



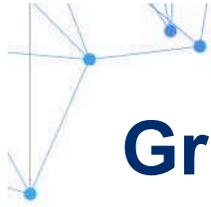
**Energy Transformation
Implementation Unit**

Transformation Design and Operation Working Group Meeting 12

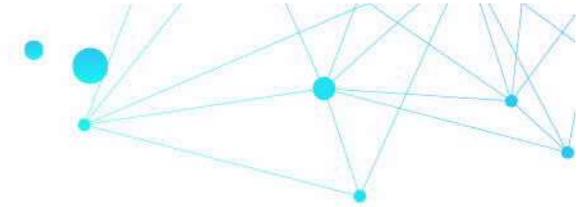
30 April 2020

**Please ensure that you mute your
microphone and turn off video**

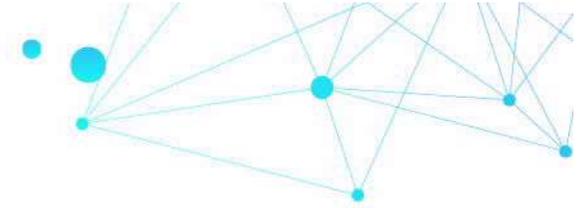
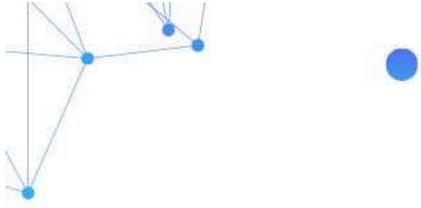




Ground rules and virtual meeting protocols



- 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.
- If there is not a break in discussion and you would like to say something, you can 'raise your hand' by typing 'question' or 'comment' in the meeting chat. Questions and comments can also be emailed to TDOWG@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.
- Please state your name and organisation when you ask a question to assist with meeting minutes.
- If there are multiple people dialling in through a single profile, please email TDOWG@energy.wa.gov.au with the names of the attendees to be recorded in the minutes.
- If you are having connection/bandwidth issues, you may want to disable the incoming and/or outgoing video.



Agenda

Item No.	Issue	Discussion led by	Time
1.	Opening remarks	Chair	10:00am
2.	DER Roadmap Update	Jai Thomas	10:05am
3.	DER Roadmap WEM Rule Amendments	Jai Thomas	10:30am
4.	Meeting close	Chair	11:30am

