Final decision

Electricity Transmission Service Providers Service Target Performance Incentive Scheme

March 2011

AUSTRALIAN ENERGY REGULATOR

Contents

Shortened forms

AER	**Australian Energy Regulator**
LOS	Loss of Supply
MITC	Market Impact of Transmission Congestion
NEM	National Electricity Rules
Scheme	Service Target Performance Incentive Scheme
TNSP	Transmission Network Service Provider

1 Introduction

The Australian Energy Regulator (AER) is responsible for the economic regulation of prescribed transmission services provided by transmission network service providers (TNSPs) in the National Electricity Market. The AER regulates TNSPs in accordance with the National Electricity Rules (NER). Clause 6A.7.4(e) of the NER required the AER to develop and publish the first service target performance incentive scheme by 28 September 2007. Clause 6A7.4(e) further requires that a service target performance incentive scheme must be in force at all times after that date.

The Australian Competition and Consumer Commission (ACCC) released the first Service standards guidelines in November 2003. In 2005 the AER adopted these guidelines as part of its compendium of regulatory guidelines. The Australian Energy Market Commission (AEMC) reviewed the framework for regulating electricity transmission services in 2006 and required the AER to publish a service target performance incentive scheme. On 31 August 2007 the AER published its first service target performance incentive scheme (version 1.0). In March 2008 the AER published version 2.0. The major difference between the versions 1.0 and 2.0 was that version 2.0 included the market impact of transmission congestion (MITC) parameter.

In August 2010 the AER received a proposal from Powerlink to amend the service target performance incentive scheme. Powerlink's proposed amendments relate mainly to parameters and definitions specifically applicable to Powerlink. The relevant parameters and definitions are in appendix B of version 2.0 of the service target performance incentive scheme (the current scheme). The proposed amendments include:

- Changing the sub-parameters of the transmission circuit availability parameter;
- Lowering the thresholds of the loss of supply event frequency parameter;
- Altering the definition of the average outage duration parameter to use an interval mean;
- Amendments to the definition of the MITC parameter.

As required by clause 6A.20(b)(2) of the NER, the AER released an explanatory statement accompanied by the proposed scheme in November 2010. It set out the NER requirements, the purpose and objectives of the proposed scheme, the nature and reasons for the proposed scheme and the consultation process to be undertaken. It also invited written submissions on the proposed scheme as required by clause 6A.20(b)(3) of the NER.

The AER received submissions on the proposed scheme from Powerlink and TransGrid. The submission from Powerlink:

- accepted 10 of the 12 proposed amendments to the scheme;
- provided further supporting information concerning its proposed amendment to the MITC parameter; and

- provided further information supporting its proposed thresholds for the loss of supply parameter.

TransGrid's submission raised no issues with respect to the proposed amendments.

As required by clause 6A.20(e)(1) of the NER, this final decision accompanies the final scheme. It sets out the NER requirements, the purpose and objectives of the scheme, the nature and reasons for the scheme and the consultation process undertaken.

This final decision sets out the AER's response to submissions on the explanatory statement. The AER's assessment of the proposed amendments that were discussed in the explanatory statement and that are not detailed in this final decision are summarised in appendix B. Where submissions did not raise issues with proposed amendments as outlined in the explanatory statement the AER maintains its position.

2 NER Requirements

2.1 Amending a service target performance incentive scheme

Clause 6A.7.4(f) allows the AER to amend or replace a service target performance incentive scheme from time to time. However for an amendment or replacement to apply to a TNSP, the final scheme must be published at least 15 months before the TNSP's next regulatory control period. Clause 6A.7.4(g) provides that the AER may from time to time amend or replace the values attributed to the performance incentive scheme parameters.

Paragraphs (f) and (g) of clause 6A.7.4 provide that any amendment or replacement of a service target performance incentive scheme or the values attributed to the parameters of the scheme must be in accordance with the transmission consultation procedures.

The transmission consultation procedures contained in part H of chapter 6A of the NER outline the process to be followed by the AER in developing the final service target performance incentive scheme. The transmission consultation procedures require the AER to publish the proposed scheme with an explanatory statement and invite written submissions on the proposed scheme. Within 80 business days of publishing the proposed scheme, the AER must publish the final scheme.

