



public interest
ADVOCACY CENTRE

Submission to the review of NSW distribution reliability standards

8 May 2020

About the Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit legal centre based in Sydney.

Established in 1982, PIAC tackles barriers to justice and fairness experienced by people who are vulnerable or facing disadvantage. We ensure basic rights are enjoyed across the community through legal assistance and strategic litigation, public policy development, communication and training.

Energy and Water Consumers' Advocacy Program

The Energy and Water Consumers' Advocacy Program (EWCAP) represents the interests of low-income and other residential consumers of electricity, gas and water in New South Wales. The program develops policy and advocates in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives input from a community-based reference group whose members include:

- NSW Council of Social Service;
- Combined Pensioners and Superannuants Association of NSW;
- Ethnic Communities Council NSW;
- Salvation Army;
- Physical Disability Council NSW;
- St Vincent de Paul NSW;
- Good Shepherd Microfinance;
- Affiliated Residential Park Residents Association NSW;
- Tenants Union;
- Solar Citizens; and
- The Sydney Alliance.

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Introduction

The distribution reliability standard plays an important role in balancing the level of reliability consumers expect for essential, regulated electricity network services against the costs of delivering it.

The nature of network regulation means that planning and investment decisions made now have lasting cost impacts on NSW consumers, highlighting the importance of using consumers' preferences in the trade-off between price and reliability. Without this, the reliability standard risks driving long-lived network investment that would be neither fair nor economically efficient.

Responses to consultation questions

Question 1

Do you agree that SAIDI and SAIFI measures should continue to be used in the reliability standards, defined in line with the AER's Distribution Reliability Measures Guideline?

Yes.

The SAIDI and SAIFI measures are well-established and understood metrics for expressing and measuring network reliability. PIAC sees no compelling reason to stop using these measures (notwithstanding changes to the specific levels of SAIDI or SAIFI in the reliability standards).

Consistency with the AER's Distribution Reliability Measures Guideline is important to help promote consistency and fair comparability between jurisdictions across the National Electricity Market (NEM). This, in turn, helps to ensure better regulation of network expenditure proposals through benchmarking of their expenditure against performance.

Question 2

Do you agree that we should convert our estimate of the efficient level of expected unserved energy to allowances for the duration and frequency of interruptions? How could we convert the efficient level of expected unserved energy to allowances for the duration and frequency of interruptions?

In converting an annual unserved energy (USE) allowance to SAIDI or SAIFI numbers, IPART should have regard to the following:

- The allocation of an annual amount into specific duration and frequency metrics must be based on informed consumer preference.
- The impact of the duration and frequency of outages on a consumer and their preferences between the two will differ based on a range of factors including:
 - Whether or not there are children, elderly people or those with medical conditions in the household
 - Whether a business has temperature-sensitive products such as medicine or food

- Whether the consumer is in a CBD, suburban, regional or remote area of NSW.
- Such informed consumer preference must be obtained through direct, deliberative engagement with consumers with adequate time and information for the consumers to understand the consequences of their preferences.

PIAC looks forward to investigating these issues further with IPART and stakeholders.

Question 3

Do you agree that the excluded events in the distributor's licences should be consistent with the AER's Distribution Reliability Measures Guideline and Service Target Performance incentive Scheme? Are there any additional events that should be excluded by the licence or any events that should not be excluded?

Consistency

PIAC considers the NSW distribution reliability standard should remain consistent with the AER's guidelines and incentive schemes like the Service Target Performance Incentive Scheme (STPIS) wherever appropriate.

Consistency with the AER's national guidelines aids making comparisons between NEM jurisdictions. This, in turn, helps to ensure better regulation of network expenditure proposals through benchmarking of their expenditure against performance.

Consistency with incentive schemes such as the STPIS will help reduce the chance of confused or perverse incentives for the network business in planning and operating their network. However, there are reasons to deviate from national frameworks, such as to reflect NSW-specific characteristics or priorities. Where it is needed to deviate in setting the NSW distribution reliability standard, IPART can and should engage with the AER, such as through their periodic reviews of their guidelines, in order to harmonise the national and NSW frameworks.

Excluded events

See response to Question 4.

Question 4

If there is a risk that the frequency of severe weather events will increase, how should the costs of providing a resilient network and the value customers place on this resilience be balanced and what requirements should be placed in the distributors' licences?

PIAC agrees with IPART that extreme weather events are likely to become more frequent and this must be reflected in the planning and operation of the electricity system. This, in turn, must be reflected in the license conditions and distribution reliability standard in a way that balances costs and value. There are a number of ways to do this, including the use of excluded events and by incorporating a measure of resilience into the cost-benefit analysis calculation itself, which are described below.

