AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

# Indicative Extrapolation Input Data For 2021-22 Marginal Loss Factors

**October 2020**

For the National Electricity Market

# Important notice

## PURPOSE

AEMO has prepared this document to provide indicative projections of generation to be used in the Marginal Loss Factor calculation for the 2021-22 financial year. The generation projections are indicative only, using historical dispatch data.

AEMO publishes this document in accordance with clause 5.5.6 of the Methodology for Calculating Forward Looking Loss Factors (version 7.0). This publication is based on information available to AEMO at the time of publication.

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# 1. Introduction

The National Electricity Rules (NER) require AEMO to determine inter-regional loss factor equations and calculated inter-regional and intra-regional loss factors each year, and publish the factors by 1 April for the financial year commencing on 1 July. The calculation is performed in accordance with the published Forward-Looking Transmission Loss Factors methodology (Methodology)[1].

AEMO uses historical generation dispatch profiles and forecast demand profiles as inputs to the loss factor calculation, then applies the minimal extrapolation process (as described in the Methodology) to the historical generation to produce forecast generation dispatch to ensure supply and demand is in balance.

Historical generation dispatch profiles might not accurately represent anticipated generation patterns, and could therefore result in marginal loss factors (MLFs) that are not representative of likely generation in the target year. To address this, clause 5.5.6 of the Methodology describes the process and conditions in which AEMO may use an adjusted generation profile proposed by a Generator in lieu of a historical generation profile for the MLF calculation.

AEMO has now published **indicative** historical and extrapolated generation forecasts for the 2021-22 MLF calculation. This information is provided to help Generators to identify whether the historical generation profiles and the extrapolated generation forecast produced in accordance with the Methodology is likely to be representative of expected generation dispatch for their plant in the 2021-22 financial year, and propose adjusted profiles if necessary.

# 2. Assumptions

The purpose of the indicative extrapolation study is to provide an indication of the generation forecast that will be used in calculation of the 2021-22 MLFs. The historical generation used for the purposes of this forecast is based on data from the 2019-20 financial year.

AEMO will continue to analyse and check these generation forecasts. Consequently, the final generation forecasts used in calculation of the 2021-22 MLFs may differ from those presented in this report.

This study incorporates the following simplifying assumptions:

- Historical demands from 2019-20 financial year for existing connection points loads.
- New loads considered are limited to transmission-connected loads greater than 50 megawatts (MW).
- New generation projects are included dependent on their status in AEMO's Generation Information web page[2], as published on 27 July 2020. Projects listed as committed[3] (COM/COM*) and with a target commercial operation date prior to or within the target year are included.

[1] AEMO. *Forward-Looking Transmission Loss Factors*, Version 7.0, effective 8 February 2017, at http://www.aemo.com.au/-/media/Files/Electricity/NEM/Security_and_Reliability/Loss_Factors_and_Regional_Boundaries/2017/Forward-Looking-Loss-Factor-Methodology-v70.pdf.

[2] At http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Generation-information.

[3] Committed (COM) projects meet all five of AEMO's commitment criteria (relating to site, components, planning, finance, and date). Committed* (COM*) projects are classified as Advanced, have commenced construction or installation, and meet AEMO's site, finance, and date criteria, but are required to meet only one of the components or planning criteria.

- Generator capacities are equal to those on the Generation Information web page update published on 27 July 2020.
- New generation projects are included if they are currently undergoing AEMO's registration process.

To calculate the indicative 2021-22 extrapolated generation forecasts, AEMO included the following new projects (not yet registered):

- Queensland – Gangarri Solar Farm, Maryrorough Solar Farm, Middlemount Sun Farm, and Kennedy Energy Park (solar, wind and storage).
- New South Wales – Bango 973 Wind Farm, Biala Wind Farm, Collector Wind Farm, Corowa Solar Farm, Crudine Ridge Wind Farm, Jemalong Solar Farm, Junee Solar Farm, Molong Solar Farm, Sunraysia Solar Farm, Wagga North Solar Farm, and Wellington Solar Farm.
- Victoria – Berrybank Wind Farm, Cohuna Solar Farm, Glenrowan West Sun Farm, Moorabool Wind Farm, Murra Warra Wind Farm – stage 2, Stockyard Hill Wind Farm, Winton Solar Farm and Yatpool Solar Farm.
- South Australia – Mannum-Adelaide 2 and 3 Solar Farms, Adelaide Desalination Plant Solar Farm – Stage 1 and 2, Murray Bridge-Onkaparinga Solar Farm, Happy Valley Solar Farm, Bolivar Wastewater Treatment Solar Farm, Morgan-Whyalla 1, 2 and 4 Solar Farms, Christies Beach Wastewater Treatment Solar Farm.
- Tasmania – None.

# 3. Results

The results of this study are provided as a separate spreadsheet on AEMO's website with this report[4]. The results provide the following information in relation to scheduled generating units:

- Historical generation, as monthly energy for each Transmission Node Identifier (TNI) from the 2019-20 financial year.
- Forecast generation, as monthly energy for each TNI for the 2021-22 financial year based on AEMO's indicative extrapolation study.

In line with clause 5.5.2 of the Methodology, AEMO has not included this information for semi-scheduled and non-scheduled generation (such as wind farms and solar farms), and the output of these generators is not adjusted.

AEMO has modelled Basslink flows at the historical figure of approximately 490 gigawatt hours (GWh) net flowing from Tasmania to Victoria.

The generation forecast used in calculation of the final 2021-22 MLFs is likely to change from the 2021-22 indicative extrapolated generation forecasts published with this report. Reasons for change may include, but are not limited to:

- Using the forecasted demand profiles for 2021-22 financial year for all existing connection points.
- Additional generation projects achieving committed status in AEMO's Generation Information web page.
- AEMO's acceptance of any adjusted generation profiles provided by Generators in accordance with the Methodology.
- Revised Medium Term Projected Assessment of System Adequacy (MT PASA) inputs.
- Revised or additional intra-regional transmission limits.

[4] At http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Security-and-reliability/Loss-factor-and-regional-boundaries.

- Updated information that may be used for the final 2021-22 MLF calculation.

# 4. Submission due date

Registered Generators may submit proposed adjusted generation profiles for the 2021-22 MLF calculation to mlf@aemo.com.au, in line with clause 5.5.6 of the Methodology.

AEMO will then consider whether to accept any proposed adjustments for the 2021-22 MLF calculation. Generators should carefully consider the requirements and conditions for acceptance in clause 5.5.6 before making submissions.

The due date for submission of proposed adjusted generation profiles is **16 November 2020**. AEMO may not be able to consider submissions received after the due date.