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Mr Chris Pattas
General Manager
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Dear Chris

Draft amended Service Target Performance Incentive Scheme

AusNet Electricity Services Pty Ltd (AusNet Services) welcomes the opportunity to make a submission in response to the Australian Energy Regulator's (AER) draft decision on the review of the distribution STPIS. AusNet Services strongly supports the use of incentives to efficiently improve the reliability of DNSPs to the benefit of customers. In response to the existing incentive arrangements, we have made significant investments in reliability-enhancing technologies in recent years, particularly distribution feeder automation, which have resulted in substantially improved reliability outcomes for customers

This submission provides comments and suggestions on specific aspects of the AER's draft decision.

USAIDI/USAIFI weightings

In AusNet Service's submission to the AER's issues paper, we stated that we did not consider any alteration to the USAIDI and USAIFI weightings was justified. The AER has maintained that an adjustment to the incentive ratios is necessary and in its draft decision specified the adjustment that it proposes to apply. AusNet Services still considers that the re-weighting is unnecessary and does not consider it has been strongly justified by the AER for the reasons set-out below.

Importance of fully understanding customer preferences

The STPIS provides a price signal to DNSPs for the value that customers place on different levels of reliability and in doing so provides DNSPs an incentive to deliver the level of reliability that is valued by the customer. Accordingly, changes to the incentive rates used in the scheme will cause DNSPs to alter their expenditure plans and deliver different reliability outcomes to customers. It is important to recognise that an incorrectly specified STPIS could either drive excess reliability expenditure (that is not valued by customers), or result in an unduly unreliable network. Because of this we agree that it important to ensure that the STPIS is properly balanced.

However, the revised ratios between SAIDI and SAIFI incentives will drive systematic changes in operating approaches and incentivise increased opex on fault restoration, to reduce outage duration. It has not been established that this is an efficient outcome and is consistent with

consumers' preferences. Conversely, maintaining the current reward ratios won't drive systematic changes in either the reliability levels or expenditure. Given the larger impact of a decision to alter the reward ratios, we consider there should be a higher evidential burden compared to a decision to maintain the existing approach. Specifically, careful examination of customers preferences and willingness to pay should be weighed up before this decision is made.

Flawed assumptions underpinning the need for change

We consider that, to the degree that there has been a reduction in CAIDI outcomes, this is an outcome of the STPIS scheme working, rather than a reflection of deteriorating customer reliability outcomes. The AER states that:[1]

> *the use of auto-reclosers to restore supply quickly after a network fault—all else being equal, including the fault repair time—would result in the same level of improvements to SAIDI and SAIFI in percentage terms. This means that the CAIDI time would not change if a distributor invests in more automation and at the same time maintains its operational response time*

We provide an illustration below that demonstrates that a decline in CAIDI is an anticipated (and not detrimental to customers) result of installing feeder automation. This demonstrates that the AER's concerns about increasing CAIDI are misplaced.

The example underpinning the AER's analysis[2] implicitly assumes that in the base case, the DNSP's response to a fault to keep all customers offline until the fault had been fixed (at which point all customers were restored at the same time). This does not reflect the manner in which AusNet Services operated its network before automation was installed (and we presume other DNSPs behave similarly). At a high level, AusNet Services approach was:

1. Identify the location of the fault.
2. Restore as many customers as possible by manually switching the network.
3. Fix the permanent fault (concurrently with step 2).

In many circumstances, fixing the fault takes longer than manually switching the network and so this is an optimal approach to emergency management. This approach results in a graduated restoration of supply, where many customers experience an outage that is shorter than the total duration of the fault. Feeder automation allows this process to be automated and completed in under a minute, thus avoiding these sustained outages entirely. By not considering this approach to restoring power after supply outages, the AER has reached a simplistic conclusion that installing a feeder automation scheme should maintain constant CAIDI. In fact, installing a feeder automation scheme is likely to increase CAIDI for the reasons set out below.

Figure 2 below replicates the AER's analysis. However, we expand it to include an additional scenario – This scenario assumes there is a manual switch installed at the point where the ACR will subsequently be installed. We have assumed that this section can be manually switched 40 minutes after the outage (restoring 4,000 customers) and the main outage will still be restored after 80 minutes. We consider this additional scenario is the appropriate baseline for the AER to use in its analysis.