However, there are diminishing returns in seeking to improve climate resilience through network planning decisions. Complementary changes to other areas of policy, regulation and planning are necessary rather than changes to the distribution reliability standard alone.

Incorporating resilience through excluded events

Excluded events are an important component of any network reliability assessment to help ensure that planning and operational decisions are not unduly swayed by statistical outliers such as extreme weather events. Otherwise, it may drive network businesses to increase expenditure well above efficient levels.

At this stage, PIAC does not see the need to reduce the range of excluded events. We would only support this if matched by a commensurate expansion in the range of mechanisms DNSPs could use to meet the reliability standard (i.e. beyond the current mechanisms such as traditional network investment and non-network options).

As IPART notes in the Issues Paper, there are alternative statistical methods to classify major event days that may better capture the increasing occurrence of extreme weather, for example, as proposed by Endeavour Energy in its 2019-24 regulatory proposal for the STPIS.¹ PIAC recommends IPART examine these further for use in the distribution reliability standard.

Incorporating resilience into the cost-benefit analysis

Incorporating resilience into the cost-benefit analysis for the distribution reliability standard must be informed by the degree to which the cost recovery and beneficiaries align.

The reliability of the distribution network is a concept defined in terms of the network's customers. This aligns with how distribution network costs are recovered – on a per customer basis. As such, the AER's Value of Customer Reliability estimates are a suitable metric for evaluating this.

By contrast, resilience (in particular climate change resilience) is a concept defined in terms of a community as a whole and not a customer in isolation. For instance, resilience goes beyond the supply of energy to a single customer's property and instead includes the ability to retain shared services for an entire community (such as emergency shelter, hospitals, petrol stations and supermarkets) during and following major disruptions such as an extreme weather event. Therefore, the beneficiaries of improved climate change resilience do not align with how distribution network costs are recovered.

Because the beneficiaries of climate change resilience are not energy customers in their individual capacities, the AER's VCR estimates alone are not a suitable metric to use. In order to address this, the AER has proposed to develop estimates for the value customers place on reliability in response to Widespread and Long Duration Outages (WALDO). While this is an important metric to properly incorporate community impacts into electricity network cost benefit analyses, PIAC has concerns about how the WALDO estimates have been derived and hence their appropriateness for use.

¹ IPART, *Review of distribution reliability standards issues paper*, March 2020, 27.

Community preferences regarding climate change resilience, and the trade-offs between resilience and network expenditure, can only be made by careful, considered, deliberative processes with well-informed people.

Question 5

Do you agree that payments under customer service standards should reflect the cost to a customer of an outage? How would this best be measured or estimated?

In principle, PIAC considers that payments under customer service standards should reflect the impact to the customer (and hence increase with the frequency and duration of an outage to a point) and should be made automatically. However, the practicalities involved in implementing this are material and must be weighed against the potential benefit to consumers.

The low level of smart meter penetration currently in NSW makes it more time and resource-intensive for a DNSP to accurately and speedily determine the occurrence and duration of an outage for a customer. PIAC understands this is not the case in Victoria where there is a high penetration of smart meters, making it more practical for DNSPs to automatically credit eligible customers.

The benefits of implementing a similar scheme in NSW depend on the extent to which there are customers who are eligible for these payments but not currently receiving them and whether they are materially disadvantaged as a result.

PIAC recommends IPART examine whether these potential benefits outweigh the implementation costs to determine whether changes should be made to the customer service standards and how they are paid to affected customers.

Question 6

Should payments under customer service standards increase as the duration (or frequency) of an outage (or outages) increases? Should payments be automatic or continue to require application by a customer? If payments become automatic, should exclusions be based on the major event day measurement that currently applies to the other reliability standards or continue to be defined causally (ie, with reference to extreme or severe weather as defined by the Bureau of Meteorology).

See response to Question 5.

Question 7

How should reliability standards cater for new technologies such as Stand-Alone Power Systems?

The reliability standard should only apply to SAPS that are installed and operated by a DNSP as a regulated service. It should not apply to a SAPS that is provided as an unregulated service, such as if it is owned and operated by a third-party or the consumer themselves.

It is important to note that, under the AEMC's proposed framework for allowing DNSPs to own and operate SAPS as a regulated distribution service, this would only be where the DNSP

transitions an existing grid-connected customer to SAPS supply. A DNSP would not be allowed to provide a regulated SAPS to a new customer connection. In addition to reducing the overall costs of operating the distribution network, those customers that are transitioned to SAPS-supply by their DNSP in this way would generally be expected to receive improved reliability than their current grid-connected supply.

At this stage, PIAC considers customers supplied via a DNSP-provided SAPS should be subject to the same or equivalent reliability standards as if they were supplied via a traditional grid connection.

