

WDR Q&A session

Monday 29 March 2021

WebEx only

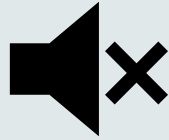
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**PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE
PURPOSE OF PREPARING MINUTES**

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

*We pay our respects to their
Elders past, present and emerging.*

Online forum housekeeping



1. Please mute your microphone, this helps with audio quality as background noises distract from the information being shared.



2. Video is optional, but having it turned off helps with webinar performance and minimises distractions.



3. We ask that you utilise the Chat function for any questions or comments you may have if you are unable to use audio.



4. If you have dialled in via phone, could you please email your name and organisation to WDR@aemo.com.au for our records.



5. Be respectful of all participants and the process.

AEMO Competition Law Meeting Protocol

AEMO is committed to complying with all applicable laws, including the Competition and Consumer Act 2010 (CCA). In any dealings with AEMO regarding proposed reforms or other initiatives, all participants agree to adhere to the CCA at all times and to comply with this Protocol. Participants must arrange for their representatives to be briefed on competition law risks and obligations.

Participants in AEMO discussions **must**:

1. Ensure that discussions are limited to the matters contemplated by the agenda for the discussion
2. Make independent and unilateral decisions about their commercial positions and approach in relation to the matters under discussion with AEMO
3. Immediately and clearly raise an objection with AEMO or the Chair of the meeting if a matter is discussed that the participant is concerned may give rise to competition law risks or a breach of this Protocol

Participants in AEMO meetings **must not** discuss or agree on the following topics:

1. Which customers they will supply or market to
2. The price or other terms at which Participants will supply
3. Bids or tenders, including the nature of a bid that a Participant intends to make or whether the Participant will participate in the bid
4. Which suppliers Participants will acquire from (or the price or other terms on which they acquire goods or services)
5. Refusing to supply a person or company access to any products, services or inputs they require

Under no circumstances must Participants share Competitively Sensitive Information. Competitively Sensitive Information means confidential information relating to a Participant which if disclosed to a competitor could affect its current or future commercial strategies, such as pricing information, customer terms and conditions, supply terms and conditions, sales, marketing or procurement strategies, product development, margins, costs, capacity or production planning.⁴

Agenda

NO	TIME (AEDT)	AGENDA ITEM	RESPONSIBLE
1	2:00pm – 2:05pm	Welcome	Ruth Guest (Chair)
2	2:05pm – 2:10pm	Recap – scope, principles, consultation summary	Greg Ruthven
3	2:10pm – 2:20pm	WDRU aggregation – assessment of system security	Greg Ruthven
4	2:20pm – 2:30pm	Telemetry requirements	Greg Ruthven
5	2:30pm – 2:35pm	Other changes since Draft Report	Greg Ruthven
6	2:35pm – 2:55pm	General questions	Ruth Guest and Greg Ruthven
7	2:55pm – 3:00pm	Next steps and meeting close	Ruth Guest

Recap – scope, principles, consultation summary

Greg Ruthven

Scope of WDR guidelines – clause 3.10.1(a)

	Description
(1)	Requirements for classification & aggregation of WDRUs
(2)	Telemetry and communications equipment requirements
(3)	<i>Methodology for NER 3.10.1(c) regional thresholds for increased visibility</i>
(4)	Process for developing baseline methodologies, including new proposals
(5)	Process to apply baseline methodology and baseline settings to a WDRU
(6)	Process to change the maximum responsive component (MRC) of a WDRU
(7)	Arrangements for providing details applicable to a WDRU (baseline methodology/settings, maximum responsive component)
(8)	Any other WDR-related information determined by AEMO This includes: <ul style="list-style-type: none">- Assessment of power system security impacts of aggregation- Regional dispatch thresholds for non-telemetered WDR- Assessment of MRC- Provision of dispatch data

Principles for developing and amending WDR guidelines – clause 3.10.1 (b)

AEMO must have regard to:

	Principle
Mandatory Principle 1	The need not to distort the operation of the market
Mandatory Principle 2	The need to maximise the effectiveness of WDR at the least cost to end use consumers of electricity
Additional Principles	Any other matter determined by AEMO acting reasonably and which must be specified in the WDR guidelines: <ol style="list-style-type: none">1. The need to ensure adequate power system operation, and the maintenance of power system security and reliability of supply

