

Marginal Loss Factor Discussion Forum

Workshop 1



Agenda

1. Introduction

2. Context

3. Discussion topics

- Appetite for change
- Timing parameters
- Calculation philosophy
- Market mechanism

4. Further feedback and questions

5. Next steps

Introduction

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Context

Consultation on Forward-looking Transmission Loss Factor Methodology

PUBLISHED: 05/07/2024

MARKET	STAGE	CONVENOR	INITIATED	ACCEPTING SUBMISSIONS?	SUBMISSIONS CLOSE
National Electricity Market	Draft Report	AEMO NEM	05/07/2024	Yes	22/10/2024

Timeline

- ✓ Consultation paper published
5 July 2024
- ✓ Submissions due on consultation paper
2 August 2024
- ✓ Draft report published
23 Sep 2024
- Submissions due on draft report
22 Oct 2024
- Final report published
18 Nov 2024

Matter under consultation

The National Electricity Rules (NER) require AEMO to calculate and publish, each year, inter-regional loss factor equations and intra-regional loss factors. AEMO has developed the Forward-looking Transmission Loss Factor (FLLF) methodology (often referred to as the Marginal Loss Factor (MLF) methodology) to set out the process by which these factors are determined. Within the scope permitted by the NER, AEMO can amend the FLLF methodology by following the standard rules consultation procedure described in NER 8.9.2.

Stakeholder feedback through pre-consultation workshops and consultation paper submissions

Marginal loss factor discussion points

July 2024

A register of discussion items related to the regulatory framework for marginal loss factors (MLF)

Today's workshop

- AEMO is *considering* further investigation of potential changes to marginal loss factor (MLF) frameworks without being limited by the current National Electricity Rules (NER) or Wholesale Electricity Market (WEM) Rules
- The purpose of today's workshop is to gather stakeholder perspectives and insights about where, how and why change could occur, and its relative importance to stakeholders
- AEMO will facilitate structured discussion and is interested in any feedback about the content of the presentation or its framing

Discussion topics

- Appetite for change
- Possible reform areas:
 1. Timing parameters
 2. Calculation philosophy
 3. Market mechanism

Appetite for change

Issue: What scale of change to the MLF calculation approach is desirable for market participants?



AEMO's understanding

- Change to MLF frameworks could lead to more efficient investment in and operation of the power system, for example by improving calculation accuracy or making MLFs more stable or predictable
- The uncertainty of framework change also has the potential to negatively impact investment stability
- Framework change has the potential to create both winners and losers



Context

- AEMO is currently undertaking a [MLF Methodology consultation](#), utilising new software, with changes to take effect for the 2025-26 calculation cycle
- Through the methodology consultation, AEMO received submissions both for and against fundamental change to MLF frameworks
- The WEM and NEM use effectively the same MLF design and are undergoing similar industry transition



Stakeholder input



What scale of change to the MLF framework is desirable?



What are the main drivers for change to MLF frameworks?



How should we consider possible reform across east and west coast markets?

Timing parameters

Issue: Do the timing parameters that currently underpin MLF calculations support the best outcomes for consumers?



AEMO's understanding

- There is a tension between stability and accuracy in MLF calculations
 - Noting stability for investors can mean errors and instability in retail settlement
- Timing parameters can be calibrated to manage this tension



Context

- The NER and WEM Rules prescribe that AEMO apply a single forward-looking MLF to a whole financial year, based on a full reference year of recent data
 - Some stakeholders raised concern with this in methodology consultation submissions
- Many alternative combinations of calculation timing parameters are feasible for AEMO to calculate



Reform concepts

[from [discussion points register](#)]

- Adjustment to relevant parameters, including:
 - Calculation frequency
 - Publishing horizon
 - Time-slicing of MLF application and reference data
 - Reference and application time lag
- Rolling reference years
- Qualitative principles introduced into market rules
 - For example, to acknowledge the stability-accuracy trade-off
 - The impacts of this may be broader than timing parameters



Stakeholder input



Compared to current process, is a more dynamic or a more stable calculation preferred?

Calculation philosophy

Issue: Would a change to the MLF calculation philosophy, currently underpinned by minimal extrapolation, improve outcomes for consumers?



AEMO's understanding

- AEMO considers that minimal extrapolation is most effective in settings where the required adjustment from independent supply-demand projections is small, and/or the adjustments are complex to model
- Where this is not the case, other approaches to calculation can be more appropriate



Context

- The difference between forward-looking and backcast MLFs is the upper limit of accuracy benefits of a new calculation approach (refer to next slide)
- Several methodology consultation submissions expressed a preference that AEMO utilise market modelling in the style of the ISP or ESOO



Reform concepts

[from [discussion points register](#)]

- Market modelling of ESOO or ISP style could be a starting point for an alternative approach where MLF calculations are not anchored to a historical period



Key concept: Minimal Extrapolation

- *A method for balancing supply and demand where generator output in defined groupings or 'levels' is adjusted in the same ratio, from the starting point of historical output*
- *Under minimal extrapolation, supply adjustments are applied pro-rata to large groups of generators, so as to keep individual generator adjustments 'minimal'*
- *This reflects a philosophy that historical data is an appropriate basis to capture the complexity of the power market*



