

New Reg: Towards Consumer-Centric Energy Network Regulation

AusNet Trial – AER Staff Guidance Note 3: Customer experience – 29 August 2018

To facilitate the process of negotiation between AusNet Services (AusNet) and its Customer Forum (Forum), AER staff will prepare guidance notes that set out the boundaries of the National Electricity Rules (NER) and the AER's guidelines for the topics in scope of the negotiation.

AER staffs' view on which topics should be in scope is set out in the second guidance note. This view recognised that the Forum has a limited time to familiarise itself with the issues, direct relevant customer research, and prepare itself for negotiations.

While AER staff will not be preparing guidance notes for those topics that are out of scope, the Forum may still consider and discuss other topics with AusNet's customers. We encourage such discussions and would be interested in customer preferences regarding those topics.

Overview

Customer experience covers how AusNet delivers its services to its customers (including how it interacts with its customers, such as customer service). It is not a specific component of the AER's decision, but is a dimension of the quality of the service AusNet provides to its customers.

What is AusNet proposing?

AusNet proposes to use customer research and complaints data to identify areas where it can improve customer experience. AusNet notes that changes to customer service levels might have implications for capex or opex forecasts, or warrant the introduction of a new small scale incentive scheme. Although AusNet has no current specific proposal for such a scheme, AusNet would like to keep open the option of introducing such a scheme if the Forum considers that AusNet should be incentivised to target customer service levels through rewards/penalties.

AusNet has posed a number of questions for the Forum on a range of matters, including customer research design, customer outcomes and customer value and funding of improved customer experience.

What are the boundaries of negotiation for customer experience?

The National Electricity Law (NEL) and the NER set out the regulatory framework for the AER's assessment of a distribution network service provider's (DNSP's) revenue proposal. As the AER cannot accept negotiated outcomes that are inconsistent with the NEL and NER, it is important the Forum is aware of the way the AER assesses capex (opex) as required by the NER.

The AER is also subject to certain obligations in establishing a small scale incentive scheme.

It would be useful for the Forum to be aware of the standard approaches we take to assessing opex and capex once we have received a DNSP's revenue proposal, consistent with the NER. Although we may have some flexibility under the NER to take a different approach, we might not make a change if the reasons for doing so are not sufficiently persuasive.

National electricity objective

The NEL requires the AER to perform its economic regulatory functions in a manner that will, or is likely to, contribute to achieving the national electricity objective (NEO).¹ The NEO is:²

... to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

The NEO is fundamentally an efficiency objective, where ‘efficiency’ is delivering electricity services to the level demanded by consumers in the long run at the lowest cost.³

NER requirements for expenditure assessment

When the AER makes a distribution determination, we must decide whether or not we are satisfied that the total capex (and opex) proposed by a DNSP reflects the relevant ‘expenditure criteria’ set out in the NER. These criteria are:⁴

- the efficient costs of achieving the ‘expenditure objectives’ in the NER⁵
- the cost that a prudent operator would require to achieve the expenditure objectives
- a realistic expectation of the demand forecast and cost inputs required to achieve the expenditure objectives.

We consider the notion of efficient costs complements the costs that a prudent operator would require to achieve the expenditure objectives. ‘Prudent’ expenditure is that which reflects the best course of action, considering available alternatives. ‘Efficient’ expenditure results in the lowest cost to consumers over the long term. That is, prudent and efficient expenditure reflects the lowest long term cost to consumers for the most appropriate investment or activity required to achieve the expenditure objectives.⁶

When considering whether the DNSP’s forecasts reasonably reflect the expenditure criteria, we must have regard to a number of capex (and opex) factors, including the extent to which the forecasts include expenditure to address the concerns of electricity consumers, as identified by the DNSP through its engagement with those consumers.⁷

If we are satisfied the forecasts meet the expenditure criteria, we must accept them. If we are not satisfied, then we must estimate forecasts that we are satisfied reasonably reflect the criteria.⁸

AER’s standard approach to assessing opex

Pages 3 to 7 of AER staffs’ guidance note on opex sets out:

- the NER requirements for assessing opex; and
- the AER’s standard approach to assessing opex.

