2022 Reliability Forecasting guidelines and methodology consultation

26 October 2022 FRG Meeting

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Purpose and agenda

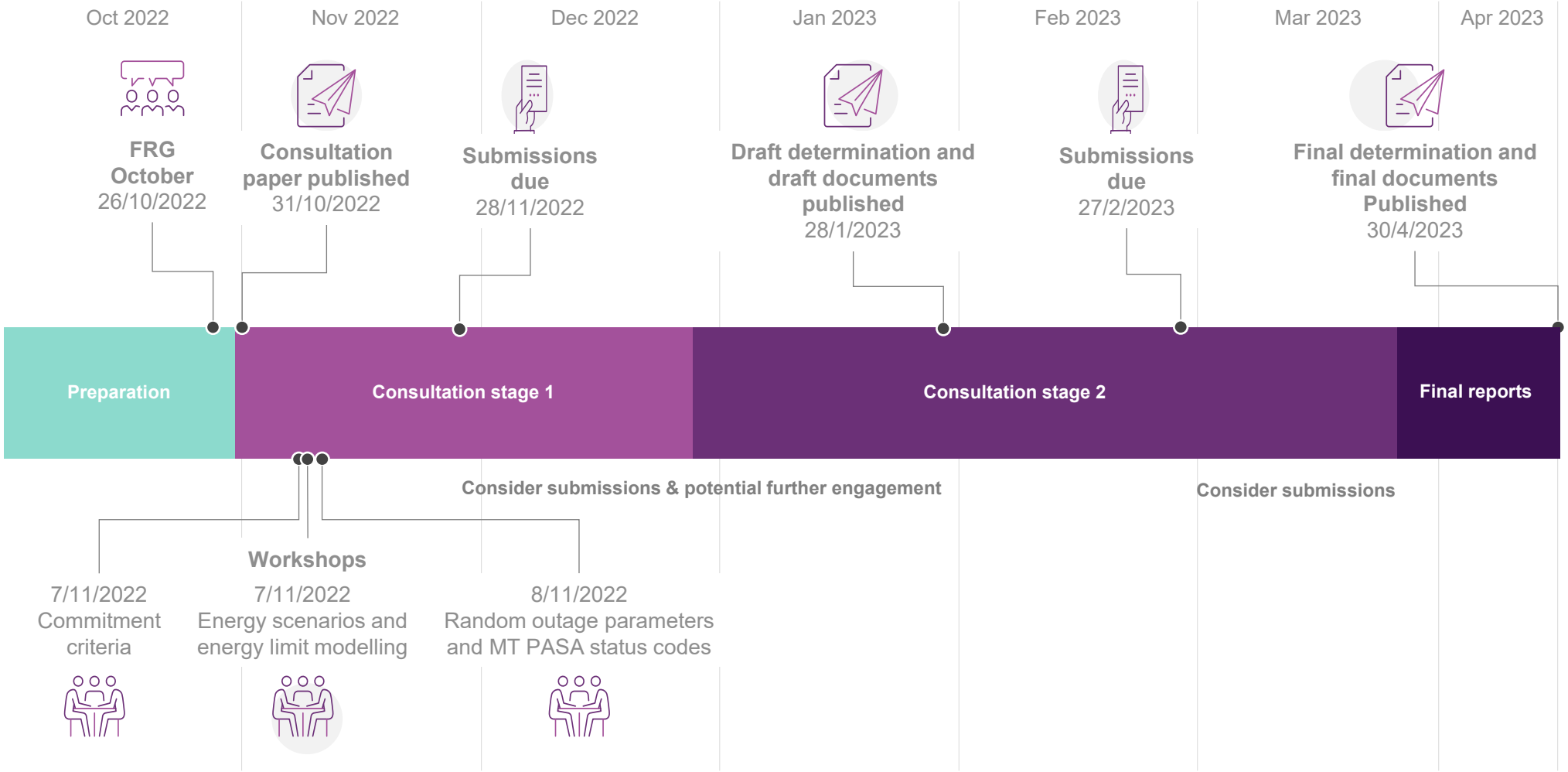
The purpose of this presentation is to *inform* the FRG of the upcoming consultation on AEMO's reliability forecasting guidelines and methodologies.

Today's Agenda includes:

- Consultation process
- Consultation topics
- Upcoming workshops

Timing	Relevant topic	Responsible
Aug 22	2022 ESOO and reliability forecast	AEMO
Today	**FRG presentation of consultation topics and process**	**AEMO, FRG**
31 Oct 22	Consultation paper published	AEMO
28 Nov 22	First stage submissions due	Stakeholders

2023 Reliability Forecasting guidelines and methodology consultation timeline



Consultation requirements

This consultation aims to meet AEMO's requirements under:

- The Enhancing information on generator availability in MTPASA rule change.[1]
- AEMO's commitment to review processes used for projecting supply adequacy over the medium term, as specified in the market event and reviewable operating incident report for the NEM market suspension and operational challenges in June 2022.[2]
- the AER's Forecasting Best Practice Guidelines (to review guidelines and methodologies at least once every four years)
- AEMO's Reliability Forecast Guidelines (to review guidelines and methodologies at least once every four years)
- NER 3.9.3D(e) (to review the Reliability Standard Implementation Guidelines at least once every four years)