2.2 Requirements for a service target performance incentive scheme

Clause 6A.7.4(a) of the NER provides that a service target performance incentive scheme must comply with the principles set out in paragraph (b) of clause 6A.7.4. These principles are that a service target performance incentive scheme should:

> *(1) provide incentives for each Transmission Network Service Provider to:*
>
> > *(i) provide greater reliability of the transmission system that is owned, controlled or operated by it at all times when Transmission Network Users place greatest value on the reliability of the transmission system; and*
> >
> > *(ii) improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices;*
>
> *(2) result in a potential adjustment to the revenue that the Transmission Network Service Provider may earn, from the provision of prescribed transmission services, in each regulatory year in respect of which the service target performance incentive scheme applies;*
>
> *(3) ensure that the maximum revenue increment or decrement as a result of the operation of the service target performance incentive scheme will fall within a range that is between 1% and 5% of the maximum allowed revenue for the relevant regulatory year;*

(4) take into account the regulatory obligations or requirements with which Transmission Network Service Providers must comply;

(5) take into account any other incentives provided for in the Rules that Transmission Network Service Providers have to minimise capital or operating expenditure; and

(6) take into account the age and ratings of the assets comprising the relevant transmission system.

3 Objectives and overview of the service target performance incentive scheme

The final scheme outlines the approach to setting a service target performance incentive within the transmission determination framework. The objectives of the final scheme, which are identical to those outlined in clause 1.4 of the current scheme, are to:

- contribute to the national electricity objective (that is, promote efficient investment in, and efficient operation and use of electricity services for the long-term interests of consumers of electricity)
- be consistent with the principles in clause 6A.7.4(b) of the NER (as set out in section 2.2 of this document)
- promote transparency in the information provided by a TNSP and AER decisions
- promote efficient TNSP capital and operating expenditure by balancing the incentive to reduce actual expenditure with the need to maintain and improve reliability for customers and minimise the market impact of transmission congestion.

3.1 Overview of the scheme

The final scheme consists of two components: the service component and the market impact component.

3.1.1 Service component of the scheme

The service component has three parameters, with each parameter having two or more sub-parameters.

3.1.1.1 Transmission circuit availability

This system security parameter incentivises the TNSP to keep the transmission circuits available to be energised and transport energy for as much of the period as possible. This parameter is generally disaggregated into two or more sub-parameters. The purpose of this parameter is to act as a lead indicator of reliability. If availability is low then reliability may be affected in future periods. This parameter incentivises TNSP performance around a target to maintain and improve availability of assets including transmission lines, transformers and reactive plant.

3.1.1.2 Loss of supply event frequency

The reliability of supply parameter uses system minutes to measure the size of an unplanned outage against the entire energy the network supplies. This parameter is generally disaggregated into a moderate (x) loss of supply sub-parameter and a large (y) loss of supply sub-parameter. The purpose of this parameter is to create an incentive to minimise loss of supply events. This parameter is based on system minutes which represent the number of MWh of each unplanned outage as a proportion of the TNSPs peak system usage. The aim of this parameter is to minimise the number of events at each threshold.

3.1.1.3 Average outage duration

The operational response parameter measures the average length of an unplanned outage in minutes as a proxy for the time a TNSP takes to return a circuit to operation. This parameter incentivises the TNSP to minimise the average length of all unplanned outages to the benefit of system users. All unplanned outages greater than 1 minute are included in the calculation for this parameter, however, large duration outages are capped at 7 days.

3.1.1.4 Operation of the service component

The scheme operates for each regulatory control period and uses targets, caps and collars based on the previous five years performance data to assess a TNSPs performance in the following regulatory control period. A TNSP's service performance for each sub-parameter is compared to its individual sub-parameter target during the relevant regulatory control period. Service performance improvements result in a financial bonus to the TNSP, while declines in service performance result in a financial penalty to the TNSP. The financial incentive or penalty is calculated using the formula set out in the scheme. This formula applies a weighting to each performance parameter. To date the financial incentive (or penalty) has been limited to 1 per cent of each TNSPs maximum allowed revenue (MAR) for the relevant calendar year. A TNSP's revenue in the following regulatory control year is then adjusted by the financial bonus or penalty accrued under the scheme.