¹ NEL, section 16(1)(a).

² NEL, section 7.

³ AER, [Explanatory Statement, Expenditure Forecast Assessment Guideline](#), November 2013, p 17.

⁴ NER, clause 6.5.7(c)(1), in respect of capex.

⁵ The expenditure objectives in the NER comprise capex and opex objectives. The capex objectives (NER, clause 6.5.7(a)) effectively require a DNSP’s revenue proposal to include the total forecast capex for the forthcoming regulatory period that the DNSP considers is required to meet or manage expected demand, or maintain quality, reliability, security, and safety, consistent with any relevant regulatory obligations. The opex objectives (NER, clause 6.5.6(a)) set out equivalent provisions for opex.

⁶ AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), November 2013, pp 8-9.

⁷ NER, clause 6.5.7(e)(5A), in respect of capex.

⁸ NER, clauses 6.5.7(c)-(d) and 6.12.1(3), in respect of capex.

AER's standard approach for assessing capex

The AER's standard approach to assessing DNSP capex proposals is set out in the Expenditure Forecast Assessment Guideline.⁹ We assess forecast capex proposals through a combination of 'top down' and 'bottom up' modelling of efficient expenditure. Our focus is on determining the prudent and efficient level of forecast capex. When we assess a capex proposal generally we will first verify the need for the expenditure. Then we will assess the efficiency of the proposed capex. This is likely to include consideration of the timing, scope, scale and level of expenditure associated with proposed projects.

Where a DNSP does not provide sufficient economic justification for its proposed expenditure, we will determine what we consider to be the efficient and prudent level of forecast capex. In assessing forecasts and determining what we consider to be efficient and prudent forecasts we may use a variety of analysis techniques.¹⁰

The AER use specific techniques to assess different categories of capex. An explanation of how the AER assesses Augex is set out in AER staffs' guidance note on Augex. The AER's approach to assessing other categories of capex is set out in the AER's expenditure guideline.¹¹

For DNSPs to demonstrate that their revenue proposal is efficient and prudent, we would generally expect the proposal to demonstrate the overall forecast expenditure will result in the lowest sustainable cost (in present value terms) to maintain, or meet the legal obligations of the DNSP in respect of, quality, reliability, security and safety.¹² However, what consumers want and are prepared to pay for, whether in terms of reliability or some other element, may assist in showing what is consistent with the NEO's overall efficiency objective. The Australian Energy Market Commission (AEMC) has observed that the more confident the AER can be that consumer concerns have been taken into account, the more likely the AER can be satisfied that a proposal reflects efficient costs.¹³

If there is robust evidence which persuasively demonstrates that consumers value a more expensive option for achieving the expenditure objectives, and are prepared to pay for that, it might be that a prudent and efficient operator would choose that option.¹⁴ In determining what weight to give to evidence obtained through a DNSP's consumer engagement, such as a consumer willingness to pay study, the AER would likely consider:

- how that evidence was collected,
- how relevant and up-to-date it is, and
- whether it is likely to reliably reflect the views of the DNSP's customer base over the long term.

If a higher cost option to meet the expenditure objectives is robustly supported by the evidence the Forum has assessed, the AER would still seek to confirm that the associated forecast expenditure reflects the lowest sustainable cost to consumers for that preferred option.

The AER would also want to confirm that any forecast expenditure in the revenue proposal would not be recovered under the service target performance incentive scheme (STPIS), or offset by future cost savings, because to allow that expenditure would be 'double counting'.

⁹ The NER (clause 6.2.8(a)(1)) requires the AER to publish this guideline, the current version of which is: AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), November 2013.

¹⁰ AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), November 2013, p 17.

¹¹ AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), November 2013, pp. 17-21.

¹² AER, [Expenditure Forecast Assessment Guideline for Electricity Distribution](#), November 2013, p 17.

