Jemena Electricity Networks (Vic) Ltd

Submission on AER Issues Paper

Reviewing the Service Target Performance Incentive Scheme and establishing a new Distribution Reliability Measures Guidelines

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OVERVIEW

Jemena Electricity Networks (Vic) Ltd (**JEN**) welcomes this opportunity to make a submission to the Australian Energy Regulator's (**AER**) issues paper reviewing the Service Target Performance Incentive Scheme (**STPIS**) and establishing a new Distribution Reliability Measures Guideline. [1]

JEN supports the AER's review of the guideline to ensure it remains fit for purpose, and takes into account developments in customer expectations, and distribution business' (**distributors**) performance and technology. JEN also supports the development of a Distribution Reliability Measures Guideline to give greater consistency to reliability measures for comparison across the National Electricity Market (**NEM**).

Our headline comments on the matters raised in the AER's issues paper are summarised below. Our responses to the questions set out in the issues paper are presented in sections 1 to 4 of this submission.

Ratio of the SAIDI and SAIFI incentive rates remains appropriate

The issues paper provides an overview of the performance of service reliability since the implementation of the STPIS. The observed outcomes of the STPIS to date shows the scheme has largely been successful in delivering improvements in supply reliability, and distributors typically achieved better improvements to their SAIFI[2] than SAIDI[3]. The AER believes this difference in performance may be due to the current scheme design regarding the ratio of the of the incentive rates between SAIFI and SAIDI.

JEN considers the current ratios are appropriate and consistent with customers' expectations. JEN sought feedback from a wide range of customers and stakeholders in relation to its services, costs and prices to ensure our 2016 regulatory proposal reflected our customers' priorities and long-term interests. Customers indicated that they value reductions in the frequency of supply interruptions ('reliability') ahead of reductions in the duration of outages ('responsiveness'), provided the outages are short to medium duration in nature.[4] Further evidence in support of a higher incentive rate for SAIFI is the KPMG survey done in 2013 which indicated that customers value reduction in the frequency of interruptions more than the duration of interruptions.[5]

JEN does not support allocating a higher incentive rate to the SAIDI measure. Moreover, we do not support the AER's proposition that there needs to be a more balanced approach between incentives to improve reliability through capex and opex. See responses to Questions 1 to 3.

Application of 3-minute MAIFI

JEN supports a change of the definition of a momentary interruption from a current threshold of 1 minute to 3 minutes because it will incentivise further investment in automation of distribution systems and improve network reliability outcomes for customers. See response to Question 5.

Balancing the incentive to maintain and improve reliability with the incentive to reduce expenditure

The CESS[6] and EBSS[7] allow distributors to retain 30% of the expenditure efficiency gains for five years, whereas the STPIS provides for penalty or reward to be kept for five years after which time it is removed. The

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[1] AER, *Issues paper, Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline*, January 2017.

[2] System Average Interruption Frequency Index.

[3] System Average Interruption Duration Index.

[4] Jemena, *2016-20 Electricity Distribution Price Review Regulatory Proposal, Attachment 4-2,* 30 April 2015, p. 27.

[5] AER, Issues paper, *Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline*, January 2017, p. 16.

[6] Capital Efficiency Sharing Scheme

AER is seeking views on whether allowing the distributors to retain the same proportion of the value of reliability improvements will promote economic efficiency. JEN does not support changing the current STPIS which provides for penalty or reward to be kept for five years. See response to Question 17.

A symmetrical financial incentive scheme

JEN believes the STPIS should continue to operate in a symmetrical way until there is convincing analytical evidence that suggests an asymmetrical incentive scheme would produce better outcomes for customers. See response to Question 18.

Adjusting the targets where the reward or penalty exceed the revenue cap under STPIS

JEN reviewed the method of adjustment proposed by the AER in the issues paper.[8] The method did not explicitly require the calculation to capture the difference between the target and actual performance of each measure in the particular year the cap on revenue at risk was breached, and it did not capture MAIFI and the telephone answering performance cap. JEN has proposed changes that build on the AER's proposed methodology. See response to Question 16.

