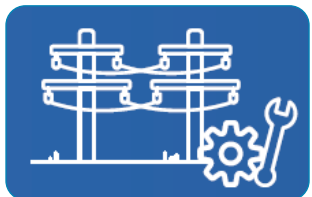
Facility & device visibility

- (Deferred) decisions on real-time or near real-time visibility requirements for DER market participation require further investigation and learning.
- Project Symphony to inform – requirements service-specific

‘Network Support Services’ (NSS)

- Western Power procurement of localised NSS incorporated into NCESS. Adjustments will be made to ENAC.
- Western Power not to compete with aggregators for Small Use Customers (<160MWhpa)
- Western Power can engage directly with larger customers at a single site (>160MWhpa)

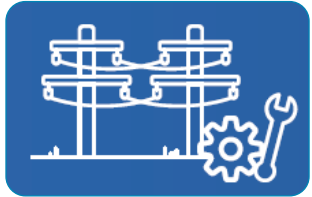
Build Required Market and Technology Infrastructure (cont.)



Aggregators

- Only the FRMP (usually the retailer) at a connection point can aggregate the NMI for energy
- Anyone can aggregate contestable customers (>50MWhpa), subject to the above
- Synergy sole aggregator for non-contestable customers (<50MWhpa)
 - In line with retail contestability policy, Emergency Solar Management responsibilities.
 - Synergy may engage with third-parties to deliver services – Project Symphony to inform.
 - Position to be reviewed as tech capability matures and customer protection frameworks developed (AES framework).
- For Demand Side Management (DSM) & Interruptible Load (IL) programs:
 - WEM rules for contestable customers - . i.e., any market participant can associate service to NMI.
 - Synergy will be sole aggregator for non-contestable customers
- Further consideration needed around minimum VPP size associated with market registration

Build Required Market and Technology Infrastructure (cont-2)



Value Stacking

- Further work needed around assessment of value stacking as a double payment.

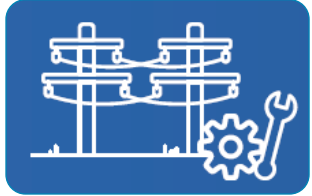
WEM Participation

- High level principles around grouping conventional facilities should be applied to VPPs
- Further work needed to determine contribution of VPPs to contingency reserve raise requirements
- VPP aggregation to follow similar model to DSM reflecting dynamic nature of VPPs

Essential System Services

- No changes made in the short term to WEM Rules for DER provision of FCESS
- VPPs may form an Interruptible Load
- AEMO may use NCESS to procure services from VPPs where PSSR need identified
- Further work is needed in more technical areas around dispatch and accreditation of FCESS.
 - Project Symphony and other pilots/trials will inform

Build Required Market and Technology Infrastructure (cont-3)



Reserve Capacity Mechanism

- VPP can already seek certification as DSP
- Further work needed to determine:
 - how to certify as non-scheduled facilities – facility visibility an issue; and
 - the approach to VPPs as scheduled or semi-scheduled facilities – visibility, metering, NAQ.

Meter Data access for settlement

- For 30-min settlement AEMO will have access via Western Power AMI
- Further work is needed to understand the costs associated with 5-min settlement for non-contestable NMIs

Standardised protocols

- Further work is needed in comms standards and protocols areas.
 - Project Symphony, national process and Project Eagle to inform.

Customer incentives



Tariffs

- 'Postage stamp' pricing retained for non-contestable (sub-1MV) network tariffs
- Consideration of retail tariffs, other retail VPP/aggregation products outside scope of this work
 - Energy Policy WA separately progressing work on DER-appropriate tariff options (network and retail).

Customer Protections

- Further work needed in in this area.
 - Alternative Electricity Services framework under development

Where to from here?

- Opportunity for you to provide feedback:

Send to info@energy.wa.gov.au

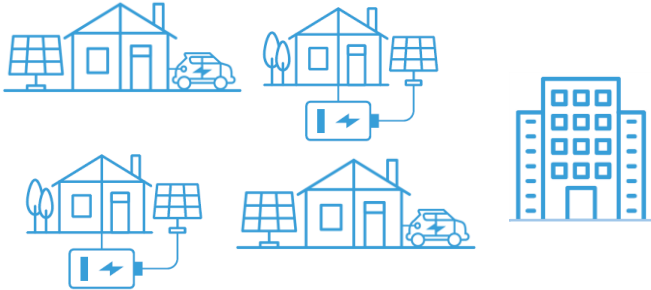
- Energy Policy WA to consider feedback, advice to Minister for Energy in early-April
- Consultation will continue on implementation of positions outlined today
 - Similar process to WEM reforms under Energy Transformation Taskforce
 - Many issues require further work to understand implications and detail of delivery

Questions?

Please write your questions in the chat

*We're working for
Western Australia.*

DER Participation Value Evolution

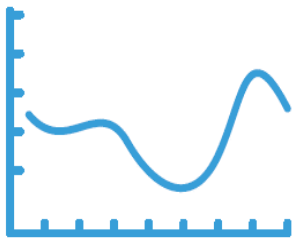
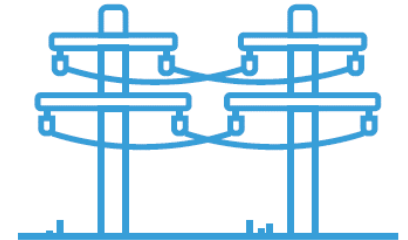


1: Retailer/Aggregator services

- 'Off market' services coordinated by retailer / aggregator to provide value to retailer, aggregator, or customer.
- e.g., managing DER to limit exposure to wholesale pricing extremes, allow commercial portfolio management, or customer energy optimisation.
- Does not require market registration.
- Some visibility needed by the system and network operators.

2: Network and System Support

- Non-Cooptimised Essential System Services (NCESS) provided to the:
 - network operator (Western Power/DSO); or
 - system operator (AEMO/DMO).
- Procurement under NCESS framework - examples:
 - assist DSO manage with local network peaks allowing network investment to be deferred or avoided.
 - provide specific services related to power system security and reliability not current defined in the market.



3: WEM services

- Co-optimised WEM services (Wholesale energy, FCESS, Reserve Capacity).
- Will require DER have higher levels of metering and telemetry capability to meet compliance and settlement obligations, dependent on the specific service provided.
- e.g. manage DER to offer demand response services or frequency support services alongside other market participants.