¹³ For example: AEMC, [Rule Determination, National Electricity Amendment \(Economic Regulation of Network Service Providers\) Rule 2012](#), 29 November 2012, p 101.

¹⁴ For example: AEMC, [Rule Determination, National Electricity Amendment \(Economic Regulation of Network Service Providers\) Rule 2012](#), 29 November 2012, p 115.

STPIS rewards expenditure incurred during the regulatory period that delivers reliability of supply improvements which users value, by applying the 'value of consumer reliability' (VCR). However, STPIS only covers a limited set of service quality metrics which predominantly relate to reliability. There could be ways a DNSP could improve the quality of network services that would not be measured and rewarded by the STPIS.

Small scale incentive scheme

The small scale incentive scheme was designed to provide for incentives not already covered by the existing incentive schemes under the NER and to test innovative approaches to incentives.¹⁵ For example, the small scale incentive scheme can provide rewards for NSPs which engage more effectively with consumers.¹⁶

The rules also provide for the AER to trial a small scale incentive scheme without applying penalties or rewards.¹⁷

The NER requires that the introduction of a new small scale incentive scheme involve wider consultation with all stakeholders in the national electricity market (NEM). Arguably, a scheme targeted just to the preferences of AusNet's customers might not generate much interest with wider stakeholders. Nonetheless, it might not be possible for a robust new scheme to be developed in time to be accommodated in the negotiation process, so the Forum might just seek a commitment from AusNet to prepare a proposal to send to the AER for consideration. The Forum could also propose implementing a new incentive scheme as a paper trial,¹⁸ which might provide useful information for implementing a revenue-at-risk mechanism at some point in the future, but would not provide a financial incentive for AusNet Services to make customer experience improvements. However, publically reporting performance could provide a reputational incentive for AusNet to improve performance.

In developing a small scale incentive scheme the AER must adhere to the requirements of part 6.6.4 of the National Electricity Rules ([published here](#)).¹⁹ AusNet and the Forum should be mindful of these requirements in the event that they decide that they would like to develop a small scale incentive scheme. Under clause 6.6.4(b) sets out the matters which we must have regard to when developing a small scale incentive scheme:

- (1) DNSPs should be rewarded or penalised for efficiency gains or losses in respect of their distribution systems;
- (2) the rewards and penalties should be commensurate with the efficiency gains or efficiency losses in respect of a distribution system, but a reward for efficiency gains need not correspond in amount to a penalty for efficiency losses;
- (3) the benefits to electricity consumers that are likely to result from efficiency gains in respect of a distribution system should warrant the rewards provided under the scheme, and the detriments to electricity consumers that are likely to result from efficiency losses in respect of a distribution system should warrant the penalties provided under the scheme;
- (4) the interaction of the scheme with other incentives that a distribution network service provider may have under the Rules; and
- (5) the capital expenditure objectives and the operating expenditure objectives.²⁰

¹⁵ AEMC, *Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) rule 2012, National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012*, November 2012, pp. 13, 212.

¹⁶ AEMC, *Rule Determination, National Electricity Amendment (Economic Regulation of Network Service Providers) rule 2012, National Gas Amendment (Price and Revenue Regulation of Gas Services) Rule 2012*, November 2012, p. 212.

¹⁷ National Electricity Rules Version 110, cl. 6.6.4(e)

¹⁸ AusNet's performance would be monitored against the proposed framework to enable an estimation of what their reward or penalty would have been. This is a common technique to ensure a proposed mechanism is fit for purpose and that the associated rewards and penalties are proportionate.