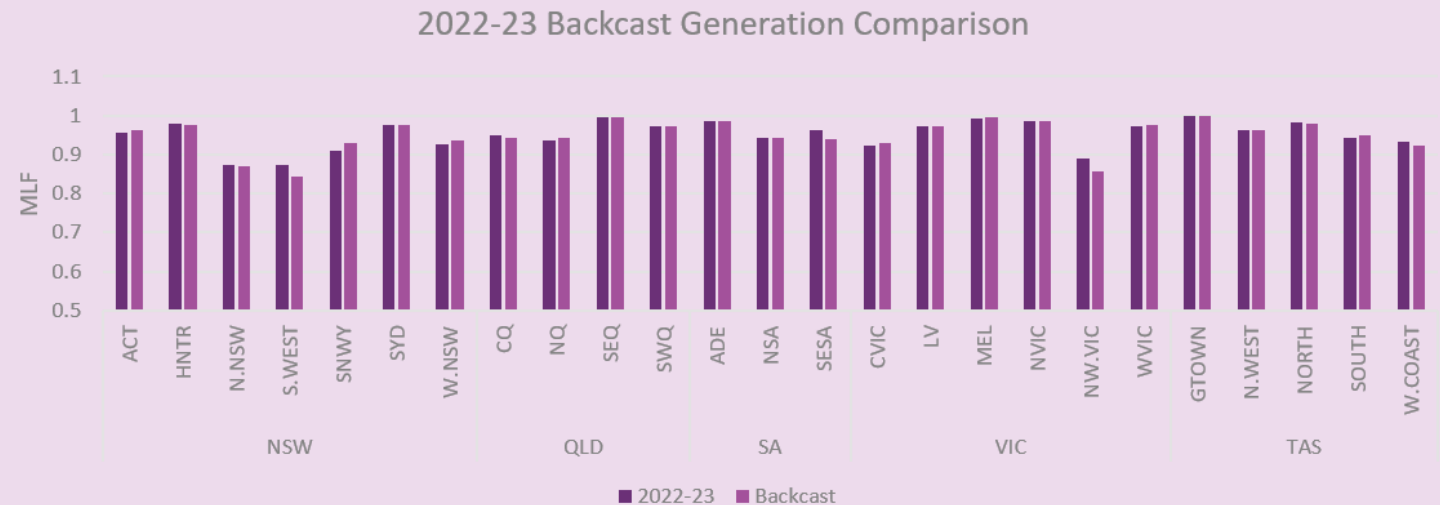
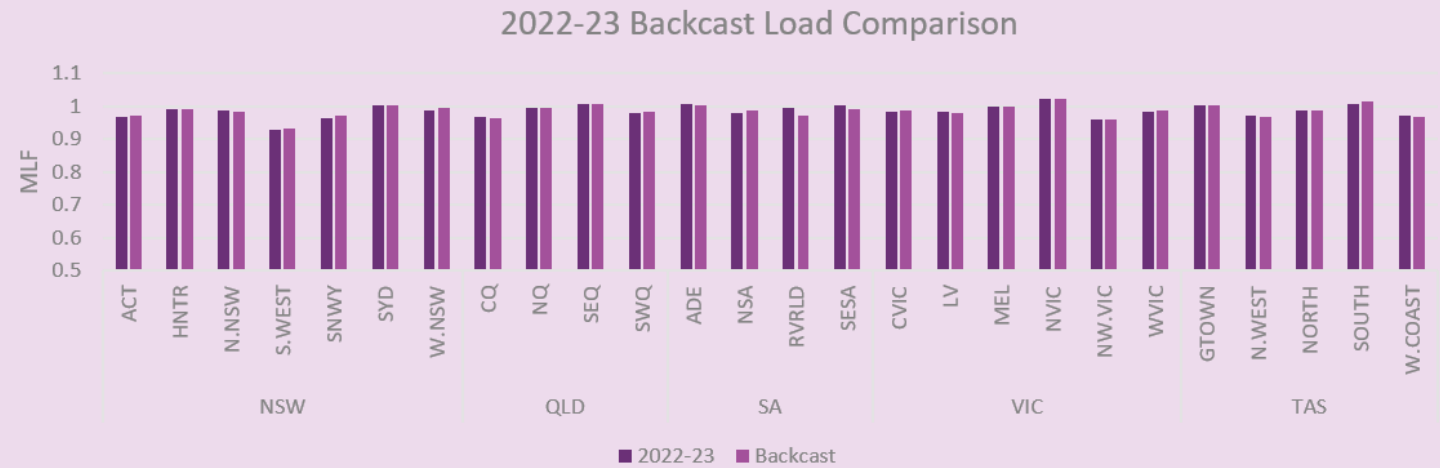
Stakeholder input



What sort of issues with the current calculation could be addressed by an alternative philosophy, and why would an alternative philosophy help?