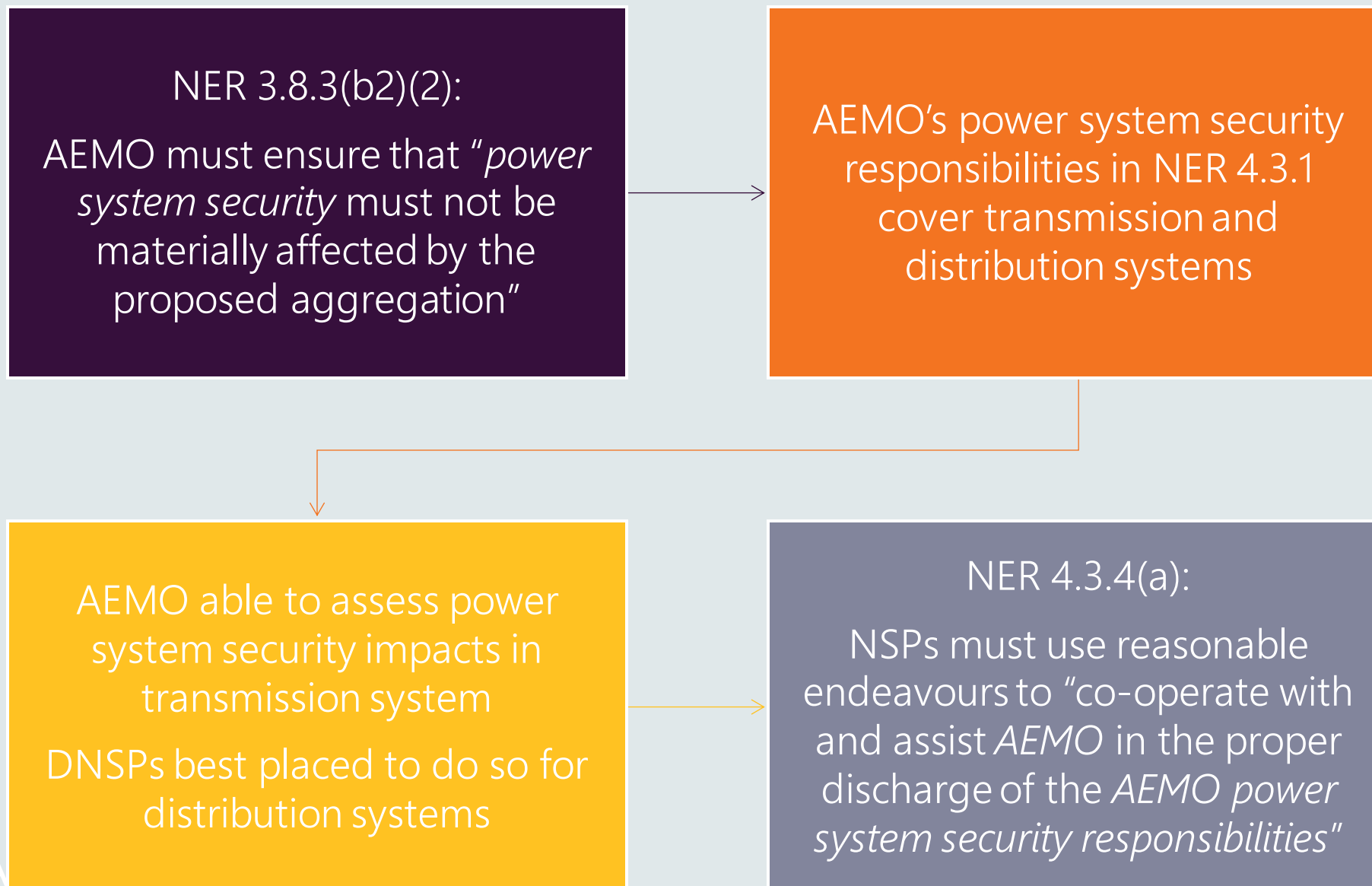
WDR guidelines consultation process

Stage		Indicative dates
TWG #1		11 Aug 20
TWG #2		12 Oct 20
1st Round Consultation	Issues paper published	22 Oct 20
	Q&A session	23 Nov 20
	Submissions due on Issues Paper (7 received)	27 Nov 20
	DNSP Workshop	11 Dec 20
2nd Round Consultation	Draft Report/Draft Guidelines published	21 Jan 21
	Q&A session	8 Feb 21
	Submissions due on Draft Report (7 received)	19 Feb 21
Final Report/Final Guidelines published		25 Mar 21