¹⁹ National Electricity Rules Version 110

²⁰ National Electricity Rules Version 110, cl. 6.6.4(b)

The rules apply a cap on the aggregate annual rewards or penalties of 0.5% unless AusNet agrees to a cap of 1%.²¹

As mentioned above, the NER also imposes consultation requirements on the AER when developing a small scale incentive scheme, requiring the AER to publish a draft scheme, and explanatory statement and to allow 30 business days for submissions. Developing a draft scheme, consultation on the draft and preparing a final scheme with consideration to submissions is a significant task. If AusNet and the Customer Forum decide to negotiate a small scale incentive scheme, it must be comprehensive and address the requirements of the NER before it is put to the AER. Any proposed scheme should include the following details:

- a rationale for its implementation in the context of 6.6.4 of the NER
- the objectives of the scheme
- how the reward or penalty will be translated to customers' bill and who should pay for the outcomes of the scheme
- a list of performance metrics to be included in the scheme
- a definition for each performance metric
- a description of how the incentive payments would be calculated for each performance metric
- a description of how performance targets should be set for each performance metric.

How is AusNet performing?

Prior to considering AusNet's customer experience performance it is helpful to consider the regulatory framework in which AusNet operates. Many of the customer experience metrics that the AER records are tied to incentive arrangements under this regulatory framework. In this section we outline the regulatory framework. We provide detailed performance data in Appendix A.

Electricity distributors submit regulatory proposals that forecast their opex and capex needs over five year regulatory periods. Capital expenditure (capex) is the cost of purchasing and installing assets like poles and wires. Operating expenditure (opex) is the cost of running an electricity network and maintaining the assets. Our approach to determining these forecasts is outlined in our expenditure forecast assessment guidelines.²²

Forecasts of opex and capex, combined with the other building blocks (such as depreciation, return on capital, and incentive scheme payments) determine the total amount of revenue that the distribution business can earn during the regulatory period. Once this total (ex-ante) revenue has been decided, there is a strong incentive for distribution businesses to reduce their costs. This is because once the revenue allowance has been set, reducing costs increases profitability. This incentive to reduce costs is desirable because it reveals information about the costs of delivering services which can then be used to inform how we, as the regulator, set opex and capex building blocks in the next regulatory period. However, to offset this incentive, under our regulatory framework there are schemes designed to discourage cost reductions made at the expense of service performance for customers.

There are two mechanisms that offset this incentive (that primarily relate to the impact of outages on customers):

- the application of the Service Target Performance Incentive Scheme (STPIS), and

²¹ National Electricity Rules Version 110, cl. 6.6.4(d)(1)

²² AER, Expenditure forecast assessment guideline for electricity transmission, November 2013.

- the approach the AER takes to providing for Guaranteed Service Level (GSL) payments in the opex.²³

We consider these mechanisms below.

Service target performance incentive scheme

The primary purpose of the STPIS is to provide incentives to Distribution Network Service Providers (distributors) to maintain the existing level of supply reliability, and to improve the reliability of supply where customers are willing to pay for these improvements. Penalties or rewards under the STPIS are applied directly to a distributor's maximum annual revenue. Targets for the STPIS are set in each determination and are based on a distributor's average performance over the previous five years. The penalties or rewards of the STPIS are derived using the value of customer reliability.²⁴

The primary incentives under the STPIS aim to reduce the average number of interruptions and minutes-off-supply for customers on a distributor's network.

The STPIS also creates an incentive for AusNet to reduce:

- the average number of momentary outages per customer on its network
- The time it takes to answer telephone calls to its customer service centre.

The incentive payments for these parameters are much lower than the incentive payments relating to the average number and duration of outages.

We present data on AusNet's STPIS performance in Appendix A. Since 2011 AusNet has beaten our STPIS targets in every year apart from 2016.

Essential Services Commission's Guaranteed Service Level scheme

The ESC administers the GSL scheme that applies to AusNet under the [Electricity Distribution Code](#) and [Public Lighting Code](#). The payments and thresholds of the scheme are set out in Table 1.

The GSL scheme provides compensation to customers for poor service. Also, the GSL scheme creates an incentive for networks to improve their performance and reduce their GSL payments. The AER's revenue determination, provides AusNet with an allowance to cover forecast GSL payments. If AusNet is able to improve its performance, and reduce its GSL payments, it gets to keep the difference between the forecast and actual GSL payments.