Forward-looking vs backcast MLFs

2022-23 results, available [here](#)



Possible reform area 3

Market mechanism

Issue: Are forward-looking MLFs a suitable locational signal for the NEM & WEM?



AEMO's understanding

- Loss pricing supports:
 - Settlement adequacy
 - Efficient dispatch
 - Locational signalling
- Renewable energy certificates are MLF-discounted with anomalous impacts
- MLFs exist in the context of the 'hub and spoke' regional dispatch model used in the NEM and WEM
- MLFs have inherent volatility that reflects the volatility of supply and demand
 - Very difficult to predict accurately
- Deciding how to account for losses could consider:
 - Accuracy of calculations
 - Certainty for market participants
 - Computational complexity
 - Interactions with other market constructs (e.g. regional model)



Reform concepts

[from [discussion points register](#)]

- Alternative ways to account for losses, including:
 - Average loss factors (ALFs)
 - Real-time loss pricing via network model (loss factors eliminated)
- Mechanisms to manage the revenue risks associated with loss factors:
 - For example, it could be investigated whether loss factors can be made sufficiently predictable to support risk transfer?



Context

- Relevant, recent NEM reform processes considering locational signals* include:
 - Adani TLF rule change proposal (2019-2020)
 - GoGaTI reviews (2016-2020)
 - TAR (2022-2024)



Stakeholder input



Are there other factors that should be considered to decide how to account for losses?



Are there alternative market mechanisms that AEMO ought to consider?

*links to these reforms are provided in the [discussion points register](#)

Further feedback and questions

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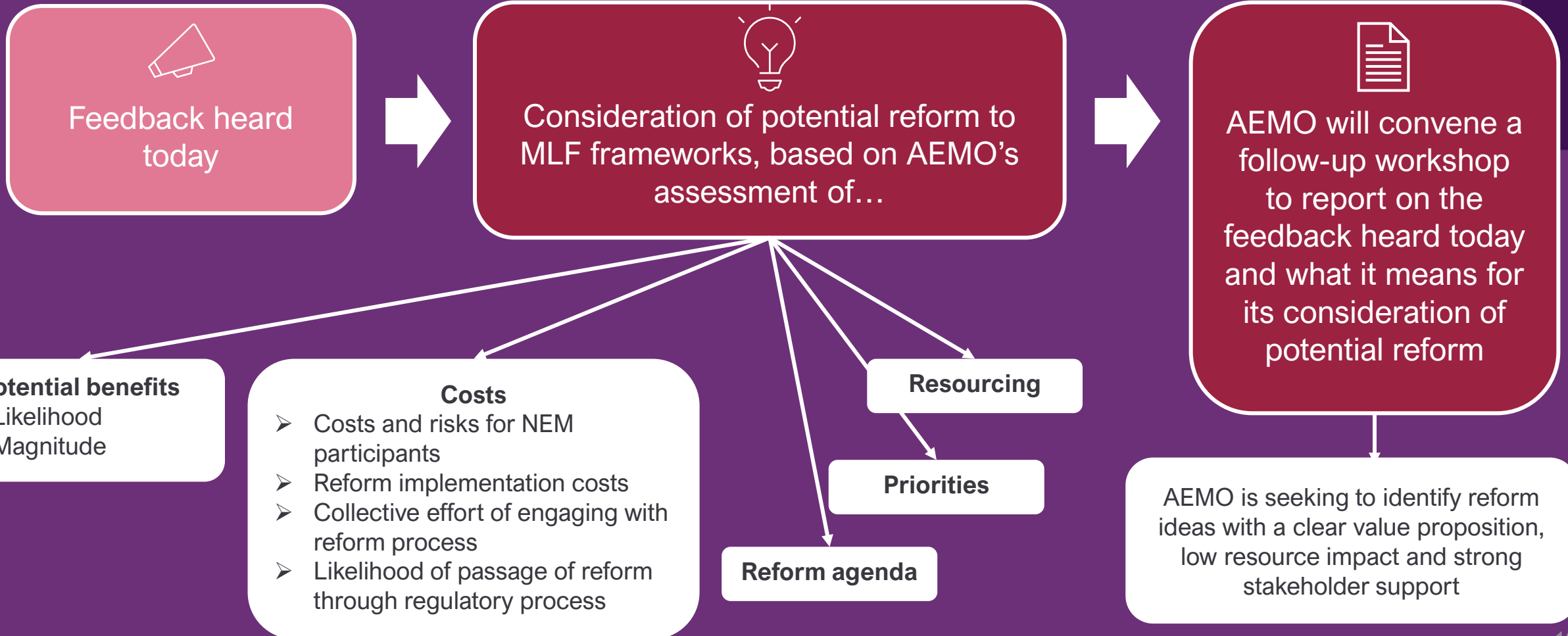
Are there any matters not discussed today that you think would help AEMO consider this?

Stakeholders are welcome to provide further feedback or arrange further discussion by contacting mlf_feedback@aemo.com.au

Next steps

WORKSHOP 1

WORKSHOP 2





For more information visit

aemo.com.au