DER Roadmap Update

Jai Thomas

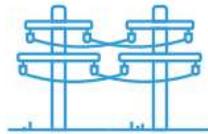
Project Director, DER

DER benefits and services



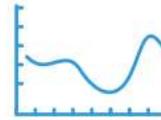
Customer

- Avoided energy costs
- Retailer buyback payments
- Reduced carbon footprint



Network

- Network reliability services
- Network capacity and support



System

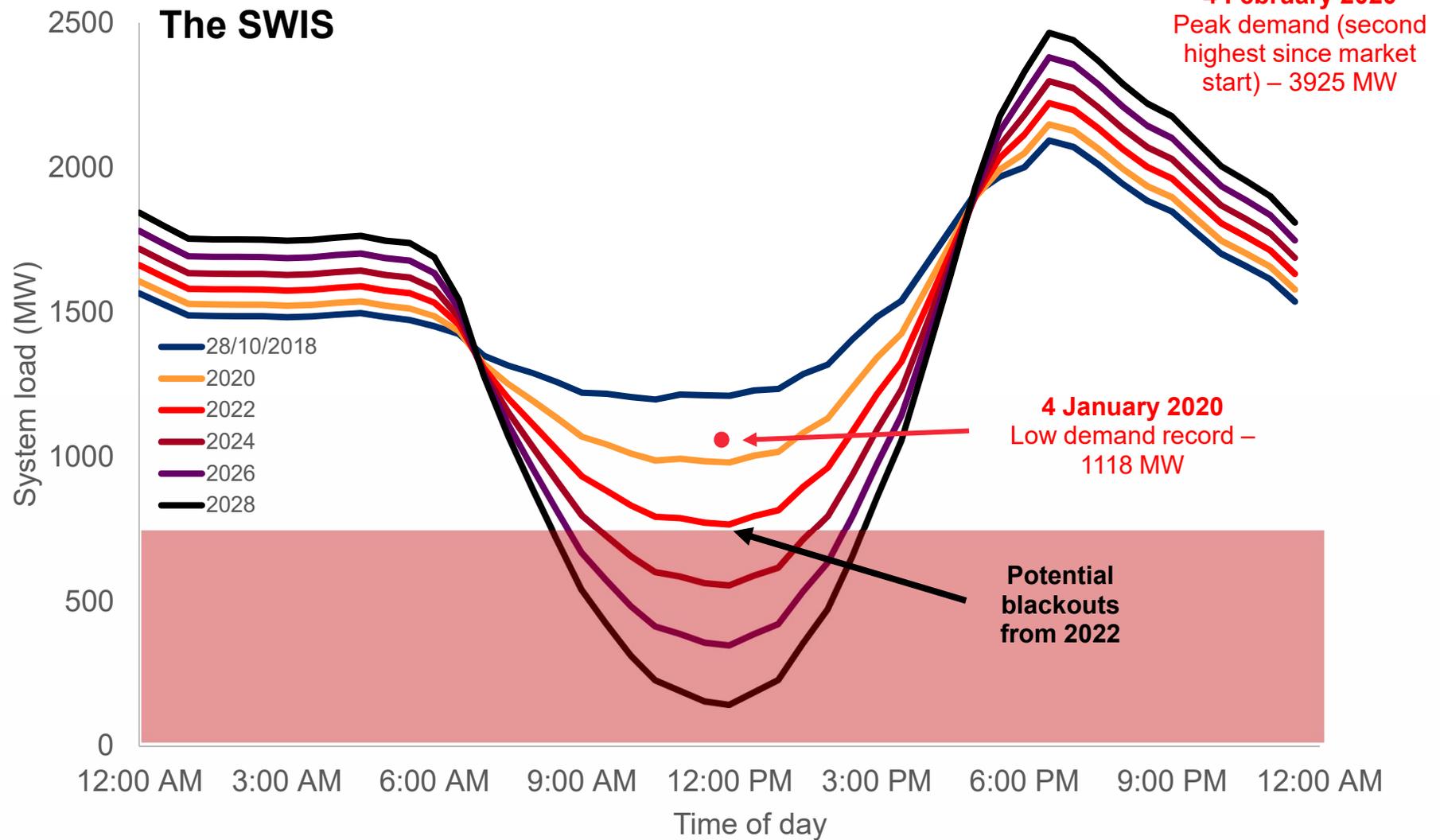
- Essential System Services
- Reserve Capacity
- Wholesale Energy