PIAC does not consider it appropriate or necessary to develop SAPS-specific reliability standards. The SAIDI and SAIFI targets for traditional supply are, by necessity, averaged to reflect the broad range of different customers served by a distribution network feeder. By contrast, since a SAPS would serve just one or a relatively small number of customers, a reliability standard could be developed unique to the particular customer(s) being supplied. However, it is too early to formalise these in the reliability standard, and instead may be investigated in a future review if necessary.

PIAC understands that in the future, a DNSP could be required to take over a third-party SAPS and provide it as a regulated service. This would raise questions as to the necessary grandfathering of reliability and pricing arrangements for such a SAPS installation. However, it is unlikely this would be a common occurrence and it does not need to be explicitly determined in the reliability standard at this stage. It is better dealt with on a case-by-case basis should it arise.

Question 8

Should network reliability standards take account of two-way energy flows and the ability of the network to allow customers to both buy and sell electricity? If yes, should reliability standards take into account the value to customers of being able to export or sell power to the grid? What might this look like in practice?

No.

While reflecting the value some customers place on the ability to export power to the grid is important, it is inappropriate to include this in the distribution reliability standards at this point.

The network reliability standard should only define levels of minimum reliability for essential distribution services. Under the current policy framework, this means the ability to consume energy from the grid, not the right or ability to inject energy back into the grid.

Extending the distribution reliability standard to account for two-way energy flows would be problematic for two primary reasons:

- The current planning and regulatory frameworks, and hence the cost-recovery mechanisms, are designed to allow households and businesses to consumer energy from the grid. Therefore, including requirements for networks to plan the network to allow customers a minimum level of access to inject power back into the grid without making corresponding

changes to cost-recovery or other mechanisms risks creating unintended consequences and perverse incentives.

- There are a number of processes already underway, such as ARENA's Distributed Energy Integration Program (DEIP), to more holistically incorporate two-way flows into the regulatory and policy frameworks.

PIAC considers IPART should not make any change to the reliability standard for two-way energy flows until the broader policy questions are settled through processes already underway such as DEIP. To do so now in isolation through this IPART process would be premature and risks the tail wagging the dog.

Question 9

Do you agree with our proposed approach to estimating the efficient level of reliability and basing the standard on the level that delivers the lowest social cost?

It is essential that IPART consider both the cost of expected unserved energy as well as the efficient cost of providing a certain level of reliability. As noted in our response to Question 4, the reliability of the distribution network is defined in terms of the customer and aligns with how distribution network costs are recovered – on a per customer basis. Therefore, the cost of expected unserved energy must reflect the value individual customers place on network reliability in their capacity as energy consumers, and not the value the broader community may place on network resilience. Therefore, in estimating the cost of expected unserved energy, VCR values such as those developed by the AER through robust customer engagement must be used.

In estimating the efficient cost of providing reliability, robust cost estimates must be used not only for traditional network investment but also for non-network alternatives and SAPS.

Question 10

How should we estimate expected unserved energy across distributors' networks (for example by area, substation and/or feeders)?

PIAC agrees with IPART's preliminary view that it categorise feeders into groups with similar properties. We note, however, that determining a "representative feeder" for each type may not be straightforward in certain cases. We look forward to working with IPART and stakeholders to examine this in further detail.

Question 11

Do you agree with our proposed approach to estimating the following inputs:

- **the cost of expected unserved energy, which is a result of:**
 - **the value customers place on reliability (VCR)**
 - **the probability of asset failures**
 - **the duration of outages and restoration profile**
 - **profile of demand at each location**
 - **number and capacity of transformers and feeders and/or non-network options**
- **the direct costs (operating and capital costs) of providing different levels of reliability, and**
- **a discount rate and asset lives to convert capital costs to an annuity.**

PIAC supports IPART using the AER's VCR values in its analysis.

However, historical experience alone may not predict future trends such as climate change impacts, increasingly frequent extreme weather events and emerging technologies. These substantially alter the probability of asset failures, the duration of outages and the demand profile at each location. Therefore, it is important IPART develop robust sensitivity or scenario testing to account for these. PIAC looks forward to working with IPART and stakeholders to investigate this further.

Question 12

What role does including reliability standards in licences play and do you agree that the standards should minimise any duplication of incentives between the NSW distributor licences and national regulatory framework?

PIAC has not yet developed a position on this issue but looks forward to working with IPART and stakeholders to examine this further.

Question 13

What is the appropriate compliance framework for monitoring performance against distribution network reliability standards? Should IPART have the flexibility to determine the frequency of reporting, in response to performance?

PIAC supports IPART taking a risk-based approach to determining compliance requirements and reviewing the appropriate reporting timeframes and requirements as part of this review.