

## AEMO METHODOLOGY FOR THE CALCULATION OF FORWARD-LOOKING TRANSMISSION LOSS FACTORS

2 AUGUST 2024

### INTRODUCTION

The Energy Users' Association of Australia (EUAA) is the peak body representing Australian commercial and industrial energy users. Our membership covers a broad cross section of the Australian economy including significant retail, manufacturing, building materials and food processing industries. Combined our members employ over 1 million Australians, pay billions in energy bills every year and in many cases are exposed to the fluctuations and challenges of international trade.

Thank you for the opportunity to make a submission under AEMO's proposed Methodology for the Calculation of Forward-Looking Transmission Loss Factors (FLLF). This submission supports the submission made by Shell Energy on this matter. In addition, EUAA highlights the following points:

- Together with Shell Energy, the EUAA supports AEMO in its proposed change to move from the older TPrice software, where load and generation balancing will now be undertaken separately in the new AEMO developed NEMLF software program and load flow simulation will be undertaken in AEMO's Power System Simulator for Engineering (PSS®E) application.
- We agree with AEMO and Shell Energy that the changes should support improved transparency in the calculation of FLLF and support AEMO's first secondary objective of the FLLF consultation, however, we agree with Shell Energy that further work and consultation is required to achieve improved accuracy as the NEM transitions to higher levels of weather dependent renewable energy generation resources which results in significant variations in actual generator output compared to that used in the modelling. We agree with AEMO that this factor questions whether the existing configuration of the use of a single generator output reference year and minimal extrapolation logic still leads to reasonable approximations of future market dynamics.
- We agree with Shell Energy that the second secondary objective of the consultation should extend beyond "simplicity of the MLF calculation process" and be that the MLF calculation process must be easily understandable from a market participant and other interested stakeholder's perspective.
- For the treatment of controllable DC interconnectors, as with Shell Energy, we support option 2(b) where a DC network component or interconnector would be modelled the same as any other AC network component or interconnector in the modelling.
- For the treatment of proposed new generators, loads or network components, we support Shell Energy's recommendation that AEMO continue including only generators, loads and network components that have achieved AEMO's "committed" or "committed \*" classification with an additional assessment to verify the likely commercial-use date (as opposed to the "proposed commissioning date") before including in the FLLF modelling target year.

- We support Shell Energy that in the transitioning NEM world, the continued use of the single generator output reference year and minimal extrapolation logic is no longer fit for purpose. We also support Shell Energy's proposed interim steps to increase the number of level definitions and adjustments to level ordering.
- As with Shell Energy, we are also unconvinced that AEMO's proposed clustering of generating units will provide tangible benefits to the FLLF modelling, however we are open to ongoing transparent consultation on this matter to better understand the impact of clustering on the accuracy of the model's output.
- Whilst supportive of AEMO's proposal to implement Option 1 as an interim and temporary measure, by the time modelling of the 2026/27 FLLF, AEMO must have implemented improved generator dispatch modelling that deals with both the storage issue (multiple and partial cycling each day) and also the variability of weather dependent renewable generation and the impact of this on other scheduled generators. AEMO's ISP and reliability assessment models are both already undertaking these somewhat complex dispatch solutions under different prevailing weather conditions. We consider it is therefore in AEMO power to achieve improvements in this area for the 2026/27 FLLF modelling. We support Shell Energy's recommendation that AEMO should constitute a new working group to facilitate these changes.
- We also agree with Shell Energy that the current calculation philosophy of a single generator output reference year and minimal extrapolation logic is no longer fit-for-purpose in the NEM, as it transitions to higher levels of weather dependent renewable generation and hydro generators output coupled with the question of storage systems variable consumption and generation. Improvements in the FLLF calculation methodology are warranted to smooth out these naturally occurring variations to improve both the accuracy and reduce the year-on-year variations of MLF's allocated to both generators and loads. The working group to determine and progress the required changes proposed above would also perform this work and we encourage AEMO to constitute this working group so its investigations can commence.

In summary, while we support AEMO's proposed changes to the FLLF methodology, we consider that much more work needs to be done to improve the accuracy and transparency of the model and the inputs. AEMO should take the current change in methodology process to get the best outcome for the energy sector and consumers. In addition to establishing a new working group, we also recommend that an ex-post review process be implemented as a feedback loop to continually improve the FLLF modelling (inputs, assumptions and the model) and reduce the impacts on consumers.

Do not hesitate to be in contact should you have any questions.



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