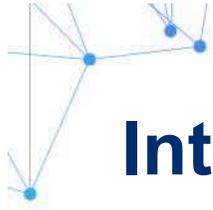
Generators, Retailers & New Business

- Risk management
- Opportunities for innovation and new product offerings

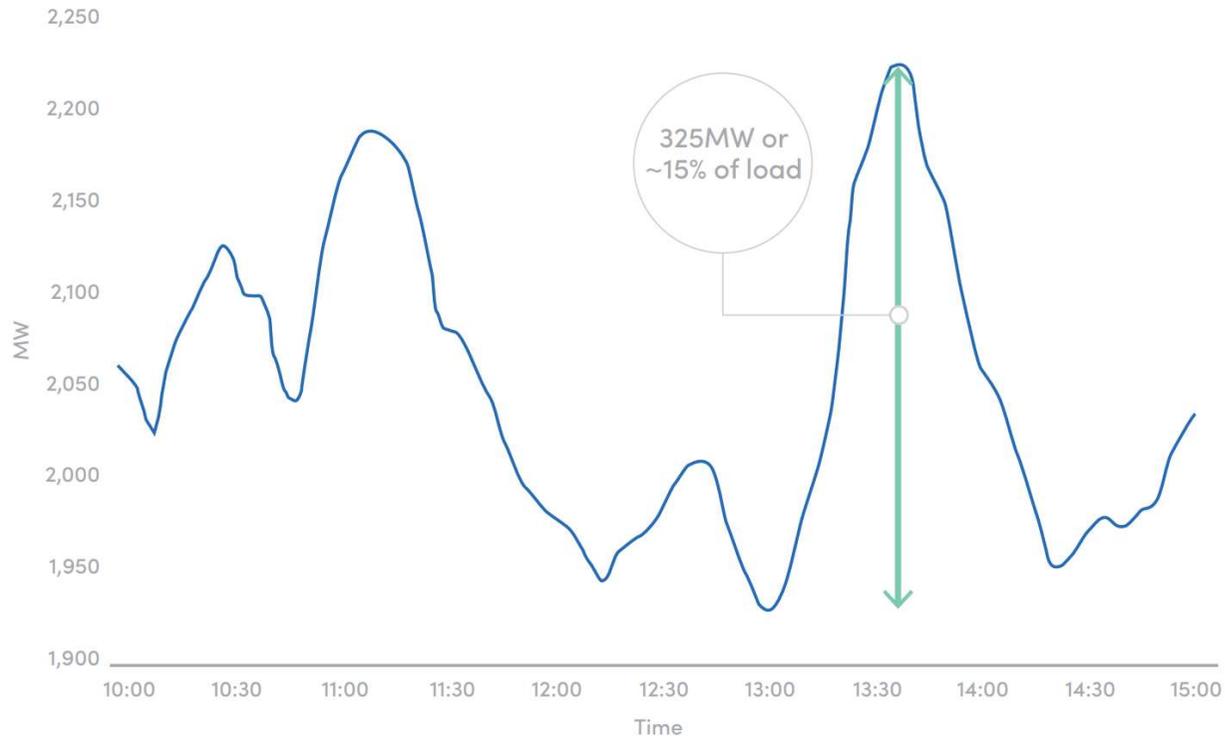
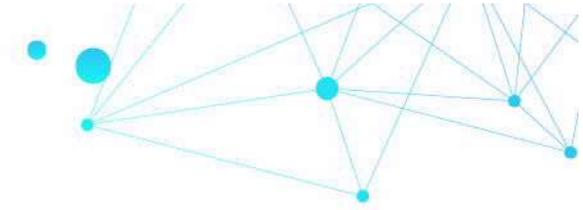
The clear and present challenge



AEMO, Integrating Utility-Scale Renewables and Distributed Energy Resources in the SWIS



Interrelated issues



- **Variability** – cloud events can cause steep fluctuations
- **Local network issues** - DER contributes to technical issues at the distribution network level
- **Equity** - customers with DER contribute less than their share of system costs and are cross-subsidised by those without DER.

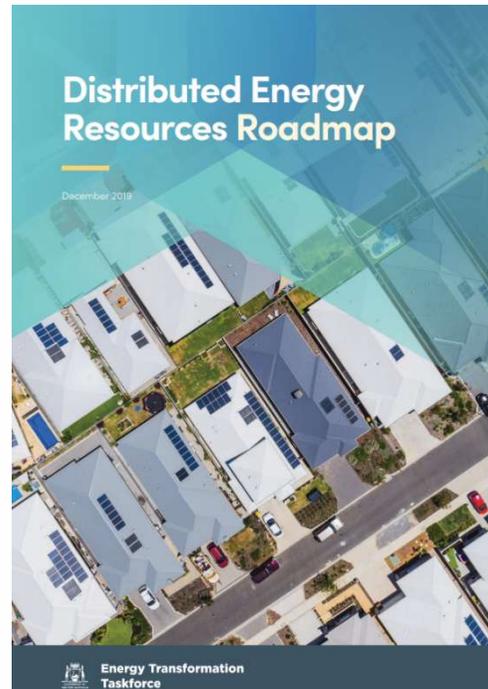
What are we doing to solve this problem?

