

10 May 2013



Reena Kwong
Australian Energy Market Operator
GPO Box 2008
MELBOURNE VIC 3001

By email: reena.kwong@aemo.com.au

Dear Ms Kwong,

Determining a value of customer reliability

PIAC thanks the Australian Energy Market Operator (AEMO) for the opportunity to provide input on AEMO's *Value of Customer Reliability Issues Paper*. PIAC considers the issue of the value of customer reliability (VCR) to be extremely important for residential consumers, given the impact of meeting reliability standards on final bills.

Please find attached the submission PIAC made to the Australian Energy Market Commission's (AEMC) 2012 review of reliability standards in NSW. A number of the points made in this submission are relevant to AEMO's current review. In particular, PIAC directs AEMO to the section regarding the way the VCR for residential consumers is weighted compared to that for commercial and large industrial users in determining an overall figure. It is PIAC's position that given consumers are the vast majority of account holders, their preferences should be weighted accordingly.

Once again, thank you for the opportunity to participate in this process. If you require any further information, please contact myself or Oliver Derum, Policy Officer in PIAC's Energy and Water Consumer's Advocacy Program, on 02 8898 6518 or oderum@piac.asn.au.

Yours sincerely

A handwritten signature in blue ink that reads "Edward Santow". The signature is fluid and cursive, with a large initial 'E'.

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Reliably affordable?

**PIAC submission to the AEMC's Review of
Distribution Reliability Outcomes and
Standards – NSW Workstream**

11 July 2012

Oliver Derum, Policy Officer

Energy + Water Consumers' Advocacy Program

The Public Interest Advocacy Centre

The Public Interest Advocacy Centre (PIAC) is an independent, non-profit law and policy organisation that works for a fair, just and democratic society, empowering citizens, consumers and communities by taking strategic action on public interest issues.

PIAC identifies public interest issues and, where possible and appropriate, works co-operatively with other organisations to advocate for individuals and groups affected. PIAC seeks to:

- expose and redress unjust or unsafe practices, deficient laws or policies;
- promote accountable, transparent and responsive government;
- encourage, influence and inform public debate on issues affecting legal and democratic rights; and
- promote the development of law that reflects the public interest;
- develop and assist community organisations with a public interest focus to pursue the interests of the communities they represent;
- develop models to respond to unmet legal need; and
- maintain an effective and sustainable organisation.

Established in July 1982 as an initiative of the (then) Law Foundation of New South Wales, with support from the NSW Legal Aid Commission, PIAC was the first, and remains the only broadly based public interest legal centre in Australia. Financial support for PIAC comes primarily from the NSW Public Purpose Fund and the Commonwealth and State Community Legal Services Program. PIAC also receives funding from the Trade and Investment, Regional Infrastructure and Services NSW for its work on energy and water, and from Allens Arthur Robinson for its Indigenous Justice Program. PIAC also generates income from project and case grants, seminars, consultancy fees, donations and recovery of costs in legal actions.

Energy + Water Consumers' Advocacy Program

This Program was established at PIAC as the Utilities Consumers' Advocacy Program in 1998 with NSW Government funding. The aim of the program is to develop policy and advocate in the interests of low-income and other residential consumers in the NSW energy and water markets. PIAC receives policy input to the program from a community-based reference group whose members include:

- Council of Social Service of NSW (NCOSS);
- Combined Pensioners and Superannuants Association of NSW;
- Park and Village Service;
- Ethnic Communities Council NSW;
- Rural and remote consumers;
- Retirement Villages Residents Association;
- the Physical Disability Council NSW; and
- Affiliated Residential Park Residents Association.

1. Introduction

PIAC welcomes the opportunity to provide comment on the Australian Energy Market Commission's (AEMC) draft report, *Review of Distribution Reliability Outcomes and Standards: NSW Workstream* (the draft report). PIAC's comments will address a number of issues, including: how reliability standards are expressed in NSW; the scenarios modelled for the draft report; and the need for a systematic examination of energy affordability.

This review is taking place against a backdrop of steep and repeated increases in electricity prices in NSW. Households on regulated retail contracts have seen electricity prices increase by more than 50% since 2009, placing significant strain on budgets and forcing consumers to make difficult sacrifices in other areas of spending.