Exclusions

JEN supports the continuation of the 2.5 beta method for the exclusion of major event days (**MED**) when calculating reliability performance measures. However, we consider the catastrophic days should first be excluded from the data set by using 4.15 beta method prior to the application of the 2.5 beta statistical method for establishing the MED. See responses to Questions 6 and 7.

JEN recommends changes to the STPIS to incentivise the uptake of non-network solutions. A key disincentive on distributors to undertake non-network solutions is the financial penalties that apply under the STPIS.[9] Non-network solutions are inherently less reliable than network solutions which, if installed, would likely result in financial penalties to distributors. Further work is required to determine who should bear the risk of non-network solution failure and reflect that in the scheme (or some other appropriate mechanism) if non-network solutions are to be encouraged. Refer to Jemena's submission on AER, *Consultation paper – Demand management incentive scheme and innovation allowance mechanism*, January 2017.

[7] Efficiency Benefit Sharing Scheme

[8] AER, Issues paper, *Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline*, January 2017, p. 32.

[9] AER, *Consultation paper – Demand management incentive scheme and innovation allowance mechanism*, January 2017, section 5.3, p. 5-28.

1. RESPONSE TO CONSULTATION QUESTIONS

1.1 RATIO OF THE SAIDI AND SAIFI INCENTIVE RATES

Question 1: The AER would like views on the appropriateness of the current approach for setting the ratio of the relative reward/penalty rates between SAIDI and SAIFI, which is very close to the duration of a typical outage time, or CAIDI.

JEN considers the current approach to setting the ratio of the relative reward/penalty rates between SAIDI and SAIFI is appropriate. The current approach of approximately allocating half of the energy to the SAIDI incentive and the other half to the SAIFI incentive has successfully delivered improvements in supply reliability.[10]

Question 2: Would allocating a higher incentive rate to the SAIDI measure—by allocating a higher proportion of the energy value to this measure—provide a more balanced approach between incentives to improve reliability through capex and opex, and provide a more even improvement to all customers? If yes, what should be the relative weights between SAIDI and SAIFI incentives?

JEN does not support allocating a higher incentive rate to the SAIDI measure. Moreover we do not support the AER's proposition that there needs to be a more balanced approach between incentives to improve reliability through capex and opex.

Capex improvements for reliability are enduring for the life of the asset and reduce the number of outages related to asset failures. Capex investments in network automation (e.g. installation of automatic circuit reclosers) would result in ongoing SAIFI improvements, as well as the associated SAIDI improvements by reducing the impact of an outage. The reliability outcomes from capex investments are sustained to customers and deliver better integrity and more resilient distribution networks.

Noteworthy, reliability improvement strategies vary between distributors as each distributor will have its own strategy to achieve efficiency gains. When the gain of one factor of the reliability measures flattens, the strategy would shift to the next and eventually would be balanced.

Question 3: Currently there is a slight difference between the ratios for SAIDI and SAIFI incentive weights across the CBD, urban and rural networks (the Wn factor of equations (1) and (2) of STPIS, see appendix C). Should a uniform ratio be applied to all network types?

Electricity supply reliability is more critical to businesses than residential customers.[11] Business customers are mainly located in CBD and urban areas and the number of customers being impacted would be higher in CBD and urban areas than in rural areas. Given the customer types and respective locations, JEN considers the

[10] AER, Issues paper, *Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline*, January 2017, Figure 1, p.12.

[11] Australian Energy Market Operator, *Value of Customer Reliability, Final Report*, September 2014, p. 2.

current weighting across network types[12] are appropriate because the economic harm and social impact is greater in CBD and urban areas.

[12] CBD, urban and rural networks are weighted 1.13, 0.97 and 0.92 respectively

2. DISTRIBUTION RELIABILITY MEASURES

2.1 MOMENTARY INTERRUPTION MEASURES, MAIFI OR $MAIFI_E$

Question 4: Should MAIFIe be implemented as the standardised measure for momentary interruptions?

The issues paper notes that the AER supports the AEMC's recommendation that MAIFIe is a more suitable measure.