WDRU aggregation – assessment of system security

Greg Ruthven

Aggregation: Basis for system security assessment & DNSP Endorsement



Aggregation: What the system security assessment will/won't achieve

- Central dispatch of WDRUs should reflect network limitations in order to manage risks in an equitable manner across all providers
 - Applies equally to transmission and distribution

When assessment is required

- AEMO assessment:
 $\sum \text{NMI-Level MRC} \geq 5 \text{ MW}$
- DNSP Endorsement:
 - One or more WDRUs would be added to an aggregation; and
 - $\sum \text{NMI-Level MRC} \geq 5 \text{ MW}$ at/behind single TNI

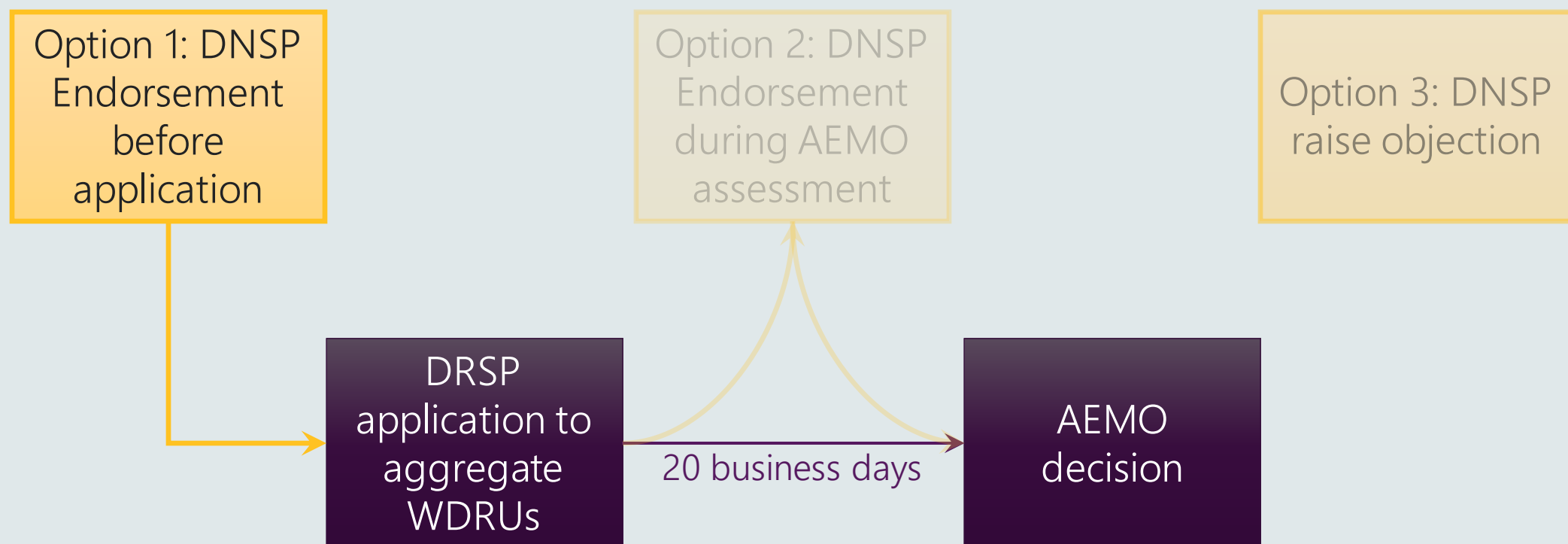
What assessment will achieve

- Identify where the WDRUs in a proposed aggregation must be represented as two or more DUIDs in constraints
- Identify constraints that must be applied

What assessment won't achieve

- Won't prevent Dx voltage issues – WDRUs may act in synchronised manner regardless of aggregation status
- DNSP voltage concerns ameliorated through information sharing

Aggregation: When should DNSP endorsement occur?