Increases in network prices have contributed significantly to these price rises. As a result, PIAC welcomed the review of distribution reliability outcomes and standards in NSW, which could be seen as an opportunity to place downward pressure on electricity prices through redesigning or amending distribution reliability standards. However, PIAC considers that the draft report presents options for adjusting reliability standards that do not stand to bring significant benefits to NSW residential consumers. PIAC argues in this submission that this stems from two factors: the decision not to examine the fundamental structure of the NSW reliability standards; and the method of calculating the value of customer reliability (VCR).

2. Reliability standards in NSW

PIAC believes that a valuable opportunity has been missed to examine whether the NSW method of determining distribution reliability standards should be fundamentally re-designed. The terms of reference for the review of NSW distribution reliability standards request the AEMC to 'consider best practice national and international reliability standards and outcomes, in particular how the standards are set and the outcomes that are delivered'.¹ Further, 'in developing its recommendations, the AEMC is requested to take into consideration: [inter alia] the expectations of NSW electricity consumers'.²

2.1 The need to examine distribution reliability standards in NSW

NSW uses a far more prescriptive approach to setting distribution reliability standards than most comparable jurisdictions. Distribution Network Service Providers (DNSPs) in NSW are 'required to plan their system to deterministic criteria, which vary according to system location'.³ For example, the standards require two redundant sets of sub-transmission lines in the Central Business District, whereas in other areas there is a requirement for one redundant set or no redundancy at all.⁴ These criteria apply in addition to minimum standards for outages as measured by the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).⁵ The NSW approach differs from that taken by other

¹ Ministerial Council on Energy, *Terms of Reference: Australian Energy Market Commission Review of Distribution Reliability Outcomes and Standards*, 2012, 4.

² Ibid.

³ The Brattle Group, *Approaches to setting electric distribution reliability standards and outcomes*, 2012, 33.

⁴ Ibid

⁵ Ibid.

Australian jurisdictions, which only stipulate the outcomes that must be achieved in terms of SAIDI and SAIFI, without prescribing the infrastructure necessary to achieve these outcomes.⁶

The case for undertaking an in-depth analysis on the NSW method of setting distribution reliability standards is strong. This case has been well expressed by the NSW retail electricity price regulator, the Independent Pricing and Regulatory Tribunal (IPART), and the consultancy firm the Brattle Group. In its examination of the approaches used by different jurisdictions, the Brattle Group found that:

Whilst the Australian approach to regulating distribution reliability is generally very much in line with other jurisdictions... NSW appears unique in applying input standards that are driving investment decisions.⁷

In its draft report, *Changes in regulated electricity retail prices from 1 July 2012*, IPART also cited the Brattle Group's recommendation to the AEMC that 'the framework for distribution reliability should focus on reliability performance, with requirements relating to network planning only used as a last resort'.⁸ IPART further stated that it 'agree[s] with the Brattle Group and support[s] specifying distribution network reliability standards on an output basis'.⁹

In a gloss on its position, the AEMC summarised the Brattle Group as saying that while some other jurisdictions used some elements of the design planning criteria that are used in NSW, this approach 'does not appear to be driving investment in the same way as in NSW as the criteria used in other jurisdictions are less stringent'.¹⁰

2.2 The draft report and the next network determination period

PIAC is extremely disappointed that the draft report has missed an opportunity to analyse the relative merits of using the current NSW deterministic approach to reliability standards versus the outputs-based approach used in other jurisdictions. While PIAC accepts that such a change would be 'very significant [and] further analysis would be required before determining if it was appropriate',¹¹ PIAC believes that the current review is the setting in which such analysis should be conducted.

PIAC is not convinced that because DNSPs would need to alter their network planning in response to a change in the nature of reliability standards, 'it is unlikely that [such a change] could be implemented before the start of the next regulatory control period'.¹² The draft report does not make clear how the AEMC determined that there would not be sufficient time for DNSPs to change their network determination proposals in response to reliability standards that are expressed in a different way. PIAC takes the view that perceived inability of DNSPs to amend their proposals must not be used as a reason to leave NSW consumers with the current distribution reliability standards until at least the end of the 2014/15 to 2018/19 network price

⁶ Ibid 34.

⁷ IPART, *Changes in regulated electricity retail prices from 1 July 2012: Final report*, 2012, 87.