We then use AusNet's actual GSL payments to forecast its GSL payments for the following period. Hence, if AusNet is able to reduce its GSL payments this will reduce its future GSL allowance, sharing the benefit with customers. In this way AusNet is able to retain, in net present value terms, about 30 per cent of any reduction in its GSL payments. We present the number of GSL payments that AusNet has made for each GSL measure in Appendix A.

²³ Though potentially relevant, we do not discuss this scheme in this boundary note. Further information on this scheme is available on our website ([here](#)).

²⁴ In dollar terms, the Value of Customer Reliability (VCR) represents a customer's willingness to pay for the reliable supply of electricity. The values produced are used as a proxy, and can be applied for use in revenue regulation, planning, and operational purposes in the National Electricity Market (NEM). The VCR was estimated by the Australian Energy Market Operator (AEMO), AEMO adopted a survey-based choice modelling and contingent valuation approach to derive the VCR values. Ref: AEMO, *Value of customer reliability review final report*, September 2014.

Table 1 GSL measures, thresholds and payments

Measure	Threshold	Payment levels
Annual duration of unplanned interruptions	Level 1 – more than 20 hours Level 2 – more than 30 hours Level 3 – more than 60 hours	Level 1 - \$100 Level 2 - \$150 Level 3 - \$300
Annual frequency of unplanned sustained interruptions	Level 1 – more than 10 Level 2 – more than 15 Level 3 – more than 30	Level 1 - \$100 Level 2 - \$150 Level 3 - \$300
Annual frequency of momentary interruptions	Level 1 – more than 24 Level 2 – more than 36	Level 1 - \$25 Level 2 - \$35
On time for appointments	More than 15 minutes late	\$20
New connections	Not by the date agreed	\$50 per day to a maximum of \$250
Public light repair	Not within 2 business days of notification	\$10

Source: Essential Services Commission, *Review of the Victorian electricity distributors' guaranteed service level payment scheme Final Decision*, December 2015

What other factors might be useful for the Forum to consider?

There are a number of ways to incentivise a distributor to improve its service performance. The Forum does not need to constrain itself to the development of an incentive scheme. There are other options such as public performance objectives, transparent performance reporting and linking staff salaries to performance. The appropriate incentive will depend on the desired outcome. Another option the Forum could explore is for AusNet to make voluntary payments to its customers for breaching agreed standards. This would not require the development of an incentive scheme. Further, due to the Efficiency Benefit Sharing Scheme, AusNet would only incur around 30 per cent of any payments over the long term.

The Forum should also have regard to any incentives arrangements that AusNet has already put into place. For example, AusNet is linking its staff's remuneration to customer experience outcomes. This may reduce the need for additional incentives. However, this approach would not provide a means of funding customer experience improvements where they have material cost implications.

What might the Forum focus on?

We consider the identification of customer desires and preferences is central to improving customer experience. As noted above, AusNet proposes to identify areas where it can improve customer experience from customer research and complaints data. We also note the Forum is actively seeking customer views and are interested in the outcomes of this research and its inferences for improving customer experience.