The WA Government's **Energy Transformation Strategy**
A two-year program of work across three interrelated workstreams

Whole of System Plan (WOSP)



October 2020



Wholesale Market Redesign



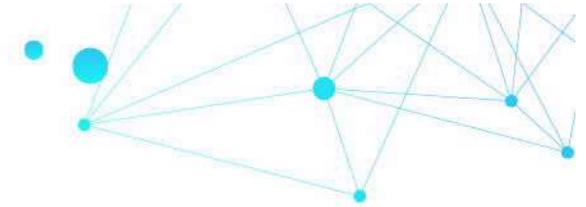
Market Start
October 2022



Five year implementation



Vision for 2025



- DER is integrated – active not passive
- We have a stable and reliable grid
- Use more renewable energy uptake without risk to the security of the power system
- Facilitate more equitable access to DER, whilst ensuring customers are protected as new business models emerge
- WA leading the way in managing the DER transition



1. Secure and reliable supply

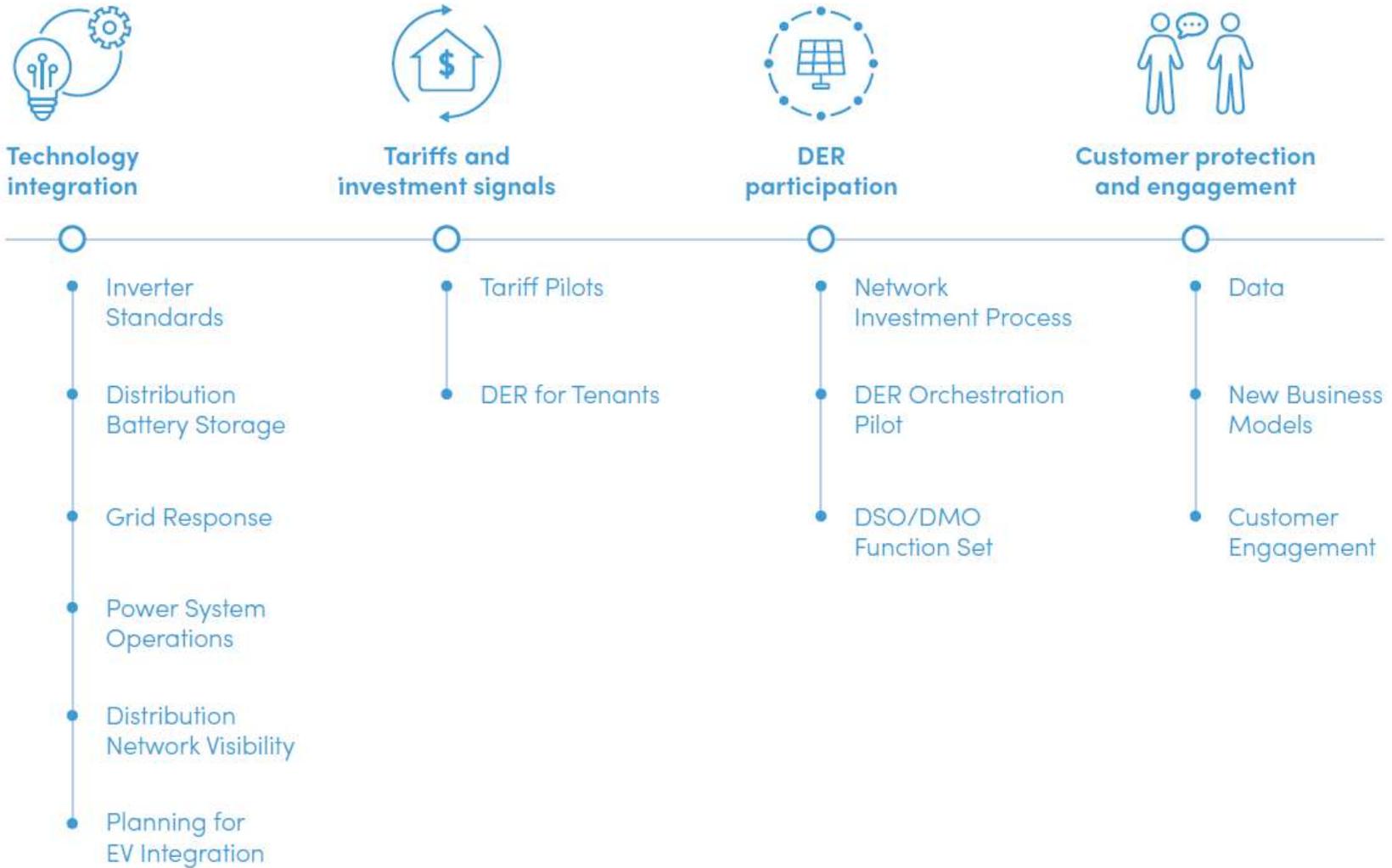


2. DER are active and delivering value

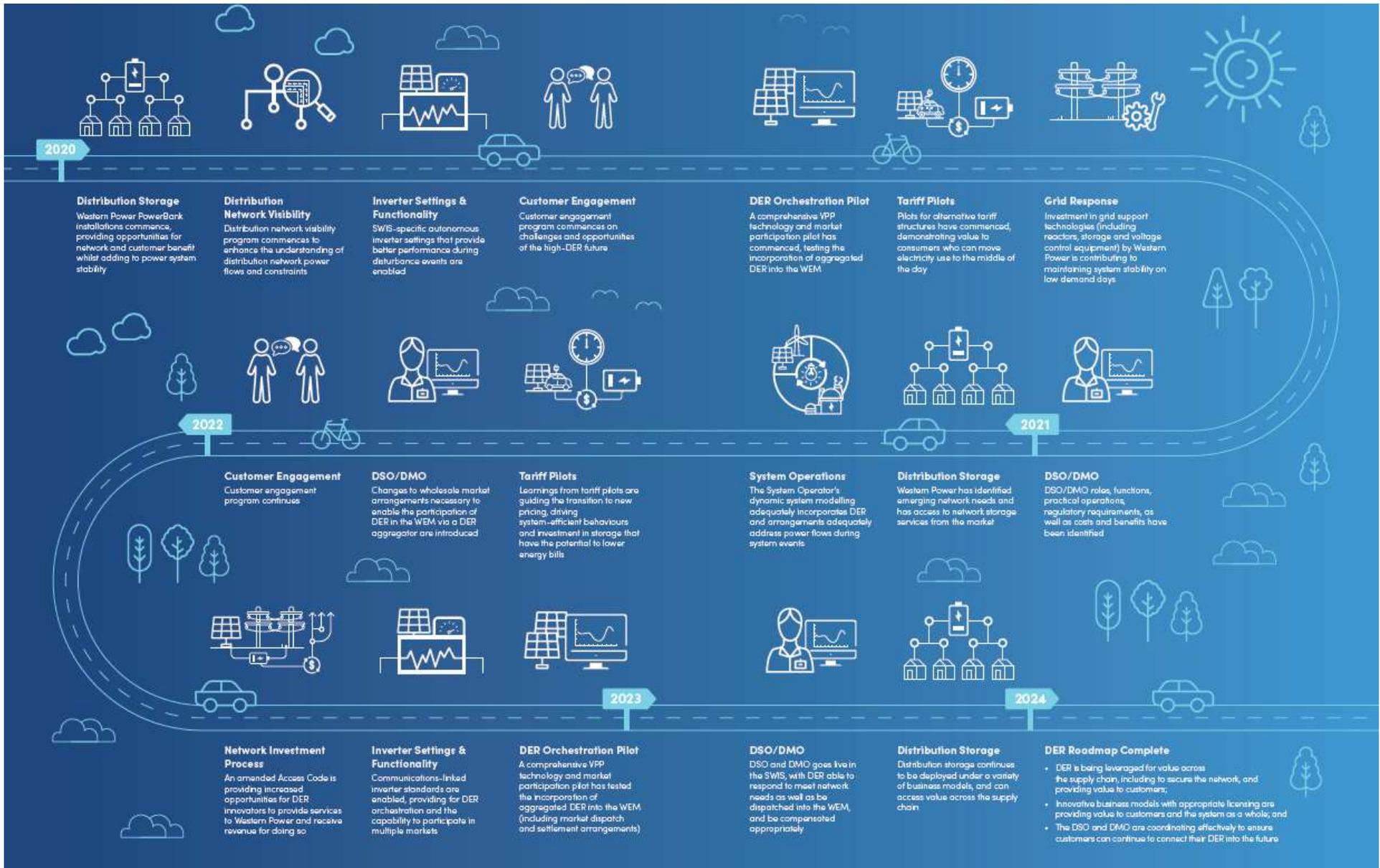


3. Customers are benefitting and protected

DER Roadmap – Themes and Elements



Key Roadmap actions



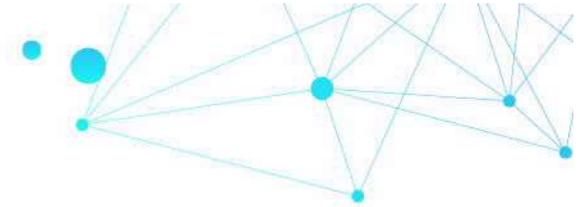
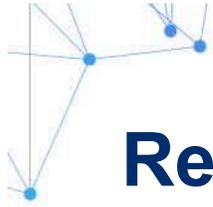
Proposed DER Roadmap WEM Rule Amendments

Jai Thomas
Project Director, DER



DER Roadmap & what it means for industry

- Reshaping existing roles and new opportunities
- Network operator expands to DSO functions
 - Greater ability to manage the Dx constraints
 - Opportunities for third parties to provide services
- AEMO evolves to include DER in operations and the market