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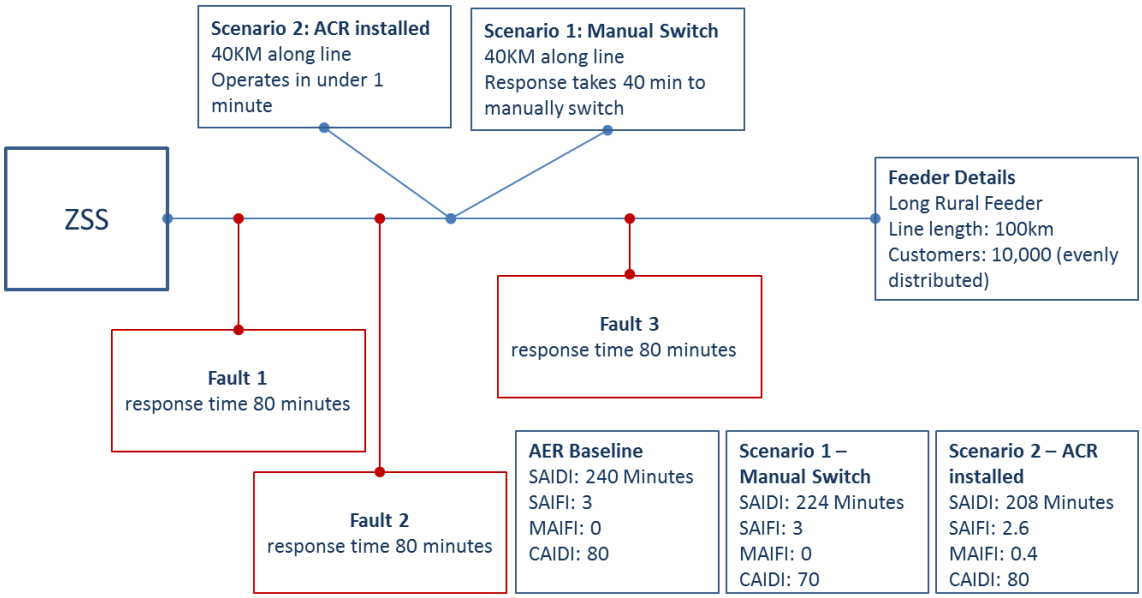
[1] Explanatory Statement, Proposed amendment, Service Target Performance Incentive Scheme (STPIS), pg 16.

[2] Explanatory Statement, Proposed amendment, Service Target Performance Incentive Scheme (STPIS), Appendix B

Figure 1 illustration of feeder automation



Source: AusNet Services Analysis

Figure 2 demonstrates that with the feeder automation installed (Scenario 2), there is a reduction in both SAIDI and SAIFI reflecting improved customer outcomes compared to Scenario 1. However, there is an increase in CAIDI and this arises because it reflects the average outage length – the shorter outage, where supply can be restored by manual switching, is transformed into a momentary outage and no longer included in the CAIDI calculation. Importantly, this longer CAIDI has not arisen because the DNSP has provided worse response to the customers at the far end of the network – these customers experience exactly the same outage length as they previously did. As such, despite the increased CAIDI, there is no detriment experienced by any customer as a result of installing the feeder automation.

This demonstrates that increased CAIDI can arise with no detriment to any customer on our network, and does not in itself indicate shortfalls with the existing incentive properties of the scheme. Importantly, this analysis also demonstrates that if the AER wants to maintain a constant CAIDI, then response time would actually need to be quicker than previously. If this is the case, then the AER should present evidence that this improvement is valued appropriately by energy consumers.

Flawed analysis to derive the adjustment

The process that the AER used to derive the 60/40 split is flawed and should not be relied upon. The AER gave the following reasons for its decision to apply a 60/40 ratio:

> *This 60/40 ratio is based on our analysis findings as detailed in Appendix A, that:*
>
> - *Currently, the typical improvement to SAIFI of an outage improvement is 5 per cent more than improvement to SAIDI, as demonstrated in Appendix B.*
> - *If a distributor's CAIDI deteriorates by 5 per cent because of a higher level of SAIFI improvement than SAIDI improvement, changing to the 60/40 ratio would result in a 4.7 per cent reduction in overall STPIS reward—this appears to*

closely offset the existing SAIFI bias compared to maintaining the current 50:50 ratio.