DRSP may apply to AEMO without DNSP Endorsement where it has sought DNSP Endorsement at least 25 business days earlier, but has yet to receive a response

Conditions for aggregation

- Two system security criteria have been stipulated as conditions for aggregation
 - All WDRUs must be in same load forecasting area (see SO_OP_3710)
 - DNSP Endorsement where required
- Setting these criteria supports transparency and predictability, because they can be precisely specified
 - Consistent with principle to maximise WDR effectiveness at least cost

WDR telemetry requirements

Greg Ruthven

Telemetry requirements: Assessing the need from first principles

Real-time power system operation requires a combination of real-time measurements and estimates

AEMO should reasonably require real-time data to be provided where:

- a. It is expected to be more accurate or provide greater operational awareness than the available estimate, and this improvement is of critical importance for power system operation; or
- b. There is no available estimate.

For WDR:

- **Real-time data:** DRSP's estimate of the quantity of curtailment relative to the baseline or pre-event consumption level
- **Available estimate:** Dispatch instruction

Telemetry requirements: Summary

- Required for individual NMI or localised concentration ≥ 5 MW
 - May be required below 5 MW in areas where plant must be curtailed for at least 5 hours per year
- Exemption process
- Data provided at DUID level (Guidelines describe data channels)
- Power System Data Communications Standard describes technical requirements (review pending)

Regional thresholds – Draft Report

- NER 3.10.1(c) allows AEMO to set regional thresholds that cap the amount of WDR *classified* in a region without telemetry
 - Objectives are to limit the risk of demand forecast errors resulting from erroneous real-time estimates of delivered WDR; minimise market distortion
 - Rules require methodology in Guidelines, monthly publication of thresholds and progress to meeting them
- Methodology proposed in Draft Report involved conservative initial thresholds with periodic/ trigger-based revision based on observed WDR dispatch performance
- Stakeholder input:
 - Creates first-mover advantage, barrier to entry
 - Given that concern is dispatch accuracy, could apply thresholds as a dispatch constraint instead of a cap on WDRU classification

Regional thresholds – Final Report

- AEMO has adopted suggestion for regional thresholds to be applied as dispatch constraints
 - Still supports objectives of regional thresholds
 - Alleviates first-mover advantage
 - Promotes market efficiency by encouraging price-based competition
- Regional thresholds not under NER 3.10.1(c)
 - Methodology retained in Guidelines
 - Requirement added into Guidelines for monthly publication of thresholds and quantity of non-telemetered WDR classified in each region
- Fixed two errors in threshold revision formula

Other changes since Draft Report

Greg Ruthven

Other changes since Draft Report

SUBJECT	CHANGES FROM DRAFT REPORT TO FINAL REPORT
Baseline development process	<ul style="list-style-type: none">• Replaced specific application form with obligation for AEMO to publish information requirements• Stipulated that applications may be made from 1 April 2022
Telemetry	<ul style="list-style-type: none">• Increased minimum update frequency from 30 to 60 seconds
Data delivery to FRMPS and DNSPS	<ul style="list-style-type: none">• Removed some prescription of the mechanisms for delivery of data to FRMPs and DNSPs<ul style="list-style-type: none">◦ Aim to preserve flexibility as AEMO makes technology decisions on WDRM implementation, in consultation with stakeholders
Other	<ul style="list-style-type: none">• Minor amendments and clarification/explanation in response to submissions

General questions

Ruth Guest and Greg Ruthven

Next steps

Stage	Timing
AEMO to assist ENA (where requested) in facilitating detailed design of DNSP Endorsement process	Apr-Jun
Minor & administrative changes to WDR Guidelines to add location of related documents as finalised: <ul style="list-style-type: none">• <i>Baseline eligibility compliance and metrics policy</i> (Final version expected mid/late May)• <i>Baseline methodology register</i> (TBC likely May/June)• <i>Post-event dispatch conformance framework</i> (Final version expected mid/late May)	TBC, likely Jun 21
Power System Data Communications Standard review	TBA



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