- Customer interaction changes
 - Aggregators/VPP bundle customer services for market
 - Better inclusion of embedded network contributions
 - Households shielded from market complexities



Requirement for change

- DER Roadmap identifies critical actions for AEMO to undertake.
- AEMO's existing functions under WEM Regulations & Rules relate to system management & market operation.
- However, existing functions do not provide certainty that AEMO can undertake and recover costs of DER Roadmap actions.
 - Existing legislation did not adequately contemplate how the AEMO would manage customer DER.
 - AEMO carries out its functions with respect to participants – AEMO do not have this relationship with DER devices.
- AEMO's obligations to operate the SWIS in a secure and reliable manner must now extend to DER, in line with the DER Roadmap.

Without certainty for cost recovery, AEMO will not be able to undertake necessary DER Roadmap activities



Proposed changes – Conferral of Functions

- Amendment to WEM Rules selected as most appropriate mechanism.
 - WEM Rules specify AEMO’s functions and provide cost recovery guidance
 - AEMO DER Roadmap activities relate to operation of the WEM and SWIS
- WEM Rule 1.20 – AEMO is conferred functions to prepare and facilitate implementation of the “WEM and Constrained Network Access Reforms”.

Proposed approach amends definition in Glossary, adding:

Wholesale Electricity Market and Constrained Network Access Reform:

means..., any related activity undertaken by AEMO in connection with implementation of the DER Roadmap, that has been endorsed by the Minister.

- Minister can now specify, through letter of endorsement, which activities AEMO must undertake.
- AEMO can now recover ERA-approved costs through its market fees.



Proposed changes – ERA review of costs

Proposed approach adds Rule 1.20.6 – AEMO budget adjustment for DER Roadmap Implementation:

- AEMO may apply to the ERA for an adjustment to the approved revenue and CAPEX *within AR5*, for DER Roadmap implementation costs.
 - AEMO must provide any additional information required by the ERA.
 - ERA must assess application within 30 business days.
 - ERA must:
 - take into account the existing guidance in the rules for determining AEMO’s budget.
 - only consider information related to this application, and not consider previously approved expenditure.
 - account for preparatory work for the DSO/DMO that may occur before 1 July 2022.
-
- Focuses the ERA review on DER Roadmap implementation activities.
 - Arrangements streamline the review – provide certainty on timeframes.
 - These changes will likely require further ERA and AEMO coordination.

