AUSTRALIAN ENERGY MARKET OPERATOR

Life of NEM Regional Model Supporting Information

Prepared by:	AEMO Markets – Settlements and Prudentials
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Current version release details

Version	Effective date	Summary of changes
3.1	03 June 2024	• New AEMO Template • Amendments to reflect the terminology changes under the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 • Minor drafting improvements

Credit limit procedure volatility factor percentile determination

1. Model assumptions

The calculation of regional volatility factor (VF) percentiles involves modelling each region as a retailer and determining the level of credit support required to meet the 2% prudential standard over the life of the NEM. Each regional model takes account of the season, regional load (adjusted consumed energy (ACE)), security deposits, regional reference prices (RRP) adjusted for carbon price, outstandings and the settlement calendar. The outstandings limit (OSL) and prudential margin (PM) are adjusted as a function of VF percentile until the prudential standard is met.

The prudential standard requires that on no more than 2% of occasions the credit support would be inadequate to cover the accruing liabilities whilst the default and suspension process is being undertaken. This timeframe is the reaction period which is covered by the PM. In the model, a default is assumed to occur each time the outstandings are in excess of the OSL. The 2% prudential standard is also known as the probability of exceedance (POE).

The main assumptions in the regional model are:

- Simplified settlement cycle
    - Settlement day is always on a Friday four weeks after completion of the billing week.
- Exceedance determination
    - Prudential assessment is assumed to occur daily except weekends and the following public holidays:

Public Holiday	Date
New Year's Day	1 January
Australia Day	26 January
ANZAC Day	25 April
Christmas Day	25 December
Boxing Day	26 December

    - If the outstandings are below the OSL then no exceedance occurs.
    - If the outstandings are above the OSL then default is assumed (i.e. no further security deposits paid) and a run through of the next seven days outstandings (including the day of the default) is tested against the PM. If the PM is less than the run through, an exceedance is counted.
    - If the seven day run through includes a settlement day then settlement is assumed not to occur and the outstandings are not reduced by the settlement amount.
    - If the outstandings are greater than the OSL on settlement day, payment for the billing week is assumed not to occur for determination of an exceedance. Otherwise, payment is assumed in full.

- Security Deposits
  - On any day, if the outstandings (including the security deposit balance) are greater than the OSL, then following assessment of an exceedance, a security deposit is assumed to be paid to reduce the outstandings down to the OSL.
  - Each security deposit amount is maintained in a security deposit balance which reduces the outstandings until the settlement day of the billing week in which the security deposit was paid. At this point, the security deposit is considered to be returned.
    - The percentiles for PM and OSL are the lowest values consistent with the 2% POE.
    - Historical RRPs from 1 July 2012 to 30 June 2014 are adjusted for the carbon price repeal by decreasing $21 per MWh for mainland regions and $12 per MWh for Tasmania.

  Additional information on the carbon price repeal can be found on the AEMO website.
  - Interest is not accrued on the security deposit.
- Seasons and Data used in the Model
  - The seasons are summer (1 December to 31 March), winter (1 April to 31 August) and shoulder (1 September to 30 November).
  - The model start date is 1 December 1999 for NSW, QLD, SA and VIC and 1 April 2006 for TAS. Data prior to the above periods is not considered in the linear regression in order to avoid non-representative prices at market start.
  - Actual market data is used for the first two full years of the model for the following parameters:
    - Estimated load
    - Regional reference price (RRP)
    - Outstandings limit volatility factor (VF_{OSL})
    - Prudentials margin volatility factor (VF_{PM})