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| Indicative Extrapolation Input Data For 2019-20 Marginal Loss Factors |

October 2018

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 2019-20 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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# 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]](#footnote-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 2019-20 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 will be unrepresentative of expected generation dispatch for their plant in the 2019-20 year.

# 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 2019-20 MLFs. The historical generation used for the purposes of this forecast is based on data from the 2017-18 financial year.

AEMO will continue to analyse and check these generation forecasts. Consequently, the final generation forecasts used in calculation of the 2019-20 MLFs may differ from those presented in this report.

This study incorporates the following simplifying assumptions:

* Consumption forecasts are based on AEMO’s Electricity Statement of Opportunities (ESOO) operational annual energy consumption (Neutral scenario) forecasts, published in on 24 August 2018[[2]](#footnote-2).
* New loads considered are limited to transmission-connected loads greater than 50 MW.
* Load reductions considered are limited to transmission-connected loads greater than 50 MW.
* Generator capacities are equal to those on the Generation Information Page[[3]](#footnote-3) published on 31 July 2018.
* New generation considered is limited to scheduled and semi-scheduled generators listed on the Generation Information Page published on 31 July 2018.

To calculate the 2019-20 MLFs, AEMO modified historical generation data from the 2017-18 financial year to include:

* Childers Solar Farm, Clermont Solar Farm, Collinsville PV, Coopers Gap, Darling Downs Solar Farm, Daydream Solar Farm, Emerald Solar Park, Hamilton Solar Farm, Haughton Solar Farm, Hayman Solar Farm, Kennedy Energy Park – Phase 1 – Solar, Kennedy Energy Park - Phase 1 – Storage, Kennedy Energy Park – Phase 1 – Wind, Lilyvale Solar Farm, Mount Emerald, Oakey 2 Solar Farm, Oakey Solar Farm, Ross River Solar Farm, Rugby Run Solar Farm, Susan River Solar Farm, Teebar Solar One, Whitsunday Solar Farm, and Yarranlea Solar in Queensland.
* Beryl Solar Farm, Bodangora Wind Farm, Coleambally Solar Farm, Crookwell 2 Wind Farm, and Crudine Ridge Wind Farm in New South Wales.
* Ballarat Energy Storage System, Bannerton Solar Park, Bulgana Green Power Hub – BESS, Bulgana Green Power Hub - Wind Farm, Crowlands Wind Farm, Gannawarra Energy Storage System, Gannawarra Solar Farm, Karadoc Solar Farm, Lal Lal Wind Energy Facility - Elaine end, Moorabool Wind Farm, Mt Gellibrand, Murra Warra Wind Farm - stage 1, Stockyard Hill, Wemen Solar Farm, and Yatpool Solar Farm in Victoria.
* Barker Inlet Power Station, Bungala Two Solar Farm, ESCRI Dalrymple, Lincoln Gap Wind Farm - stage 1, Tailem Bend – Solar, and Willogoleche in South Australia.
* Granville Harbour Wind Farm and Wild Cattle Hill Wind Farm in Tasmania.

# Results

The results of this study are provided as a separate spreadsheet on AEMO’s website with this report[[4]](#footnote-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 2017-18 financial year.
* Forecast generation, as monthly energy for each TNI for the 2019-20 financial year based on AEMO’s indicative extrapolation study.
* Energy limits, based on historical generation that would be applied for 2019-20, have been listed in the accompanying spreadsheet as an indication.

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 193 gigawatt hours   
(GWh) net flowing from Victoria to Tasmania. The flow on Basslink is closely related to generation   
in Tasmania.

The generation forecast used in calculation of the 2019-20 MLFs may differ from those published in this report. Reasons for a change may include, but are not limited to:

* AEMO’s acceptance of any adjusted generation profiles provided by Generators in accordance with the Methodology.
* Updated information that may be used for the final 2019-20 MLF calculation.
* Enforcement of intra-regional transmission limits.

# Submission due date

Registered Generators may submit proposed adjusted generation profiles for the 2019-20 MLF calculation to [mlf.process@aemo.com.au](mailto:mlf.process@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 2019-20 MLF calculation. Generators should carefully consider the requirements and conditions for acceptance in clause 5.5.6 before making submissions.

The due date for submissions is **19 November 2018**. AEMO may not be able to consider submissions received after the due date.

1. AEMO. *Forward-Looking Transmission Loss Factors*, Version 7.0, effective 8 February 2017. Available 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>. [↑](#footnote-ref-1)
2. Available at <http://forecasting.aemo.com.au/Electricity/AnnualConsumption/Operational> [↑](#footnote-ref-2)
3. Available at <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/Generation-information>. [↑](#footnote-ref-3)
4. Spreadsheet is available at <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Security-and-reliability/Loss-factor-and-regional-boundaries>. [↑](#footnote-ref-4)