⁸ Ibid.

⁹ Ibid.

¹⁰ AEMC, *Review of Distribution Reliability Outcomes and Standards: Draft Report – NSW Workstream*, 2012, 18.

¹¹ Ibid.

¹² Ibid.

determination period—especially as they are a commonly cited reason for infrastructure investment that drives price increases.¹³ By that time, even more significant reliability related expenses will have been ‘sunk’ into the network, leaving consumers to pay the allowed return on this investment for the life of the asset.

PIAC, therefore, recommends that an assessment of the relative merits of different approaches to setting reliability standards should be undertaken for the Final Report of the NSW workstream. By completing this work, the AEMC would take account of the expectations of NSW electricity consumers, as it is requested to do in the review’s terms of reference. NSW consumers would reasonably expect that a review of distribution reliability standards would examine *all* genuine possibilities to reduce electricity bills through adjustments to those standards. It could also determine the question whether a change in how reliability standards are set would mean that the same outcomes could be achieved with lower levels of investment.

Recommendation 1

PIAC recommends that as part of preparing the final report of this review, the AEMC examine whether DNSPs could more cost effectively meet distribution reliability standards if these were expressed in a more outcomes-based manner, in line with the approach generally taken by other Australian jurisdictions.

3. Scenarios for changes to reliability standards and the value of customer reliability

While PIAC’s primary position is that a bolder approach needs to be taken in relation to distribution reliability standards, PIAC nevertheless also provides comment on aspects of the analysis undertaken in relation to existing reliability standards in NSW. PIAC considers that there are two aspects to the analysis undertaken by the draft report that limit the draft report’s value as a policy planning tool. Firstly, the three scenarios modelled for a reduction in customer reliability present only very modest reductions in reliability and small impacts on electricity consumers. Secondly, PIAC believes that there is a problem with the method used to calculate an average VCR for each DNSP, with the result being that it arrives at a value that is too high. The use of this value to determine the ‘cost’ value in the cost-benefit analysis for a reduction in reliability standards understates the benefits to residential consumers of reducing distribution reliability standards in NSW.

3.1 Scenarios for changes in reliability standards

PIAC is surprised by the very modest reductions in customer reliability—and therefore the network cost component of electricity bills—that occur under the three scenarios modelled by the AEMC as part of the draft report.

Part of the reason for the lower than expected impact of any reduction in reliability standards is that, according to modelling prepared by the DNSPs for the draft report, capital expenditure related to reliability standards will be lower in the next network regulatory period, even ‘if no

¹³ IPART, above n 7, 4.

changes are made to the current licence conditions' regarding reliability standards.¹⁴ This suggests that significant capital expenditure related to achieving reliability standards has been made in the current regulatory period. Electricity consumers will be paying a return on this 'sunk' investment for many years to come. The draft report also notes that given current reliability standards have been greatly exceeded, 'compliance with the [reliability] standards could have been achieved with a lower amount of capital expenditure'.¹⁵

However, despite these factors, the reductions in network investment under the draft report's three scenarios are modest. In particular, under the 'extreme' scenario, in 15 years' time the average change in residential customer bills will only be an \$18 annual reduction, in exchange for an average 15-minute increase in supply interruptions.¹⁶ (PIAC notes that because this figure is an average, some consumers will actually face longer interruptions and therefore be worse off.)

PIAC submits that the impact of bills being \$18 lower than would otherwise be the case is not sufficient to offset recent—and forecast—increases in residential retail electricity bills. An \$18 reduction (in net present value terms) is equivalent to 0.9% of IPART's indicative bill for Integral Energy customers, or just 0.4% of IPART's indicative bill for Country Energy customers.¹⁷ PIAC argues that modelling should be undertaken to show the impact of more significant reductions in reliability standards—so as to provide more meaningful reductions in customer bills. Examining reductions of that order, along with the already modelled smaller reductions in reliability, would have served to enhance the usefulness of the AEMC's advice to the NSW Government on the issue of reliability standards.

PIAC appreciates that it is relatively late in the process to undertake such modelling. However, in order to take this rare opportunity to consider this issue, and to fulfil the potential to provide positive outcomes for consumers, it is very much needed.

The case for a more significant reduction in reliability standards is even more compelling when an alternative method of calculating the VCR is employed (see below).

