

# Changes to Load Relief Value and Contingency FCAS volumes – Tasmania Region November 2020

AEMO is acting on a recent review of load relief in the Tasmania Region of the National Electricity Market (NEM). Accordingly, from December 2020, AEMO will slowly reduce assumed Tasmania Region load relief from 1% to 0%, at the rate of 0.1% per fortnight. This will result in increased procured Contingency Frequency Control Ancillary Services (FCAS) volumes for the Tasmania Region.

## Review of load relief

Following AEMO's reduction during 2019 of the load relief value applied in the mainland regions of the National Electricity Market (NEM), a review has since been conducted in relation to load relief in Tasmania. The analysis of the current response of Tasmanian load to disturbances was performed by TasNetworks and independently reviewed by AEMO. The recommendation of the review is to apply a load relief value of 0% in Tasmania.

AEMO's analysis of power system events in the mainland during 2020 also confirmed that a load relief value of 0.5% remains appropriate at this stage for the mainland NEM. For further information on the mainland load relief reduction process, refer to <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/ancillary-services/load-relief>.

## Background – role of load relief in Contingency FCAS

In the NEM, there are six Contingency FCAS markets, designed to ensure there is enough frequency response in the system to deal with a single credible contingency, which is typically the loss of a large generating unit, transmission interconnector or major industrial load.

The amount of Contingency FCAS procured in Tasmania is determined from the size of the largest credible contingency, minus a level of assumed load relief. Unlike the mainland, the calculation of Contingency FCAS requirements in Tasmania also considers system inertia levels, with higher levels of Contingency FCAS required under lower system inertia levels.

Load relief is an assumed change in load that occurs when power system frequency changes. It relates to how particular types of load (particularly traditional motors, pumps, and fans) draw less power when frequency is low, and more power when frequency is high. Since the Tasmania Region joined the NEM, the Tasmania Region load relief has been assumed to be 1%; this means that for a 1% change in frequency (0.5 Hertz), the total Tasmania Region demand is assumed to change by 1%. Tasmania has a substantially different load composition when compared to the mainland, in particular a very high proportion of large single industrial loads, and its assumed load relief is different to the mainland.

TasNetworks has installed improved and expanded high-speed monitoring capability throughout the Tasmania network to better support analysis of phenomena like load relief.

## Changes to Contingency FCAS volumes

The reduction of assumed load relief will increase the required volumes of all Tasmanian Contingency FCAS products. Fast and slow services will increase more than delayed services, as the assumed frequency change (and thus assumed load relief) is greater for those services<sup>1</sup>. AEMO will commence reducing the Tasmania load relief assumed value from the current value of 1% from 9 December 2020. To allow the market to adjust appropriately to the increased Contingency FCAS requirements, the reductions will be at the rate of 0.1% each fortnight to achieve the final value of 0%. Each change will be notified by market notice.

<sup>1</sup> This is because the Frequency Operating Standard (FOS) sets out different frequency tightness obligations for different timeframes.

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Contingency FCAS volumes are highly dynamic, because they depend on contingency size and prevailing conditions, such as system inertia and demand.

Note that all changes contemplated here affect Contingency FCAS only in Tasmania. No changes to Regulation FCAS are anticipated.

### **Monitoring and further actions**

AEMO will regularly monitor Contingency FCAS performance and market activity throughout this process and may revise these plans if any unexpected outcomes are noted