- *For comparison, a 55/45 ratio would only represent a 2 per cent reduction in overall STPIS reward, which may not be sufficient to influence a change in a distributor's response to restore supply interruptions in a more timely manner.*
- *More importantly, if a distributor delivers the same levels of improvement to both SAIFI and SAIDI—including maintaining the existing average fault repair time, it will receive the same STPIS reward under the 60/40 ratio as the existing approximately 50/50 ratio. This change to the incentive rate ratio between SAIFI and SAIDI would therefore not reduce the financial incentive to implement more automation to restore supply because the financial reward to the distributor would remain unchanged, if the current level of supply repair time (CAIDI) is maintained.*

The AER's approach was to alter the SAIDI/SAIFI ratio to set the percentage change in STPIS rewards equal to the observed deterioration in CAIDI. In response to this we make two points:

1. The AER's calculation of a 4.7% reduction in the STPIS reward is highly dependent on the assumptions underlying the AER's calculation. For example, the AER's calculation assumes that the feeder automation only operates in one in three outages and when it operates this results in 40% of customers being restored quickly. It can be seen that changing these assumptions provides very different outcomes.
2. More importantly, there does not appear to be a sound conceptual basis to suggest a % difference in CAIDI should be corrected by a similar % difference in the STPIS reward. Without a conceptual basis supporting this position, there is no justification underpinning the proposed adjustment.

Table 1 replicates the AER's analysis and presents variations of the AER's scenario. The different scenarios vary the number of outages where the feeder automation operates, or the number of customers who are quickly restored by the feeder automation.

Table 1 Proportional change in STPIS reward

		Proportion of outages where feeder automation operates	
		1/3	**2/3**
Percent of customers restored by feeder automation	**20%**	-12.7%	-4.7%
	40%	-4.7%	-1.8%
	60%	-2.7%	-0.9%
	80%	-1.8%	-0.5%

Source: AusNet Services Analysis

It can be seen that each scenario has a different outcome and the 4.7 percent figure underlying the AER's analysis is highly dependent on the assumptions they chose in their example. The AER has not articulated a clear basis for selecting these particular assumptions or demonstrated whether they best reflect a feeder automation scheme. The AER could have

chosen a different set of assumptions and these different assumptions would have led to a different adjustment. As such, this calculation provides no evidence for the appropriateness of the change to the 60/40 SAIDI/SAIFI ratio as claimed.

Based on our above analysis, we do not consider the AER has provided sufficient justification for a change to one of the key incentive schemes and so do not support this amendment to the STPIS.

Value of Customer Reliability

The revised STPIS includes a clause allowing the AER to decide upon a different VCR. AusNet Services supports adding this clause to the STPIS. However, the timeliness of the VCR reviews is important. It is important that there is certainty regarding the VCR that will apply in advance of the regulatory period, particularly as reliability is likely to be a key element of early consultation with customers when developing our proposal.

The AER should outline principles about when and how the VCR will be determined. We suggest that the VCR should be locked in at the F&A stage when a decision is made on the version of the STPIS to apply in the next regulatory period.

The default VCR's in the STPIS reflect those values used in the initial 2009 STPIS decision. These VCR values are now out of date and should either be updated or removed entirely in the final decision.

S-factor calculation formula

We support the AER in simplifying the STPIS formula and ensuring that the time periods properly align with the PTRM. We consider that the way in which the S-bank mechanism is defined could be specified more clearly to remove some remaining uncertainty. We propose the following formula, which expresses the S-bank mechanism in formulaic terms:

$St = AR_{t-2}\, S_{t-2}\,\% \times (1 + \Delta CPI_{t-1}) - (AR_{t-2} Sb_{t-2}\,\% \times (1 + \Delta CPI_{t-1})) + (AR_{t-3} Sb_{t-3}\,\% \times (1 + \Delta CPI_{t-2}))$ t = 1, … ,5

Where:

- Sbt-2% is the s-bank for regulatory year t -2, as a percentage of revenue (or prices) calculated annually through the compliance assessment.
- Sbt−3% is the s-bank for regulatory year t -3, as a percentage of revenue (or prices) calculated annually through the compliance assessment.

We consider the above formula achieves the AER's intention, but provides certainty regarding the intended operation of the S-bank mechanism.

We would be happy to meet with AER staff to further discuss this letter. If you have any queries in relation to this submission, please contact Michael Larkin, Senior Economist on 03 9695 6346.

Sincerely,

Tom Hallam
General Manager – Regulation and Network Strategy
AusNet Services