Exclusions for each parameter are permitted to remove events which are outside the TNSPs control, for example the following events are excluded: successful auto reclose events (those outages resolved in less than one minute), force majeure events (bush fires, acts of war, government intervention, etc) and third party events (faults on a third party system that cause an outage on the transmission system). These events are considered to be beyond the reasonable control of the TNSP.

3.1.2 Market impact component of the scheme

The market impact parameter incentivises the TNSP to operate to minimise transmission outages that can affect the National Electricity Market (NEM) spot price. This parameter is separate to the service component parameters and operates as a bonus only with up to 2 per cent of maximum allowed revenue at risk.

4 Issues raised in submissions and AER response

The AER received submissions from Powerlink and TransGrid.

Powerlink accepted the AER's position in relation to ten of the twelve proposed amendments outlined in the explanatory statement and included in the proposed scheme.[1] Powerlink provided further information to support its proposed thresholds for the loss of supply parameter and the addition of an exclusion to the MITC parameter.

TransGrid noted that the proposed scheme was not materially different to the current scheme as it applies to TransGrid, and accordingly had no concerns with the proposed amendments.

4.1 Issues raised in submissions

4.1.1 Circuit availability parameter

During its current regulatory control period the AER has applied a circuit availability parameter to Powerlink based on sub-parameters for peak, critical and non-critical circuit availability.

Powerlink proposed to convert the peak, critical and non-critical sub-parameters to sub-parameters based on asset classifications of transmission line, transformer and reactive plant.

AER preliminary position

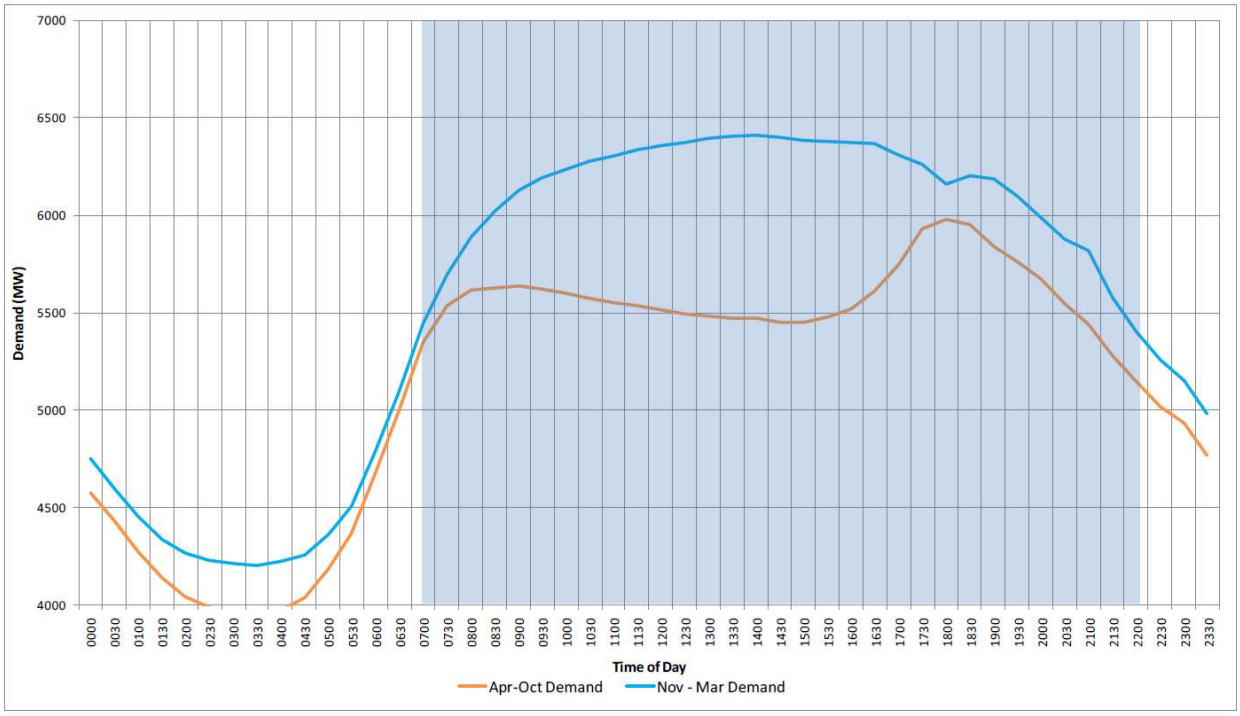
The AER considered it reasonable for Powerlink to have similar asset based classes as applied by TransGrid. However, the AER considered that a peak circuit availability sub-parameter should apply to Powerlink due to its seasonal peak load profile.