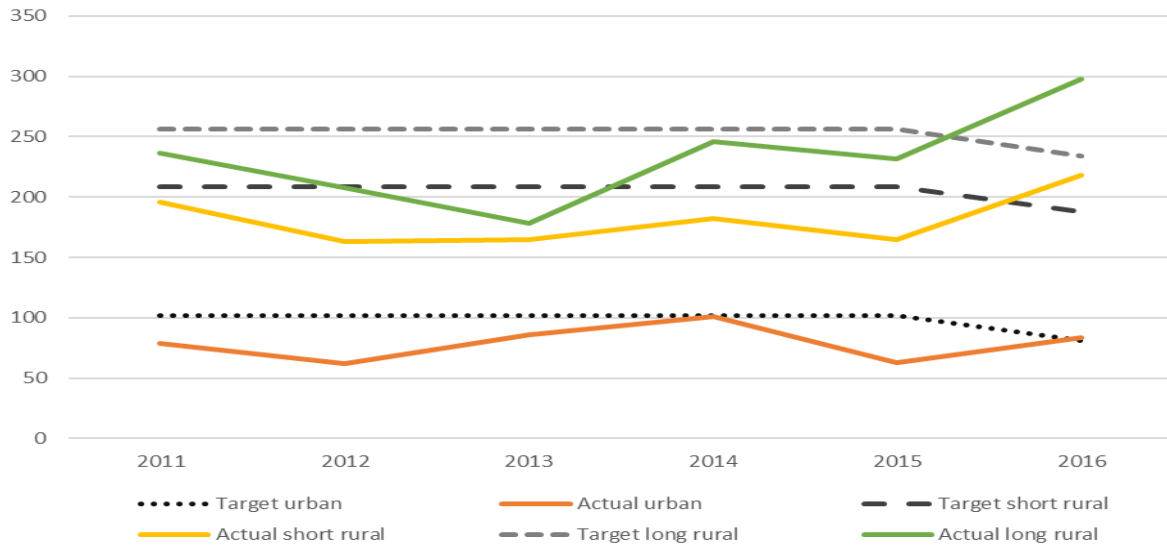
The Forum should not constrain its discussions to matters that have an impact on AusNet's proposal. There are aspects of customer experience that are not directly relevant to the proposal because they don't have cost or incentive implications. These could relate to how AusNet responds to customer inquiries or even the layout of AusNet's website. It follows that there may be a myriad of small changes that AusNet could make to improve customer

service that would not have cost implications and hence warrant inclusion in its proposal. Despite these matters not being relevant to the proposal, we consider that there is great benefit in the Forum investigating these matters to seek low cost ways to improve customer experience.

Appendix A: Performance data on AusNet’s customer experience

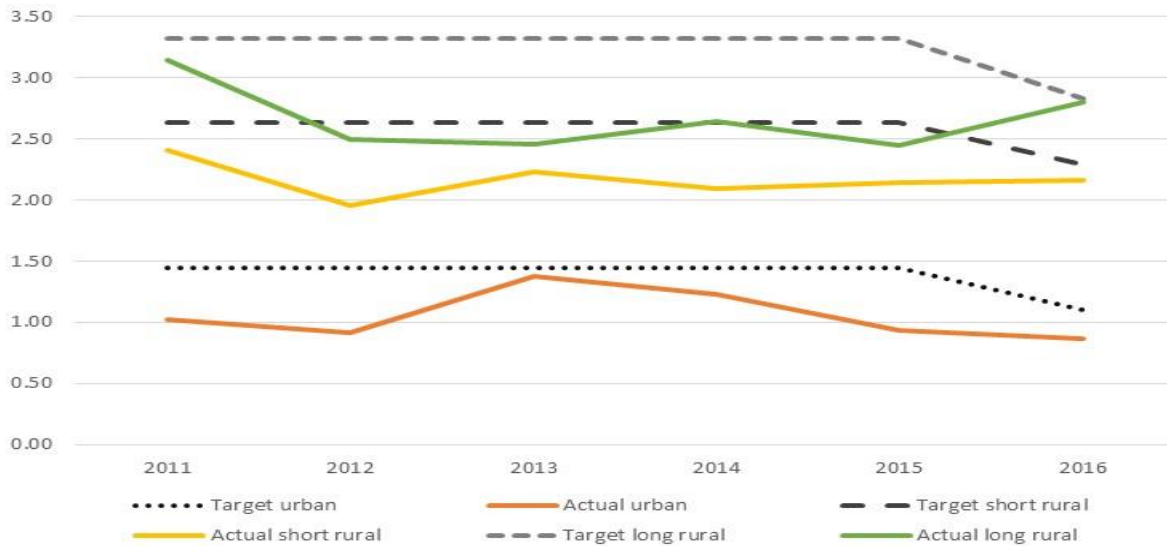
The following charts show these measures against AusNet’s network against our targets under the STPIS.²⁵ These charts demonstrate that AusNet has beaten our targets in every year apart from 2016. AusNet will have been rewarded under our scheme for outperforming the AER’s targets. This reward is applied as a direct adjustment to AusNet’s annual revenues.