JEN supports a change of the definition of a momentary interruption from the current threshold of 1 minute to 3 minutes because it will drive further automation of distribution systems and improve network reliability outcomes. Further automation would lower SAIFI and SAIDI through quicker fault detection, isolation and restoration.

Our support is consistent with the AEMC's recommendation to change the definition of momentary interruption from less than 1 minute to less than 3 minutes.

2.2 APPLICATION OF 3-MINUTES MAIFI

Question 5: Even if the definition for performance comparisons was set at 3 minutes, should the STPIS provide flexibility to change the MAIFI threshold to a value other than 3 minutes to balance the cost of the technologies available to the distributors, the forgone unmeasured unserved energy and customers' preferences?

JEN does not support providing flexibility in the STPIS for the AER to change the threshold because changing the threshold from time to time would create investment risks and uncertainty in business case decisions. Moreover, allowing such flexibility in the STPIS would depart from the intent of COAG Energy Council's request to the AEMC to develop common definitions of distribution reliability measures to improve comparability of reliability performance measures across the NEM.[13]

2.3 EXCLUSIONS

2.3.1 EXCLUDING CATASTROPHIC DAYS FROM THE DISTRIBUTION RELIABILITY MEASURES GUIDELINE

Question 6: What method should be applied to identify catastrophic days so that it is able to consistently, reasonably and universally operate across all distributors?

JEN supports the continuation of the 2.5 beta method for the exclusion of major event days (**MED**) when calculating reliability performance measures. However, we consider the catastrophic days should first be

[13] AEMC, Final Report, *Review of Distribution Reliability Measures*, 5 September 2014, p. i.

excluded from the data set by using 4.15 beta method prior to the application of the 2.5 beta statistical method for establishing the MED.

Our support is consistent with the AEMC's recommendation in its final report[14]

"We recommend that the 4.15 beta described by the IEEE could be used to identify catastrophic events and that the interruptions associated with these events could be excluded from the data set prior to the application of the 2.5 beta method. We also recommend that the distributor can, with the agreement of the relevant regulator, propose an alternative method when it is applying an incentive scheme."

2.3.2 TREATMENT OF CATASTROPHIC DAYS UNDER STPIS

Question 7: Given catastrophic days are already excluded under the MED framework, should such events be treated differently from the "major event days" concept under STPIS?

Catastrophic events are extreme outliers and if these events are not excluded from the data set prior to the application of the 2.5 beta method, they skew the results of the 2.5 beta method for the exclusion of major event days when calculating reliability performance measures. Therefore we believe catastrophic days should be treated differently from the "major event days" concept under STPIS.

Noteworthy the AEMC consulted on this matter and recommended that catastrophic days should be excluded from the data set prior to the application of the 2.5 beta method.

2.3.3 OUTAGE DUE TO FAILURE OF TRANSMISSION CONNECTION ASSETS

Question 8: Should distributors be permitted to exclude a transmission outage event if the event is caused by the action, or inaction, of that distributor?

The issues paper proposes to add a further test for the exclusion criterion of *failure of transmission connection assets*. The AER considers the distributors' control over *failure of the transmission assets* should go beyond the distributors' responsibility for planning of transmission connection assets. The issues paper does not provide any case studies or examples to support the need for the additional test to ensure that the *primary cause of the outage was not due to any act or omission by the distributor*.

JEN does not support addition of such a test. Inclusion of such a broad, imprecise and subjective test is likely to lead to potentially lengthy debate on who (distributors or transmission network service providers) caused the transmission asset to fail, and dispute resolution.

Further analysis should be undertaken to assess benefits and need for this additional change.

2.4 DEFINITION OF FEEDERS

Question 9: The AER would like views on the current definitions of the feeder classifications.

[14] Ibid, p. 28.

The AER is proposing to adopt the AEMC's proposed new definitions for feeder classifications,[15] which did not recommend major changes to the current classification. We support the recommendations in the issues paper.

Question 10: Historically, only feeders supplying the central business districts of the capital cities of each jurisdiction have been classified as CBD feeders for STPIS purpose. Should this practice be maintained?