Powerlink submission

Powerlink proposed the inclusion of a peak circuit availability parameter that will operate from 07:00 to 22:00 in the summer months from November to March excluding weekends and public holidays. Powerlink provided the following charts based on average network demand for the period June 2007 to June 2010.

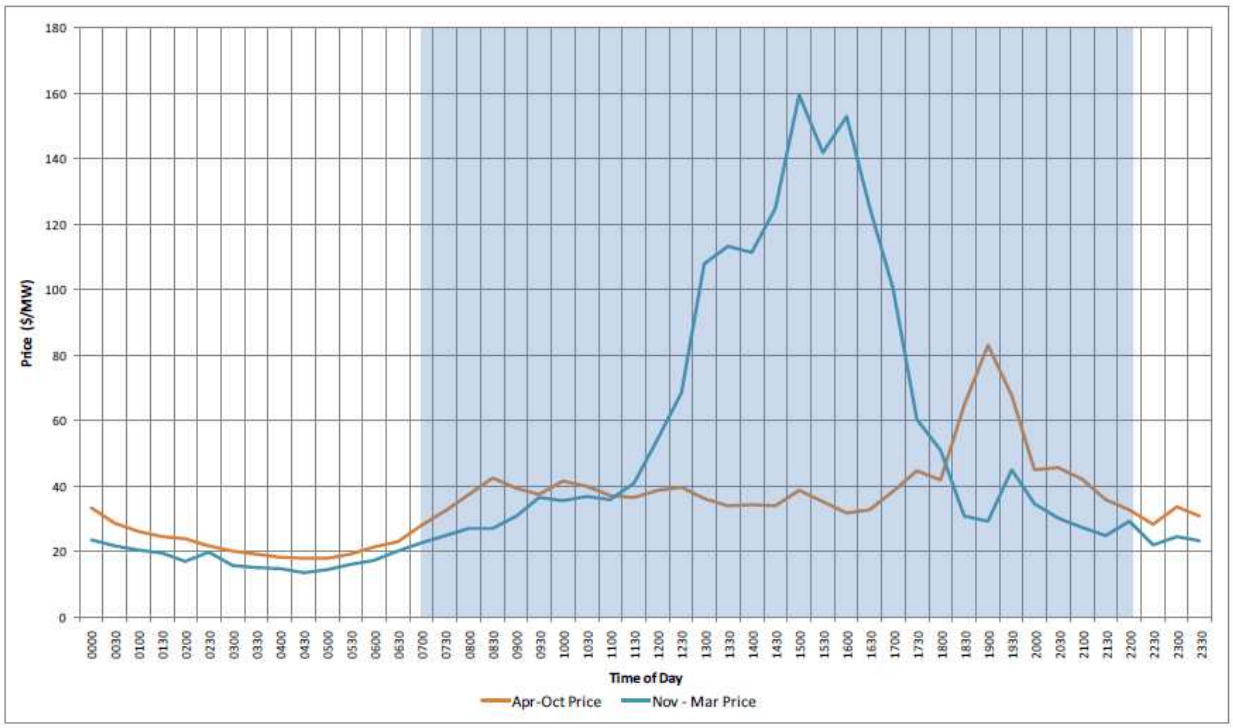
[1] Powerlink, Response to the AER Explanatory statement on Powerlink's proposed service target performance incentive scheme, 21 January 2011, pg 1

Figure 1 – Queensland Average Demand (MW) (from 2007-2010) Profiles



Source: Powerlink, Response to the AER Explanatory Statement on Powerlink's proposed Service Target Performance Incentive Scheme: 1 July 2012 to 30 June 2017 regulatory period, 21 January 2011, pp.7