Figure 1 Average annual minutes-off-supply per customer



Source: AER analysis of data collected through our annual reporting Regulatory Information Notices. Results for 2017 have not been finalised. These results have been normalised to remove the effect of extreme weather events. Extreme weather events are excluded under our STPIS.

Figure 2 Average annual number of interruptions per customer

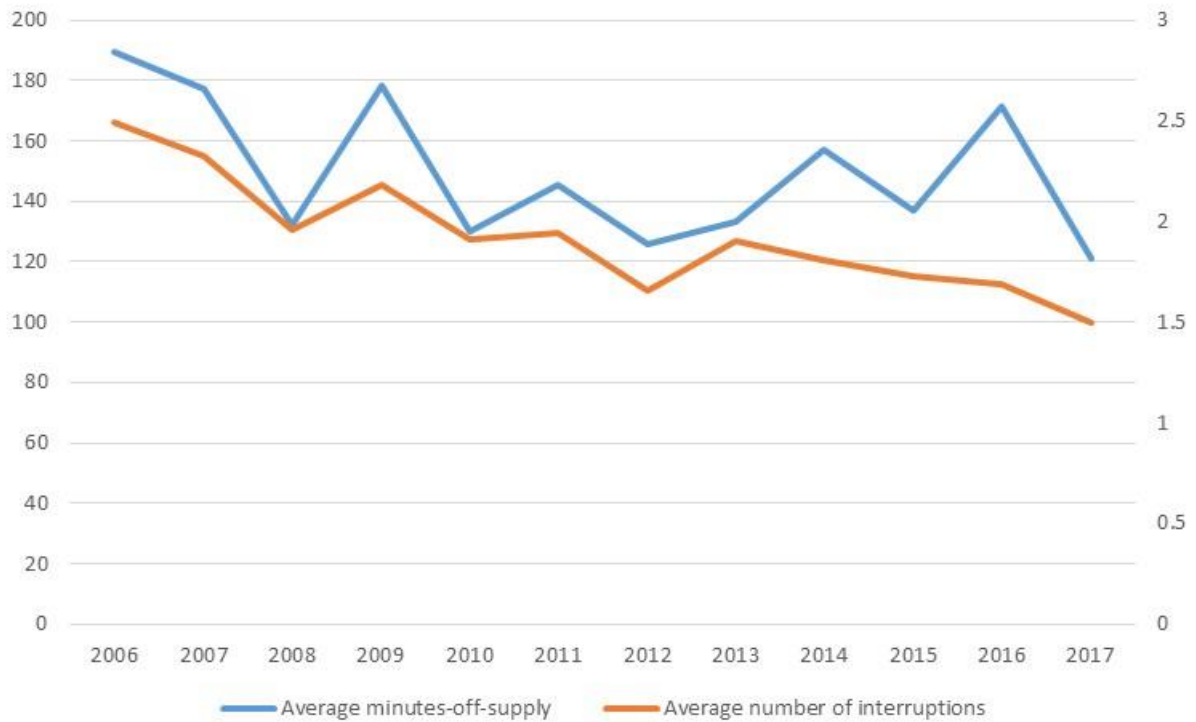


Source: AER analysis. Results for 2017 have not been finalised. These results have been normalised to remove the effect of extreme weather events. Extreme weather events are excluded under our STPIS.

²⁵ Our targets under the STPIS for 2011-15 and 2016 are based on AusNet’s average performance between 2005-2009 and 2010-14 respectively. The STPIS also provides an incentive to reduce momentary interruptions and answer telephone calls quickly. However the financial penalties associated with these parameters are much less significant.

Figure 3 shows AusNet's network-wide average per customer number of interruptions and minutes-off-supply. Though there is some variability from year to year, this figure shows that AusNet's network has become more reliable.

