



Review of electricity distribution reliability outcomes and standards

Draft advice on the costs and benefits of the future level of electricity distribution reliability in New South Wales

The Australian Energy Market Commission has published draft advice for public consultation on the costs and benefits of four scenarios for the future level of distribution reliability in NSW.

What is the purpose of the AEMC's advice?

The Ministerial Council on Energy (MCE) requested the AEMC provide advice on the costs and benefits of the future level of reliability that could be provided by electricity distribution networks in NSW.

Our draft report sets out the AEMC's draft advice on four scenarios for distribution reliability in NSW, and examines trade offs between possible changes in distribution investment and reliability performance for each scenario. The draft advice provides information for the NSW Government, should it decide changes should be made to the level of reliability that is provided by electricity distribution networks in NSW.

We are now calling for public submissions on the draft report. The AEMC's final report will be published in late August 2012.

Summary of the AEMC's draft advice on the NSW workstream

- We considered four scenarios for the future level of distribution reliability in NSW over a fifteen year timeframe from 2014/15 to 2028/29. Three scenarios provide for lower reliability outcomes, ranging from a modest reduction to an extreme reduction in outcomes, and one scenario provides for improved reliability outcomes.

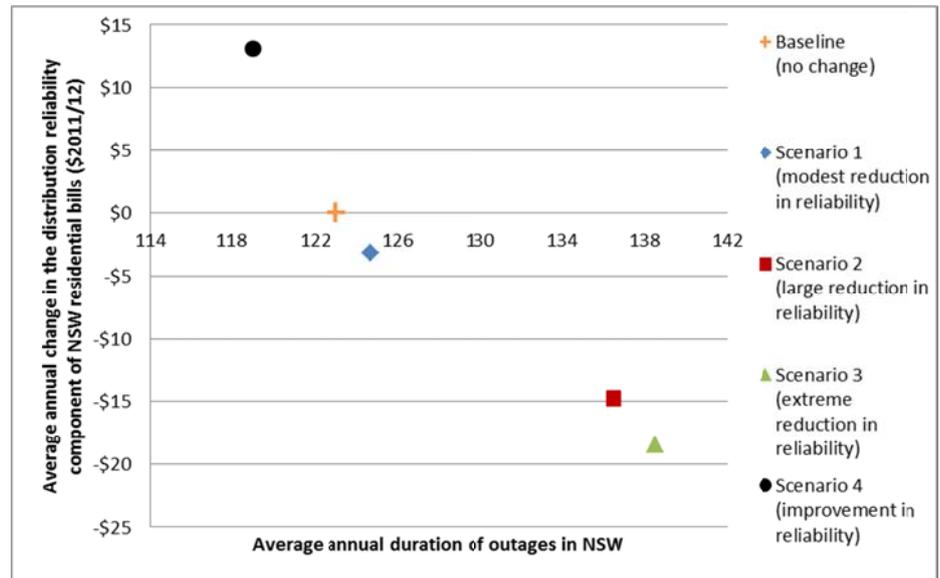
Impact on customer bills and reliability performance

- In terms of the impact on residential customer bills, it is estimated that the average NSW residential consumer in 2028/29 would save \$3 to \$18 a year in today's dollars on their electricity bill under the scenarios for lower reliability outcomes, when compared with the continuation of the current requirements for distribution reliability.
- Investment to meet the current reliability requirements in NSW, which were established in 2005, has already been committed.
- The reduction in customer bills is likely to be relatively modest, as investment to maintain existing reliability requirements is just one of the drivers of the cost of distribution services. Distribution costs, in turn, form only one component of overall electricity bills.
- However, reductions in capital expenditure and customer bills would come at a cost of increased outages.
- In 2028/29, these increased outages are estimated to range from around two minutes more a year under a modest reduction in reliability to fifteen minutes more a year under an extreme reduction in reliability, compared to the continuation of the current requirements for distribution reliability.
- Over a five year timeframe, the impact on outages is expected to be significantly smaller and would range from an increase of less than one minute to seven minutes more outages a year under our scenarios for reduced reliability.
- The impact on reliability performance may either be higher or lower for different customers, depending on which distribution network they are covered by and where they live within each network.

There are significant benefits from reducing the level of distribution reliability in NSW, even while taking into account the relatively high value placed on a reliable electricity supply by NSW customers.

- A comparison of the impact on customer bills and outages for each scenario and a baseline of no change to the current requirements for distribution reliability is set out in Figure 1.

