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Proposed amendment to the service target performance incentive scheme – September 2009

Dear Chris

Thank you for providing Jemena Electricity Networks (JEN) the opportunity to comment on the Australian Energy Regulator's (AER) proposed amendments to the Service Target Performance Incentive Scheme (proposed STPIS).

Amendments Proposed by the AER

JEN supports most of the amendments proposed by the AER, except for the amendments proposed for Appendix D of the STPIS document. The AER's proposed amendments are intended to allow DNSPs to propose an alternative transformation method where the SAIDI data collected under the scheme does not exhibit a log normal distribution.

Given that the STPIS currently assumes SAIDI data collected exhibits a log normal distribution, JEN considers there should not be a new requirement to prove that the data exhibits a log normal distribution as contemplated by the proposed insertion of the words "*Apply a commonly accepted statistical test for normality to the data set, and where the data set is normally distributed:*" between steps 3 and 4. JEN considers the AER is making the calculation of the major event day boundary (T_{MED}) unnecessarily onerous and complicated. JEN proposes that the words between steps 3 and 4 be deleted.

The STPIS assumes that the types of exclusion events set out in clause 6.4 (a) are excluded from the calculation of exclusion T_{MED}. To avoid doubt, JEN suggests the inclusion of the words "(do not include days attributed to any of events prescribed in clause 6.4(a))" at the end of step 1.

Additional Issues

There are three other issues with the STPIS that JEN would like to bring to the AER's attention in this submission. JEN understands that these issues are outside the scope of the proposed amendments. Nevertheless JEN considers these issues materially affect the operation and effectiveness of the STPIS. JEN intends, in its regulatory proposal (to be submitted by 30 November 2009), to put forward

amendments to how the STPIS should apply to JEN. These amendments will seek to address the impact of the issues discussed below.

Specifically, the issues JEN wishes to raise relate to:

- Clause 2.5 – Calculation of T_{MED}
- Victorian DNSPs use of MAIFIe, rather than MAIFI
- An error in formula 1C in Appendix C: Adjustment to allowed revenue

Calculation of T_{MED}

Clause 2.5(c) of the STIPS document states the term T_{MED} will be calculated and approved annually by the AER in accordance with appendix C.

As part of the regulatory proposal submitted during the price review, the AER has asked the DNSPs to demonstrate that the investment proposal will achieve the reliability targets set for the price review period.

As reliability targets for the next regulatory period are set (and fixed) using the T_{MED} (determined from 5 years of historical performance), JEN believes that an annual reassessment of T_{MED} using a rolling 5-year average has the potential to expose the DNSP to a changing T_{MED}, with a resultant risk of not achieving the reliability targets. It creates regulatory uncertainty of DNSP investments.

JEN therefore proposes that T_{MED} should be fixed for the duration of the regulatory period.

MAIFIe and MAIFI

Under the current regulatory regime, the Victorian DNSPs have been reporting Momentary Average Interruption Frequency Index (**MAIFIe**) in the current and pervious regulatory periods based on the IEEE 1366-2003 standard, which defines a momentary interruption event as follows:

> " 3.15 momentary interruption event: An interruption of duration limited to the period required to restore service by an interrupting device. Note - Such switching operations must be completed within a specified time of 5 min or less. This definition includes all reclosing operations that occur within five minutes of the first interruption. For example, if a recloser or circuit breaker operates two, three, or four times and then holds (within 5 min of the first operation), those momentary interruptions shall be considered one momentary interruption event."

Notably, the Victorian approach is different to that in the AER's STPIS. Appendix A of the STPIS document defines Momentary Average Interruption Frequency Index (**MAIFI**) as follows:

> MAIFI (Momentary Average Interruption Frequency Index): The total number of customer interruptions of one minute or less, divided by the total number of distribution customers. Notes: No.4 – In calculating MAIFI, each operation of an automatic reclose device is counted as a separate interruption. Sustained interruptions which occur when a recloser locks out after several attempts to reclose should be deleted from MAIFI calculations.

The difference between MAIFI and MAIFIe is best explained with the following two scenarios of a temporary fault.

In scenario 1, a fault occurs on the network at time-point A, whereby the feeder circuit breaker operates to remove supply. After a period of a few seconds, the feeder circuit breaker attempts to restore supply at time-point B, and finds that the original fault remains and therefore operates again. Finally, the feeder circuit breaker attempts to restore supply again at time point C and finds that the original fault has gone from the network and therefore supply is permanently restored. The entire sequence occurs in a time period that is less than 1 minute.

For scenario 1, under the status quo approach, MAIFIe would count as 1 event. Yet under the AER's definition, a DNSP would be forced to report a MAIFI of 2 incidents, as supply was lost twice within a few seconds.

By comparison (scenario 2), if the feeder circuit breaker unsuccessfully attempted to restore supply at time-point B and went to lockout, the customer still experiences loss of supply twice, but the measure of SAIFI would be reported as 1 event only, as per MAIFIe in the example above.

JEN, as well as other Victorian DNSPs, have always reported MAIFIe to the ESC and, therefore, the historical performance upon which the 2011-2015 targets will be set does not reflect (and underestimates) the MAIFI figures that would have resulted if the AER definition of MAIFI had applied.

Setting targets based on one metric (MAIFIe) and measuring actual performance for the STPIS using a different metric (MAIFI) will see a perceived degradation of performance, as many incidents where only 1 event was reported previously will suddenly be reported as 2 or more events.

Industry experience to date has confirmed that generally the success of reclose operation is higher when a multi-shot reclose function is implemented (and where it is safe to do so, for example, in rural areas during non-bushfire season). The use of MAIFI (as opposed to MAIFIe) is likely to discourage a DNSP from implementing multi-shot reclose function, resulting in lower reliability of supply to customers.

MAIFIe data is the only data available upon which the AER can reasonably based future targets. The use of MAIFIe is more closely aligned with customers' experience of the interruption—a key reason for the current use of MAIFIe in Victoria. Also, the adoption of MAIFIe for Victorian DNSPs will ensure continuity and comparability of reliability performance from the beginning of calendar year 2000.

There is another drawback in using MAIFI instead of MAIFIe. Failure to adopt MAIFIe as the reliability performance measure will unfairly characterise those DNSPs that deploy smart network technologies, such as distribution automation and self healing networks (automatic supply restoration), as DNSPd with abnormally high MAIFI and render the MAIFI measure meaningless for comparative purposes.

JEN therefore recommends the STPIS definition of MAIFI be amended to be consistent with the current definition of MAIFIe.

Error in formula 1C

JEN believes the formula 1C (shown below) in Appendix C of the STPIS document is incorrect.

$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{n} p_{ik}^{t+1} * q_{ik}^{t-1}}{\sum_{i=1}^{n}\sum_{j=1}^{n} p_{ik}^{t} * q_{ik}^{t-1}} \leq (1+\Delta CPI_t)*(1-X_{t+1})*(1+S_t) \quad \text{..... (1C)}$$

Under a weighted average price cap the DNSP has n relevant tariff classes which each have m components:

JEN believes the correct formulation should be as follows:

$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{ij}^{t+1} * q_{ij}^{t+1}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{ij}^{t-1} * q_{ij}^{t-1}} \leq (1+\Delta CPI_t)*(1-X_{t+1})*(1+S_t) \quad \text{..... (1C)}$$

Closing Comment

Thank you for considering JEN's submission. Should you wish to discuss any of the comments, please contact me on (03) 8544 9036.

Kind regards

Anton Murashev
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