INFORMATION

Transparency of unserved energy

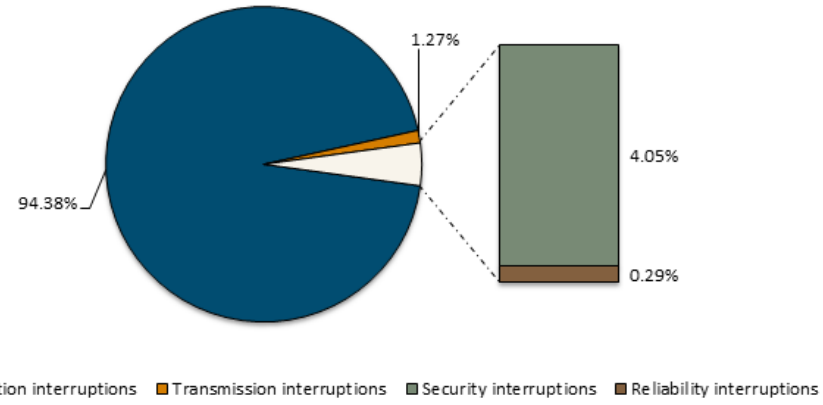
The Reliability Panel has released a final report reviewing the transparency and clarity of the definition of unserved energy. The review examined the transparency of what events should be included in or excluded from the calculation of unserved energy for the purposes of the reliability standard in an ex-post manner.

Background

In general, unserved energy refers to demand that has not been met, i.e. supply interruptions. Supply interruptions can occur from many reasons: reliability (e.g. not having enough generation or demand response to meet demand on a very hot day); security (e.g. load being shed to manage frequency across the system); or network (e.g. outages due to fallen power lines).

As the figure below shows, interruptions to consumer supply relating to the reliability of generators and interconnectors have historically represented a very small amount of all supply interruptions experienced by customers.

Sources of supply interruptions in the NEM: 2007/08 to 2017/18



Source: AEMC analysis.

In the NER, the concept of unserved energy with respect to wholesale-level reliability is applied to measure any supply interruptions consumers experience from generation and interconnection inadequacy only. Under the reliability standard, expected unserved energy must not be more than 0.002 per cent of the total energy demanded in a given year.

AEMO uses the unserved energy framework specified in the NER, which provides guidance on what types of events should be included in the calculation, and what type of events should be excluded from the calculation, to calculate how much unserved energy there was in any given financial year, in an ex post manner. This review examined whether this unserved energy framework remained appropriate.

Recommendations

The final report concluded that the unserved energy framework is largely appropriate, but highlighted areas for improvement with respect to information provision, clarity and transparency around how unserved energy is calculated ex-post.

As a result, the final report includes the following key recommendations:

- To **promote transparency of the ex-post unserved energy calculation**, AEMO should be

required to provide more information on how it calculates unserved energy.

- To **improve clarity of the unserved energy framework**, the definition in the NER should be complemented with the introduction of a principle to guide AEMO when allocating incidents to unserved energy ex-post.

The Panel considers that the proposed changes improve:

- clarity of the definition of unserved energy for the purposes of the reliability standard
- transparency of the calculation of unserved energy
- the provision of information to the market in a manner useful to stakeholders.

The Reliability Panel submitted the above recommendations, along with some additional minor changes aimed at improving clarity, to the AEMC in a rule change request.

Scope of review and next steps

The scope of this review only extended to the transparency and clarity of the ex-post calculation of unserved energy. The Panel did not consider if the reliability standard itself, and how it is defined, was appropriate.

While the Panel concluded that the existing definition of unserved energy is largely fit for purpose, stakeholders raised other issues which are best examined through a review of the reliability standard. The Panel reviews the reliability standard and settings every four years, and may do so more often if requested by the AEMC.

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