Costs to be recovered

DER Roadmap implementation activities cost estimates

Workstream	Type	FY 20 \$m	FY 21 \$m	FY 22 \$m	AR5 \$m
Technology Integration	Opex	0.4	1.4	0.9	2.7
	Capex	0.2	0.3	0.0	0.5
DER Participation	Opex	0.2	0.9	1.0	2.1
	Capex	0.1	1.5	1.8	3.3
Project Symphony	Opex	0.1	0.0	0.0	0.1
	Capex	0.0	2.1	1.4	3.5
Totals	Opex	0.7	2.3	1.9	4.8
	Capex	0.2	3.9	3.2	7.4

Notes:

- CAPEX estimates to be refined in the coming months and submitted to ERA for in-period review (as per draft rules)
- OPEX incurred within AEMO AR5 overspend allowance
- Does not include costs funded by ARENA
- Does not include DER Register implementation costs (discussed below)
- FY 20 includes expenditure incurred since 1 January 2020.



DER Register Rule Change

- Taskforce approved DER Register approach in December 2020.
- WEM Rules have now been developed in consultation with AEMO and Western Power.
- Planned go-live date in September 2020.

Proposed approach adds Rule 3.24 – Distributed Energy Register:

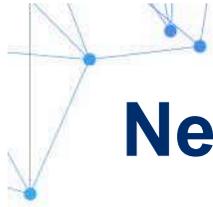
- Proposed approach adds new WEM Rule clause
 - AEMO will be required to develop a Register Information Procedure, outlining data requirements and transfer process.
 - Western Power will be required to provide AEMO with the data it has of the kind described in the Procedure.

Cost Estimate

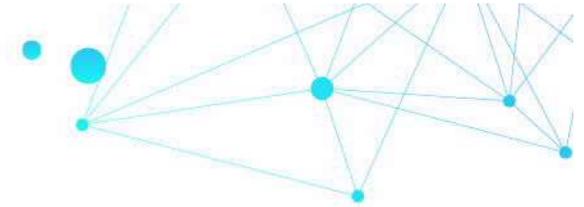
Cost component	FY 20	FY 21
Opex	\$20,000	\$20,000
Capex	\$200,000	\$900,000

Notes:

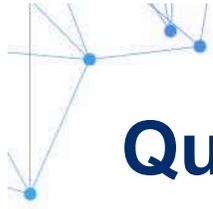
- a) FY21 Capex to be confirmed with detailed planning.



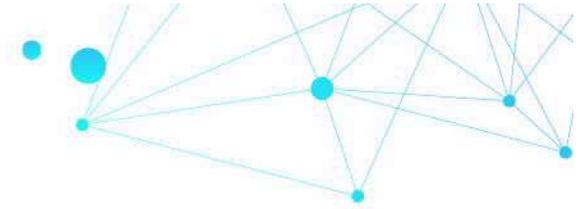
Next Steps



- Transformation Design and Operation Working Group (TDOWG) advised of planned approach today, 30 April 2020.
- **Consultation Paper to be published on 4 May 2020.**
- **Three-week consultation period (COB 22 May 2020) for feedback on consultation paper and draft Rules.**
- Following incorporation of feedback stakeholders will be advised of final draft WEM Rules.
- **Final draft amending WEM Rules to be provided Minister to make in June 2020.**



Questions?



Contact details

Jai Thomas

DER Project Director, Energy Transformation Implementation unit

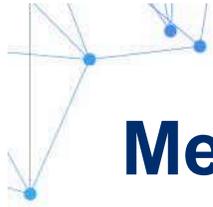
jai.thomas@energy.wa.gov.au

For further information, please visit the Brighter Energy Future webpage:

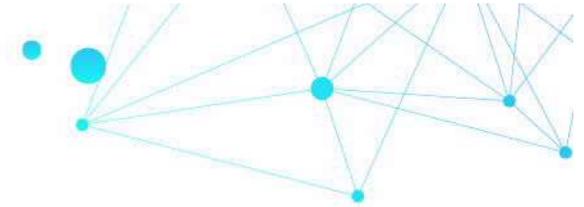
<http://brighterenergyfuture.wa.gov.au/>

For more detail, please visit the Energy Policy WA webpage:

<https://www.wa.gov.au/organisation/energy-policy-wa>



Meeting close



Questions or feedback can be emailed to TDOWG@energy.wa.gov.au

Next meetings:

WRIG 2 – Thursday 7 May, 9:30am – 12noon.

TDOWG 13 - Tuesday 26 May, 9:30am – 12noon.