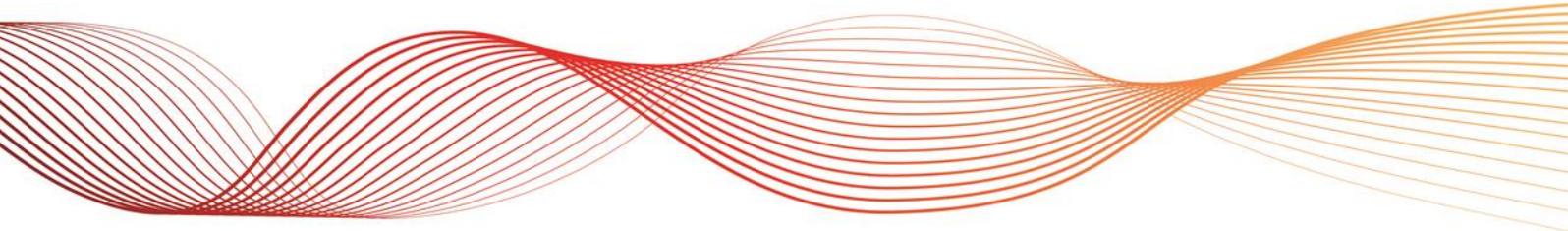




ENERGY ADEQUACY ASSESSMENT

BASSLINK OUTAGE

Published: **January 2016**





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Acknowledgement

AEMO acknowledges the support, co-operation and contribution of market participants in providing data and information used in this publication.



1. TASMANIAN ELECTRICITY SUPPLY

This report provides updated information about the adequacy of electricity supply in the National Electricity Market (NEM) following updated information about the Basslink Interconnector fault which occurred on 20 December 2015, disconnecting Tasmania from the NEM.

This report follows the December 2015 Energy Adequacy Assessment Projection (EAAP), and provides an updated assessment based on the revised return to service date of the Basslink Interconnector on 19 March 2016, as announced by the asset owner on 14 January 2016.

This latest analysis confirms no regional reliability standard breaches in Victoria or Tasmania over the next two years if Basslink Interconnector is returned to service 19 March 2016. The reliability standard prescribes a maximum of 0.002% of all operational consumption can go unserved for any region in any financial year.

AEMO has assessed energy adequacy in Tasmania using the low rainfall scenario defined in the Energy Adequacy Assessment Projection (EAAP) Guidelines¹, namely:

- Based on rainfall between 1 July 2006 and 30 June 2007 for all regions except New South Wales. New South Wales is based on rainfall between 1 June 2006 and 31 May 2007.²

Energy adequacy projections

AEMO's analysis under the low rainfall scenario, which would have the highest impact on the adequacy of electricity supply, indicates:

- No projected reliability standard breaches in Tasmania over the period until 19 March 2016 when the Basslink Interconnector is expected to return to service.
- More than 500 gigawatt hours (GWh) of gas-fired generation (approximately 25% of total generation) is expected in Tasmania before 19 March 2016. This generation will require reliable gas supply from Victoria (about 60 terajoules (TJ) per day). AEMO is satisfied that there is sufficient gas transportation capacity to supply this Tasmanian gas-fired generation, without impacting gas supply to Victoria.
- No reliability standard breaches in Victoria, with no imports from Tasmania during the Basslink outage.

Any further changes to the supply mix (such as reduced wind generation, unplanned generation outages, or gas supply interruptions) could put Tasmanian energy adequacy at risk.

Modelling methodology

This analysis is based on information provided by participants, through the Generator Energy Limitation Framework, for the December 2015 EAAP, with the following changes to assumptions:

- The Tamar Valley Combined Cycle Gas Turbine has returned to service with a capacity of 208 megawatts (MW) from 20 January 2016.
- Basslink Interconnector will return to service on 19 March 2016, as advised by the asset owner.
- Updated model to reflect current water storage levels in Tasmania for hydro electricity, that are at 20.7 per cent (2,982 GWh) as at 15 January 2016.

The analysis is conducted over a two-year timeframe. As the study is probabilistic in nature, AEMO performs 400 simulations (considering various unplanned generation outage states) for the low rainfall scenario using both 10% and 50% probability of exceedance demand forecasts. From these simulations, the expected yearly regional energy consumption at risk of not being served is calculated and compared against the reliability standard to assess adequacy of supply.

¹http://www.aemo.com.au/AEMO%20Home/Electricity/Resources/Reports%20and%20Documents/--/media/Files/Other/electricityops/EAAP_Guidelines.ashx



2. MEASURES AND ABBREVIATIONS

Units of measure

Abbreviation	Unit of Measure
GWh	Gigawatt hours
MW	Megawatts
MWh	Megawatt hours
TJ	Terajoules

Abbreviations

Abbreviation	Expanded Name
AEMO	Australian Energy Market Operator
EAAP	Energy Adequacy Assessment Projection
POE	Probability of Exceedance

Glossary

This report uses many terms that have meanings defined in the National Electricity Rules (NER). The NER meanings are adopted unless otherwise specified.

Term	Definition
Reliability Standard	The power system reliability benchmark set by the Reliability Panel. The maximum permissible unserved energy, or the maximum allowable level of electricity at risk of not being supplied to consumers, due to insufficient generation, bulk transmission or demand-side participation (DSP) capacity, is 0.002% of the annual energy consumption for the associated region, or regions, per financial year.