No comments.

2.5 PLANNED INTERRUPTIONS

Question 11: Should planned outages be included in the STPIS? What is the value/cost of a planned outage?

JEN does not support inclusion of minutes of planned supply interruptions in the STPIS measures, because it is generally a function a distributors' asset replacement and network augmentation programs (**works**). In these cases distributors would be penalised due to a change in the volume of works from one regulatory period to another.

Additionally the STPIS should not include measures that would incentivise distributors' to undertake more 'live-line' work and would effectively only transfer risk from reliability to safety.

Question 12: What considerations should we take to address the potential safety related issues in order to enable the introduction of incentives to reduce planned outages?

JEN does not support introduction of incentives to reduce planned outages. Refer to our response to Question 11.

Distributors provide a minimum of four-days-notice prior to any planned interruption. The notice is generally sufficient for customers to take necessary actions to mitigate the impact of supply interruption. Consequently, JEN considers the economic and social cost of impact of planned supply interruptions on consumers is significantly less than unplanned interruptions.

2.6 MONITORING SERVICE TO WORST SERVED CUSTOMERS AND GSL PAYMENTS

Question 13: The AER would like views on what level of supply interruptions is considered worst served?

The AER has proposed two methods of measuring worst served customers:

a) Defining the threshold level for being worst served in terms of more than 'x' hours of unplanned SAIDI *or* more than 'y' unplanned SAIFI in a year.

[15] Ibid, p 27.

b) Identifying the supply areas and the actual unplanned SAIDI and SAIFI levels of the bottom 'x' percent of total distribution customers.

Based on the AER's previous reports on Victorian electricity distribution businesses, JEN's considers both methods can be used for collecting information on worst served customers.[16] However, JEN's preference is method (a) because the calculation and thresholds relate to network types, which are commonly defined across the NEM and therefore would provide a better measure for performance comparison across the NEM. Under method (b) there is always going to be a bottom 'x' percent of worst served customers because networks operate at varying levels of performance depending on equipment and location. One distributor's supply interruptions that are considered worst served can be another distributor's medium performance and are therefore not comparable.

2.7 CONSISTENT APPROACH TO MEASURE OUTAGES

Question 14: Do you consider that improved standardisation would increase the effectiveness of STPIS?

JEN supports the AER's proposed standardisation improvements outlined on page 31 of the issues paper.

Question 15: Should unmetered supplies be included in the performance measure?

Ideally unmetered supplies to traffic light installations and key telecommunication equipment should be included in the performance measure as they are no less important than metered supplies. However we understand not all distributors may have accurate data of unmetered supplies (eg. unmetered connections to thousands of pole mounted amplifiers[17]). A requirement to include unmetered supplies in the performance measure will inevitably involve costs being imposed on those distributors. Moreover, unmetered supplies represent only a small percentage of the customer base and therefore their inclusion may not have a material impact on management's response.

In the interest of comparability of performance across all distributors, JEN's preference is to exclude unmetered supplies from the performance measure.

[16] AER, *Victorian Electricity Distribution Network Service Providers, Annual Performance Report 2010*, May 2012.

[17] Thousands of pole mounted amplifiers were installed as part of the Broadband rollout program.

3. STPIS SPECIFIC ISSUES

3.1 ADJUSTING THE TARGETS WHERE THE REWARD OR PENALTY EXCEED THE REVENUE CAP UNDER STPIS

Question 16: What is the appropriate method to adjust the target when the performance improvement or deterioration results in the financial reward/penalty that exceeds that cap level?

Currently the STPIS provides for adjustment of performance targets in the subsequent regulatory control period to the extent the financial reward/penalty exceeded the revenue at risk under the scheme in the previous regulatory period. However, the STPIS does not set out how this is to be done.

JEN reviewed the method of adjustment proposed by the AER in the issues paper.[18] The method did not explicitly require the calculation to capture the difference between the target and actual performance of each performance measure in the particular year the cap on revenue at risk was breached, and did not capture MAIFI and the telephone answering performance cap. JEN proposes the following improvements, which build on the AER's proposed methodology.