AEMO will also implement minor administrative changes related to:

- The Integrating energy storage systems in the NEM rule change [3]

References:

1. See https://www.aemc.gov.au/rule-changes/enhancing-information-generator-availability-mt-pasa
2. See https://www.aemo.com.au/-/media/files/electricity/nem/market_notices_and_events/market_event_reports/2022/nem-market-suspension-and-operational-challenges-in-june-2022.pdf
3. See https://www.aemc.gov.au/rule-changes/integrating-energy-storage-systems-nem

Guidelines and methodologies subject to consultation

Guidelines or methodology	Primary rule
Reliability Standard Implementation Guidelines (RSIG) [A]	NER 3.9.3C NER 3.9.3D
Energy Adequacy Assessment Projection (EAAP) Guidelines	NER 3.7C
Generation Information Guidelines	NER 3.7F
Medium Term Projection Assessment of System Adequacy (MT PASA) Process Description	NER 3.7.2
ESOO & Reliability Forecast Methodology	NER 3.13.3A NER 4A Parts A-C

A AEMO intends to undertake targeted consultation required by the 'Updating Short Term PASA' rule change in early 2023. RSIG elements specifically relating to ST PASA will therefore not the focus of this consultation. See https://www.aemc.gov.au/rule-changes/updating-short-term-pasa

Identified potential deficiencies

- Poor representation of potential thermal fuel shortfall scenarios in current guidelines, restricting AEMO from collecting information related to fuel supply, and modelling such scenarios.
- Some generator dispatch patterns in current reliability forecast models that are actually inoperable as a result of some operational generator characteristics being excluded. This restricts AEMO from accurately and comprehensively identifying supply adequacy issues should participants advise of significant energy limits.
- Inconsistencies in AEMO's commitment criteria regarding new generator, integrated resource system, aggregated DER and/or transmission developments, that have resulted in the late identification of reliability risks due to project delays, and/or the exclusion of projects perceived to be certain to proceed.
- The exclusion of certain generation outage categories from current forecast generator outage methodologies, despite these outage categories being key contributors to market events in June 2022, and other recent actual market events.
- Issues identified in the current methodology for calculating a reliability gap period, indicative trading intervals, and reliability gap in MW.

Topics discussed in consultation paper

1. Energy adequacy methodology, scenarios and GELF data collection
2. Commitment criteria for generators, transmission and aggregated DER
3. Random outage parameters for generators and inter-regional transmission
4. MTPASA generator status and recall times
5. Reliability gap calculation methodology

Energy adequacy methodology, scenarios and GELF data collection

- AEMO considers that better advice may be provided to market participants and interested parties about reliability risks relating to energy adequacy
- New EAAP scenarios proposed to include thermal fuel shortfalls
- New GELF parameters proposed for AEMO to better understand thermal fuel adequacy risks
- Methodology changes proposed to better represent energy limits in reliability forecast modelling

Commitment criteria

- AEMO considers that adjustments to the reliability forecasting commitment criteria may improve the treatment of new projects in reliability forecasts.
- Standardisation and adjustments to the inclusion of projects in reliability forecasts are proposed, including:
  - Generator and integrated resource systems
  - Transmission
  - Aggregated DER
- Changes proposed would result in the inclusion of more generator projects in reliability assessments, with consideration for project delays.

Random outage parameters

- AEMO is considering whether the treatment of random outages in reliability forecasts may be improved.
- Adjustments are proposed to the collection and inclusion of generator outage parameters in reliability forecasts.
- A methodology is proposed to incorporate outage categories currently excluded that have been contributors to recent reserve shortfall events.
- Inter-regional transmission outage parameters are discussed, building on consultation conducted in January 2022.

MTPASA generator status and recall times

- New methodology elements required by the ‘Enhancing information on generator availability in MTPASA’ rule change
- Scheduled generator and integrated resource system participants are required to submit reason codes and recall times alongside daily PASA availability and weekly energy limits from 9 October 2023.
- AEMO proposes an implementation consistent with IEEE 762-2006
- Recall times proposed to apply only to a subset of reason codes.

Reliability gap calculation

- AEMO is seeking to improve the calculation of reliability gap components for Retailer Reliability Obligation (RRO) purposes consistent with the NEL and NER
- AEMO proposes changes that build on the existing methodology.

Upcoming workshops

- Monday 7 November
  - Commitment criteria
    - **11am – 12:30pm (AEDT)**
  - Energy scenarios and energy limit modelling
    - **1pm – 2:30pm (AEDT)**
- Tuesday 8 November
  - Random outage parameters and MT PASA status codes
    - **11am – 12:30pm (AEDT)**

- Instructions to register your attendance will be provided on the consultation webpage.
- To propose any other topics for consultation, please contact energy.forecasting@aemo.com.au

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