Recommendation 2

PIAC recommends that the final report of the AEMC's review of distribution reliability standards—NSW workstream examine the costs and benefits of significantly larger reductions of those standards than were modelled for the draft report.

3.2 Calculating the VCR

PIAC submits that the method used to calculate the VCR for each DNSP yields a value that is too high compared to the VCR for residential consumers. This, in turn, distorts the results of the cost-benefit analysis undertaken to assess whether reliability standards should be amended.

The Oakley Greenwood analysis used in the draft report weights the relative VCRs of residential, business and industrial customers according to their 'relative share of electricity consumed'.¹⁸

¹⁴ AEMC, above n 10, 7.

¹⁵ Ibid.

¹⁶ Ibid 89.

¹⁷ IPART, above n 7, 8.

¹⁸ Oakley Greenwood, *NSW Value of Customer Reliability*, 2012, 13.

The final figure is \$94,990/MWh, compared to \$53,300/MWh for medium/large businesses with usage over 160 MWh per year and \$413,120/MWh for small businesses using less than 160 MWh per year.¹⁹ However, PIAC submits that the average VCR for NSW should be weighted in line with the number of account holders that fall into each category. While data about the number of large business energy users in NSW is not readily available, figures from IPART show that in 2010/11, there were 2,909,347 small residential account holders, compared with 315,640 small non-residential account holders.²⁰ PIAC believes that re-weighting the VCR in line with these figures (even allowing for the inclusion of large businesses) would see a significant decrease in its average value for each DNSP.

3.2.1 Effects of a lower VCR

The effect of using a lower VCR would be twofold. Firstly, the cost-benefit analysis of reducing reliability standards is tilted even more heavily in favour of making such a reduction. This is because in the draft report, the cost is the amount of energy not served to consumers multiplied by the weighted average VCR; and the benefit is the value of avoided network expenditure (see Figure 1 below). Adjusting the cost-benefit analysis in this way further strengthens the case for amending reliability standards.

Figure 1: Calculating costs and benefits of reducing network reliability standards

COST	BENEFIT
Energy not served x VCR (weighted average)	Value of avoided network expenditure

Note: Energy not served is the amount of electricity that consumers are not able to use because they are experiencing a supply disruption.

Secondly, if the VCR is reduced, the benefit of avoided network expenditure will still outweigh the cost. While a decrease in reliability standards is likely to lead to an increase in the amount of energy not served, that amount of energy would be multiplied by a lower VCR, meaning the cost would be lower. At the same time, lowering reliability standards could mean more network expenditure is avoided, thereby increasing the value of the benefit in the cost-benefit analysis.

For these reasons, the VCR used to develop the cost-benefit analysis of reducing distribution reliability standards should be weighted more towards the majority of consumers than is the case in the draft report. If a VCR weighted more heavily towards residential consumers is used, a cost-benefit analysis supports making adjustments to reliability standards that could potentially put more significant downward pressure on electricity bills.

PIAC also notes that if the VCR drives decisions of whether or not to invest in infrastructure, then a higher VCR would become an instrument to justify residential consumers cross-subsiding a network that is reliable enough to meet the needs of small and large business users. In addition, business users factor energy costs into the prices of their goods—prices that can be adjusted when input costs increase. Larger users may also have the resources to invest in back-up systems and/or embedded generation capacity to improve their own reliability of supply. Conversely, residential consumers do not have a mechanism to pass on increasing electricity

¹⁹ AEMC, above n 10, 42.

²⁰ IPART, *Electricity retail businesses' performance against customer service indicators in NSW*, 2012, 35.

costs and are left to dedicate a higher proportion of their income to electricity. When people have low or fixed incomes, this dynamic forces them to make sacrifices, including forgoing other essentials, in order to afford their electricity bill.²¹

Recommendation 3

PIAC recommends that the NSW VCR be weighted by the number of account holders in the residential, small-business user and large-business user categories.

4. Informing consumers of outages

PIAC believes that there is considerable scope for consumers to benefit through the use of new forms of communication regarding the expected duration of supply outages. Having a guide to the expected length of an outage would be especially useful to consumers in deciding what action to take in response to such an event.

