

# Consultation paper on transmission loss factors

**The AEMC has started consultation on two rule change requests that seek to amend the transmission loss factor framework in the national electricity market (NEM).**

## Rule change request

The AEMC has received two rule change requests from Adani Renewables:

- On 27 November 2018, Adani Renewables submitted a rule change request seeking to redistribute the allocation of the intra-regional settlement residue (IRSR) so it applies equally between generators and networks users.
- On 5 February 2019, Adani Renewables submitted a rule change request seeking to change the marginal loss factor (MLF) calculation methodology to an average loss factor methodology.

These rule changes have been consolidated so that overlapping issues can be addressed.

## Marginal loss factors

When transmitting electricity from one point to another, a portion of the energy is lost in the form of heat due to electrical resistance. This occurs predominantly in transformers and transmission lines. These losses which occur through electricity flows are a function of physics and are unavoidable.

The impact of these losses are referred to as marginal loss factors (MLFs) and represent the portion of electrical energy that is lost when the next or marginal unit of electricity is transmitted across the transmission network. An MLF value specifically represents the losses between a generator or load connection point on the transmission network and the regional reference node (RRN). MLFs are calculated and published by AEMO annually and are applied to each generator's or load's connection point in the NEM. A generator's revenue is proportional to its MLF and so an MLF value can affect a generator's commercial viability.

Previously, MLFs were reasonably predictable with less variability from year-to-year. This reflected the stability of the generation sector: much of the supply into the NEM was provided by relatively few, large generators with consistent dispatch patterns.

However, with the restructuring of Australia's power system accelerating, MLFs have become difficult to forecast accurately and incorporate into decision-making for some market participants. This is a result of coal-fired generators exiting and new wind and solar generators connecting throughout very different parts of the NEM compared to the locations of the established generation fleet.

## Intra-regional settlement residue

Intra-regional settlement residues arise from the wholesale market settlement process. The value of MLFs impacts on the settlements made to generators and market customers.

Intra-regional settlement residues are paid to the transmission network service provider (TNSP) for the associated region and are used to reduce TUOS charges that are ultimately paid by electricity customers.

## **Consultation paper**

This rule change process will assess the two rule changes requests from Adani Renewables and consider more generally, the transmission loss factor framework. The consultation paper outlines the AEMC's approach for this rule change process and seeks stakeholder feedback on key issues and potential solutions.

Submissions to the consultation paper close on Thursday, 18 July 2019.

In addition, the AEMC is holding a workshop on 4 July 2019 in Brisbane to gather stakeholder views on the operation of the transmission loss factor framework. If you are interested in attending, please contact Andrew Splatt at [andrew.splatt@aemc.gov.au](mailto:andrew.splatt@aemc.gov.au) or (02) 8296 0623. Final details for the workshop, including venue, time and agenda, will be provided closer to the date.

## **Related work**

The AEMC has two other projects that relate to Adani Renewables' rule change requests. Both of these projects are key to addressing the state of change in generation occurring in the NEM.

These are:

- [Coordination of generation and transmission investment implementation \(COGATI\) - access and charging review](#)
- [Transparency of new projects](#) rule change.

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