Figure 2 – Queensland Average ($/MW) (from 2007 to 2010) Profiles



Source: Powerlink, Response to the AER Explanatory Statement on Powerlink's proposed Service Target Performance Incentive Scheme: 1 July 2012 to 30 June 2017 regulatory period, 21 January 2011, pp8

AER considerations

The AER considers that the peak circuit availability parameter proposed by Powerlink is appropriate to incentivise circuit availability during the summer months. The AER considers that the times of 07:00 to 22:00 during the summer months from November to March represent the period when electricity demand is maximised in Queensland. Therefore this period reflects the times when circuit availability should be maximised to minimise the likelihood of a transmission outage affecting transmission system users.

The AER therefore considers Powerlink's proposal is appropriate.

4.1.2 Loss of supply event frequency

The AER applies a set of thresholds for the loss of supply frequency parameter. The thresholds represent the level at which the number of loss of supply events is minimised before the TNSP is rewarded or penalised under the scheme. These thresholds were set at 0.20 and 1.0 system minutes in Powerlink's current revenue determination. These loss of supply thresholds incentivise the TNSP to reduce the frequency of outages for transmission system users at each threshold.

Powerlink proposed to decrease the threshold for loss of supply from 0.20 and 1.0 system minutes to 0.15 and 0.75 system minutes respectively. Powerlink stated these lower thresholds were a balance between the inherent vulnerability of the long, skinny Powerlink grid to larger loss of supply events (as compared to other parts of the NEM) and Powerlink's improved performance over the previous nine years.

AER preliminary position

The AER noted Powerlink's arguments concerning the inherently increased risk of a large outage on its network due to its long and skinny characteristics. The AER also considered Powerlink's performance over its current regulatory control period under the guidelines.

The AER considered that Powerlink's performance over the previous regulatory control period warranted lower thresholds for the loss of supply frequency parameter. Given that Powerlink had exhibited similar performance to other TNSPs, the AER proposed thresholds of 0.05 and 0.30 system minutes on the basis that these thresholds would encourage improved performance for Powerlink.

Powerlink submission

Powerlink disagreed with the AER's proposed reductions to the loss of supply thresholds to 0.05 and 0.30 system minutes. Powerlink stated that it does not represent meaningful incentives on Powerlink's geographically sparse Queensland grid.

Powerlink stated that the AER was pursuing a one size fits all approach that does not account for the higher likelihood of an outage occurring on Powerlink's radial network. Powerlink provided the AER with a University of Queensland report[2]

---

[2] Powerlink, *Investigations into the Reliability of Meshed versus Extended Transmission Systems*, University of Queensland

highlighting the higher likelihood of an outage on a radial network (such as in Queensland) as opposed to a meshed network (such as in Victoria).

Powerlink stated that "*thresholds need to be set greater than the size of the majority of LOS events for the Queensland grid.*"[3] Powerlink stated that this is justified based on the radial nature of the network and the loss of larger less well connected loads resulting in comparatively high system minute events for Queensland compared to other NEM TNSPs.

Powerlink further supported its proposed thresholds on the basis of the severity index (which Powerlink states is akin to the loss of supply parameter) used in the University of Queensland report. The severity index is 2.5 times higher for Queensland than it is for the Victorian transmission network. On this basis Powerlink stated its thresholds should be 2.5 higher than those for the Victorian TNSP, i.e. 0.125 and 0.75 system minutes.

Powerlink further supported its arguments for higher thresholds by stating that a number of direct connect customers with loads greater than 100MW will be connecting to the Powerlink network. These load connections will increase the maximum electricity demand on the transmission system. Therefore the number and magnitude of loss of supply events may increase with the increased amount of large load blocks connected to the periphery of Powerlink's network. As such, potential additional direct connections need to be accounted for in the loss of supply parameter thresholds.