PIAC notes that in the customer survey completed as part of the draft report, 24.2% of total respondents indicated that they have a preference for investment in communications systems that would inform consumers how long an outage was likely to last.²² While the survey presents respondents with an investment choice between communication and infrastructure to reduce the frequency or duration of outages, PIAC believes that such a trade-off is not necessary. Investments to improve communication could yield welcome results for consumers at a much lower cost than is required for network infrastructure every year.

At present, consumers generally need to call their energy supplier and listen to a recorded message if they are seeking information regarding an outage. PIAC would like to see increased use of more modern technology; for example, sending customers an SMS message regarding the expected duration of an outage. An automated SMS service is currently operated by Victorian DNSPs including Jemena, United Energy, Citipower and Powercor.²³ Recorded messages should also be retained, as for longer outages mobile devices will run out of battery life.

It must also be remembered that not all consumers have a mobile device or live somewhere with good mobile coverage. The rollout of new schemes to communicate with consumers about outages would need to be carefully assessed to establish if any specific groups are not receiving information through developing channels. In undertaking such an assessment, DNSPs should consult with community sector organisations representing groups such as newly arrived immigrants, older people and those with physical disability. Depending on the results of this process, targeted methods of communication may need to be developed to help specific groups of consumers.

Recommendation 4

Electricity networks should develop more contemporary methods of communicating with consumers about the expected time and duration of any supply outages.

²¹ PIAC, *Cut Off II: The experience of utility disconnection*, 2009, 37.

²² Ibid 51.

²³ Jemena, *SMS Service for major electricity outage information*, 2012, <jemena.com.au/outages/electricity/sms-notification.aspx>; United Power, *SMS outage updates*, 2012, <<http://uemg.com.au/customers/your-electricity/customer-services/sms-outage-updates.aspx>>; Citipower and Powercor, *Major power outage information sent directly to customers via SMS or email*, 2011, http://www.powercor.com.au/Latest_News/_97/>, all as at 2 July 2012.

The effectiveness of these new communication strategies should be examined to ensure that all consumer groups are being informed about supply outages. This assessment should be undertaken in consultation with organisations representing consumer groups who may not use the technology on which given communication strategies are based.

5. The issue of energy affordability

As previously stated, NSW energy consumers have experienced steep and repeated electricity price increases in recent years. In this environment, an examination of a strong driver of these prices, such as network costs, was seen as potentially offering consumers some respite from further price increases. However, the draft report suggests that any reductions to energy bills as a result of changes to reliability standards will be modest at best.

While this submission has outlined some observations about the process for arriving at this conclusion, PIAC also considers the issue of electricity affordability to be in need of more systemic attention from policy makers. If distribution reliability standards do not represent an option to make meaningful reductions to power bills, where do such opportunities lie? It is clear that the status quo approach to energy policy does not adequately consider affordability issues. Policy makers must take a holistic view of the problem and devise contemporary and inclusive responses to this significant challenge.

PIAC believes that an Energy Affordability Forum convened by the AEMC would be the appropriate body to undertake this task. Such a forum should include representatives from governments, regulators, energy companies and consumer organisations and have the objective of maximising access for all consumers to what is an essential service. In undertaking a coordinating role in such a process, the AEMC would be working towards its strategic objective of 'contributing to energy market policy development as the leading source of advice on energy markets'.²⁴

Recommendation 5

The AEMC should convene a forum to examine and develop advice on the issue of energy affordability. Membership of the forum should include representatives from governments, regulators, energy companies and consumer organisations.

6. Conclusion

PIAC believes that the draft report has missed an opportunity to examine the effect that redesigning NSW distribution reliability standards would have on NSW consumers. The method used to calculate the average VCR for each DNSP also overstates the value placed on reliability by residential consumers. This means that the benefits to consumers of reducing reliability standards are not fully assessed. For the AEMC's final report to be useful to the NSW Government, it must accurately reflect the benefit that consumers may receive as a result of reducing or adjusting reliability standards. New approaches to improving electricity affordability need to be found to ensure consumers are able to afford this essential service. It is PIAC's hope that an AEMC affordability forum will provide much-needed focus on this issue, so policy-based solutions can be found and implemented.

²⁴ AEMC, *Mission and Values*, 2011, <<http://www.aemc.gov.au/About-Us/Mission-and-values.html>> at 2 July 2012.