Figure 1: Comparison of the change in customer bills and outages for each reliability scenario

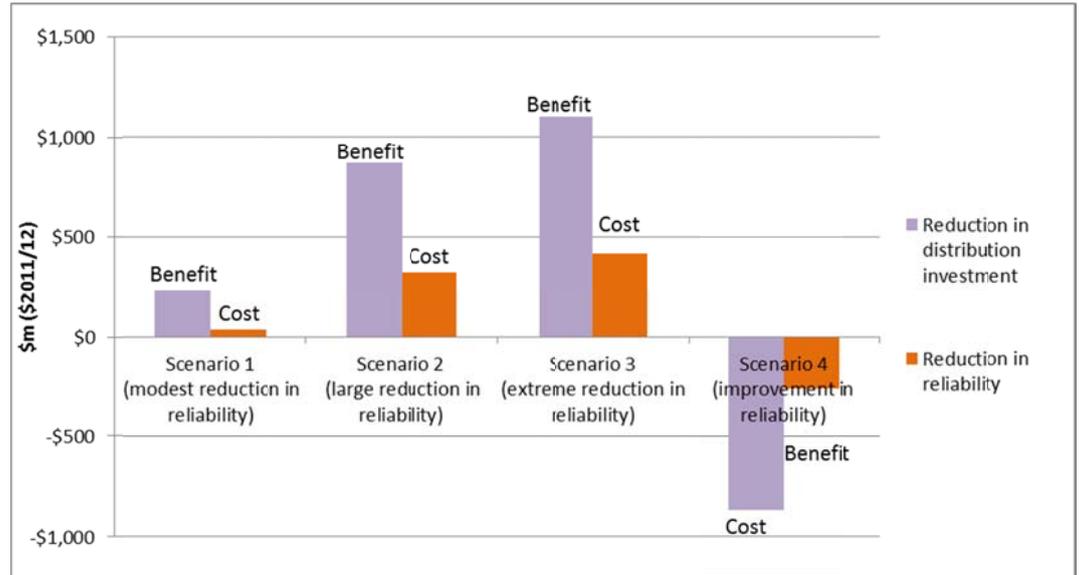


The costs and benefits of our scenarios for distribution reliability in NSW

- Our analysis suggests there are benefits to consumers from reducing the level of distribution reliability in NSW.
- The three scenarios for lower distribution reliability outcomes indicate that the cost savings from reducing reliability levels are larger than the costs to customers of poorer reliability performance, compared to the continuation of the current requirements for distribution reliability.
- In other words, a relatively small reduction in reliability can lead to a large reduction in the investment required by electricity distribution networks.
- Over a fifteen year timeframe from 2014/15 to 2028/29, the three scenarios for lower reliability outcomes would provide reductions in distribution investment in today's dollars ranging from \$231m for a modest reduction in reliability outcomes to \$1.1bn for an extreme reduction in reliability outcomes.
- Over a five year timeframe from 2014/15 to 2018/19, the reductions in distribution investment would still be large, ranging from in today's dollars \$112m for a modest reduction in reliability outcomes to \$467m for an extreme reduction in reliability outcomes.
- Under our scenario for improved reliability outcomes, the costs of improving reliability performance outweighed the benefits of improved reliability for customers. This suggests there would be overall costs to improving reliability in NSW.
- A summary of the costs and benefits under each scenario over a fifteen year timeframe from 2014/15 to 2028/29 are set out in Figure 2 below

We have undertaken a survey of almost 1,300 NSW customers to understand the impact of changes to reliability on customers.

Figure 2: Comparison of the costs and benefits of each reliability scenario



Results from the NSW customer survey

- Our draft advice has been based on comparing the change in distribution investment under each scenario against the change in reliability performance, using modelling provided by the NSW distribution networks.
- To understand the impact of changes to reliability on customers, we developed a NSW value of customer reliability for each NSW distribution network, by surveying 1,288 customers across NSW.
- The NSW values of customer reliability that have been developed from this survey are set out in Table 1 and suggest that NSW customers place a relatively high value on a reliable electricity supply.

Table 1: NSW value of customer reliability

NSW average	Ausgrid	Endeavour Energy	Essential Energy
\$94,990/MWh	\$86,790/MWh	\$110,710/MWh	\$90,710/MWh

- Even when taking this relatively high customer value of reliability, as discussed above, under our three scenarios for lower reliability the costs savings in distribution investment would still outweigh the potential costs to consumers from poorer reliability.
- To complement the values of customer reliability we developed, we also asked customers about their willingness to pay for improved reliability and their willingness to accept poorer reliability for a discount on their electricity bill.
- The results from our willingness to pay and accept questions are broadly in line with the NSW values of customer reliability, and also suggest NSW customers place a high value on a reliable electricity supply.
- Further details on the results of our customer survey can be found in our fact sheet, *NSW customer survey on electricity reliability*, on the AEMC website.

National workstream of the review

- The MCE has also asked the AEMC to consider if there is merit in developing a nationally consistent framework for expressing, delivering, and reporting on distribution reliability outcomes.
- We will publish an issues paper in late June 2012 for public consultation on this workstream.

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