Figure 3 Long term trend in AusNet's reliability



Source: AER's economic benchmarking RINs 2013 – 2017. These results have been normalised to remove the effect of extreme weather events.

We annually collect information on AusNet's performance against the GSL scheme through a regulatory information notice.²⁶ The number of penalties against each measure are set out in Table 2. As set out in Table 2 AusNet services incurs a penalty each time it breaches a GSL threshold. GSL payments are an operating expenditure line item for AusNet. We have included an allowance for GSL payments in our decisions on AusNet's required opex.

Table 2 AusNet's GSL scheme performance in 2016 and 2017

Appointments	2016	2017
Total customer arranged appointments	3,478	3,782
Appointments not met within 15 mins of agreed time	23	6
Appointments - GSL payments	23	6
Connections		
Total connections made	16,294	18,311
Connections not made on agreed date	396	587
Connections - GSL payments - 1-4 day delay	295	306
Connections - GSL payments - 5+ day delay	101	281
Reliability of supply		
Low reliability payments - 8 events	22,237	4,707
Low reliability payments - 12 events	5,616	257
Low reliability payments - 24 events	2,540	0
Low reliability payments - 20 hours	23,574	9,133
Low reliability payments - 30 hours	24,154	3,362
Low reliability payments - 60 hours	14,402	115
Low reliability payments - 24 momentary events	12,121	12,463
Low reliability payments - 36 momentary events	2,895	1,830
Low reliability payments - Duration per Event (12hrs) Urban	2,181	3,776
Low reliability payments - Duration per Event (18hrs) Rural	126	572
Street lights		
Street lights	146,753	151,414
Street lights "out" during period	7,255	6,668
Street lights not repaired in 2 business days	1,622	625
Street lights – number of business days to repair	2	2
Street Light - GSL payments	43	33

Source: AER, annual reporting RINs for AusNet Services distribution, 2016 and 2017

²⁶ AER, annual reporting RINs for AusNet Services distribution ([available on our website](#)).

Additional data the AER collects on customer service

The AER also annually collects other information on AusNet's customer service. AusNet's performance in 2016 and 2017 is presented in Table 3.

Table 3 AER customer experience metrics, AusNet 2017

Quality of supply metrics	Units	2016	2017
Voltage variations - steady state (zone sub)	Number	944	663
Voltage variations - one minute (zone sub)	Number	491	327
Voltage variations - 10 seconds (zone sub) min<0.7	Number	1333	619
Voltage variations - 10 seconds (zone sub) min<0.8	Number	2195	901
Voltage variations - 10 seconds (zone sub) min<0.9	Number	4745	1953
Voltage variations - steady state (feeder)	Number	3644	15389
Voltage variations - % zone subs monitored	(per cent)	93%	100%
Voltage variations - % feeders monitored	(per cent)	55%	100%
Customer service metrics	Units	2017	2017
Timely provisions of services			
Number of connections made	Number	16,294	18,311
Number of connections not made on or before agreed date	Number	396	587
Timely repair of faulty street lights			
Street lights - average monthly number "out"	Number	7,255	6,668
Street lights - not repaired by "fix by" date	Number	0	0
Street lights - average number of days to repair	Number	2	2
Total number of street lights	Number	146,753	151,414
Call centre performance			
Calls to call centre fault line	Number	111546	85,073
Calls to fault line answered within 30 seconds	Number	79131	72,566
Calls to fault line - average waiting time before call answered	Number	67.76	23
Call centre - number of overload events	Number	137	2
Percentage of calls abandoned	(per cent)	5.95	5.04%
Number of customer complaints			
Complaint - reliability of supply	Number	221	131
Complaint - technical quality of supply	Number	22	39
Complaint - administrative process or customer service	Number	272	359
Complaint - connection or augmentation	Number	163	307
Complaint – other	Number	297	426
Total number of complaints	Number	978	1,262

Source: AusNet (D) 2017 – RIN response - Annual - Consolidated – Public