For each year the financial reward/penalty under the STPIS exceeds the revenue at risk cap:

a) *Determine the actual s-factor prior to the necessary adjustment.*

b) *Determine the difference between the actual s-factor and the revenue cap percentage, typically five percent.*

c) *Allocate the above difference in s-factor value to the SAIFI, SAIDI, MAIFI and telephone answering measures of each network element type based on the relative contribution to the actual s-factor in that year.*

d) *Calculate the adjusted performance based on the relative incentive rates of each network element in that year, and according to the above allocations for each network element.*

e) *Create a table of the adjusted performance values, where in the years the cap is breached, the raw 'actual value' is replaced with the adjusted 'actual value'.*

f) *Calculate the average performance targets over the last 5 years to apply during the next regulatory control period.*

JEN supports a methodology that aligns the incentive in the current period with the targets in subsequent periods. JEN proposes that the AER collaborates with the distributors to further define its methodology.

[18] AER, Issues paper, *Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline*, January 2017, p. 32.

3.2 BALANCING THE INCENTIVE TO MAINTAIN AND IMPROVE RELIABILITY WITH THE INCENTIVE TO REDUCE EXPENDITURE

Question 17: Do you consider that allowing distributors to retain the same proportion of the value of reliability improvements as they do capital and operating expenditure reductions will promote economic efficiency?

The CESS and EBSS allow distributors to retain 30% of the expenditure efficiency gains for five years. The STPIS provides for penalty or reward to be kept for five years after which time it is removed.

There is no discussion or analysis in the issues paper to show that a change to the current methodology, to allow distributors to retain 30% of the value of reliability improvements, would promote economic efficiency.

JEN does not support such a change simply on the basis of aligning the incentive towards CESS and EBSS.

3.3 A SYMMETRICAL FINANCIAL INCENTIVE SCHEME

Question 18: We would like views on whether the scheme should continue to operate in a symmetrical way, i.e. penalties are incurred at the same rate as rewards.

The AER considered this issue when developing the first STPIS in 2008 and concluded that a symmetrical scheme approximates the operation of a competitive market more closely than an asymmetrical incentive scheme.[19]

JEN believes the scheme should continue to operate in a symmetrical way until there is convincing analytical evidence that suggests an asymmetrical incentive scheme would produce better outcomes to customers.

3.4 HOW TO LINK WITH DISTRIBUTOR CUSTOMER ENGAGEMENT FINDINGS SEEKING CHANGES TO RELIABILITY LEVEL

Question 19: Should consumers' preferences be reflected through the capital and operating expenditure funding level, or through the STPIS incentives, or a combination of both measures?

Any local or temporal shift in consumer desire for reliability would be reflected in the STPIS incentive rates for rewards or penalties through a higher or lower VCR.

Should consumer engagement outcomes identify that consumers generally are seeking a change in the supply reliability outcomes, their preferences could be considered in the objectives of the capital and operating expenditure funding levels. We consider there is a balance between short and long term incentives and both types of approaches are required to balance competing objectives.

[19] Ibid, p 34.

To enable the latter approach, a rule change may be required as the funding criteria[20] for distributors' operating and capital expenditures are to maintain the current level of reliability, safety and security of the distribution system.

> Question 20: Which input factors of the STPIS should be, or could be, made flexible to reflect consumers' preference on reliability level, for example the VCR rate, level of revenue at risk and the major event day exclusion criterion (which determines the coverage of the reliability measures).

The obvious parameter to incorporate flexibility in the STPIS is consumers' reliability preferences through the VCR rates.

The level of revenue at risk is another factor that can be used which would be simpler to apply.

JEN does not believe the MED exclusion criterion is a suitable factor to address consumers' reliability preference as the primary purpose of the exclusion criterion is to identify and exclude major incident event days—that are outside the reasonable control of the distributor—from the calculations of the incentive scheme.

3.5 SIMPLIFY THE CALCULATION OF THE S-FACTOR

> Question 21: We would like views on the current approach for s-factor calculations. Specifically, should and how the calculation of s-factor be simplified?

A distributor's performance in the last two regulatory years of its regulatory control period will affect its revenues in the first two regulatory years of the next regulatory control period.

The AER is proposing to simplify the s-factor calculation by including the financial reward or penalty as a dollar value rather than a percentage in the control mechanism—similar to the method of recovering cost pass through in the control mechanism.[21]

JEN proposes that the adjustment should be aligned to the price control mechanism where a factor adjustment should apply under a price cap and a dollar adjustment should apply under a revenue cap. This approach will simplify the mechanics of applying the adjustment.

3.6 RULES FOR GUARANTEED SERVICE LEVEL PAYMENTS

> Question 22: We would like views from stakeholders on what other clarification is needed for the GSL section of the current STPIS scheme.

No comments.

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[20] s 6.5.6 and s 6.5.7 of the National Electricity Rules.

[21] AER, Issues paper, Reviewing the STPIS and establishing a new Distribution Reliability Measures Guideline, January 2017, p 37.

4. FUTURE OF STPIS

4.1 INTERACTION WITH NEW TECHNOLOGIES

> Question 23: In what way could the STPIS be changed to reflect the needs of consumers with storage or other similar technologies?

The STPIS is designed to operate by measuring average outcomes across the network having regard to network types (CBD, urban or rural). JEN considers it should continue to operate on average outcomes and at feeder type level of measurement. To change to more granular levels of customer or asset type would be prohibitively costly to acquire the data necessary to perform the calculations.

We acknowledge customers with solar PV, battery storage or other similar technologies may have greater tolerance for short to medium duration network outages

To recognise this likely change in the future in the way customers value network reliability, SAIDI could be given less weighting than SAIFI.

4.2 SHOULD THE SERVICE QUALITY INCENTIVE ONLY FOCUS ON MEASURING SAIDI AND SAIFI?

> Question 24: The existing STPIS is not based directly on the energy-not-supplied. Do you think it would be preferable to base the financial reward or penalty directly on the energy not supplied? How shall we measure the social harm associated with network outages?

JEN does not support basing the financial reward or penalty directly on the energy not supplied given that it is not a measurable quantity.

JEN is currently estimating the energy not supplied by adopting the fourth option of the methodology outlined on page 37 of the AER's *Economic benchmarking RIN for distribution network service providers – Instructions and Definitions (November 2013)*. We believe it will be very difficult to estimate the lost loads directly using a standardised approach across the distributors

Refer to our response to Q 25 in support of no change.

> Question 25: The existing STPIS is estimated as the product of the outage duration (and frequency) of an average customer and the incentive rates for the SAIDI (and SAIFI). Do you think it would be preferable to base the average outage duration and frequency on energy not supplied (KWH) or load (KVA)

Economic harm of loss of supply depends on a range of factors such as:

- volume of electricity not supplied
- identity of the customer

- number of loss of supply events
- duration of the loss of supply events
- time of day; and so on.[22]

The AER is asking whether the SAIDI should be *directly* based on energy-not-supplied to recognise the economic harm to different end-use customers.

It may be an ideal notion to base SAIDI directly on energy-not-supplied, however, JEN considers cost and inaccuracy will out-weight the expected benefits. To estimate energy-not-supplied would require accurate historical and forecast load profile data down to the customer level which would add a level of complexity, effort and cost to develop.

Additionally, the existing STPIS is based on VCR using customer metrics and the value they place on supply outages.

> Question 26: Should the AER move away from service quality measures mainly based on SAIDI and SAIFI measures? If not, how do we know when we have reached that point? What other measures should be considered?

Based on consumer engagement outcomes, we understand our customers currently value supply reliability. Consequently, JEN considers SAIDI and SAIFI is an important feature of the current STPIS and we should not move away until customers' service quality measures changes in the future.

We acknowledge that as the penetration of a range of distributed energy resources increase, network outages may not necessarily result in loss of supply. Arguably, customers may value network reliability less over time, however, this change will be reflected in a lower VCR which will flow to the STPIS.

A quality of supply measure may be a possible consideration in the future.

[22] Ibid, p. 41.