Powerlink stated that events at the 0.05 system minutes are likely to be beyond the reasonable control of Powerlink, based on the following:

- Powerlink considers that the absolute minimum level for controlled outages is 0.06 system minutes, as:
    - the National guideline for manual reclosing of high voltage apparatus following a fault operation (ENA guidelines),[4] which sets out the minimum industry standards for the safe manual reclosing of high voltage electrical apparatus following a network fault, provides that a manual reclose should not occur until 15 minutes after the failure of an auto-reclose event.
    - Powerlink's average loss of supply event is 34 MW.
- Only 65 per cent of all feeders have auto reclose equipment installed. Of these half (or 32.5 per cent of total loss of supply events) have outage durations equal to or greater than 15 minutes.

Therefore, Powerlink concluded that it cannot control a significant number of events greater than the AER's proposed loss of supply threshold of 0.05 system minutes.

---

3 Powerlink, *Response to the AER Explanatory Statement on Powerlink's proposed service target performance incentive scheme: 1 July 2012 to 30 June 2017 regulatory period*, pp. 10

4 Energy Networks Association (ENA), ENA NENS 07-2006: National Guideline for Manual Reclosing of High Voltage Apparatus Following a Fault Operation, section 6.3

AER consideration

The AER considers, on balance, that a moderate loss of supply (x) threshold at 0.10 system minutes and a large loss of supply (y) threshold at 0.75 system minutes will provide Powerlink with the appropriate incentives to improve performance under this parameter. The AER has reached this view for the following reasons.

Moderate (x) threshold

The AER considers that a threshold of 0.10 system minutes, rather than the 0.15 system minutes proposed by Powerlink, is appropriate.

Reasons for adopting a 0.10 system minute threshold

The aim of the moderate loss of supply event frequency sub-parameter is to minimise the total number of controllable loss of supply events. Therefore the threshold for the moderate (x) loss of supply needs to be set at a level at which loss of supply events can be controlled.

Following the AER's preliminary position to adopt a 0.05 system minute threshold, Powerlink derived an 'absolute minimum' level of controllable loss of supply of 0.06 system minutes. This 'absolute minimum' is based on its operating requirements for manual reclose of 15 minutes and average lost load of 34MW, and represents an average based on Powerlink's historical operational performance. The AER regards Powerlink's 'absolute minimum' to be a level of performance that would only be achievable if a loss of supply event occurred and no further issues were required to be rectified before manual reclose could be initiated.

Due to the radial nature and sparse geographic region supported by Powerlink's network, it is appropriate to set the threshold higher than the absolute minimum of 0.06 system minutes as calculated by Powerlink. The threshold should be set at a reasonable level above the minimum controllable loss of supply threshold, in order to allow Powerlink to rectify a loss of supply event that is reasonably greater in duration and/or magnitude than an average event. Therefore a threshold a reasonable level above 0.06 is appropriate.

Powerlink's 2006 to 2009 historical performance for thresholds from 0.01 to 0.20 system minutes is set out in table 1 below.

Table 1: Powerlink's historic performance with exclusions from 2006 to 2009 against various thresholds for the moderate (x) LOS event threshold

Performance Summary	2006	2007	2008	2009	Average
< 0.20 System Minutes	2	2	2	2	2
< 0.19 System Minutes	2	3	2	2	2
< 0.18 System Minutes	2	3	3	2	3
< 0.17 System Minutes	2	4	3	2	3
< 0.16 System Minutes	2	4	4	3	3
< 0.15 System Minutes	2	4	4	3	3
< 0.14 System Minutes	2	4	4	3	3
< 0.13 System Minutes	2	4	4	3	3
< 0.12 System Minutes	3	4	4	3	4
< 0.11 System Minutes	3	4	4	3	4
< 0.10 System Minutes	3	4	5	3	4
< 0.09 System Minutes	3	4	5	3	4
< 0.08 System Minutes	4	4	5	4	4
< 0.07 System Minutes	5	4	5	4	5
< 0.06 System Minutes	6	4	5	4	5
< 0.05 System Minutes	6	4	6	5	5
< 0.04 System Minutes	7	6	9	5	7
< 0.03 System Minutes	8	7	12	5	8
< 0.02 System Minutes	9	8	13	7	9
< 0.01 System Minutes	9	9	21	8	12

Source: AER calculations using Powerlink data

The shading in the table represents different ranges of thresholds within which the average number of events is the same.[5] It is reasonable to expect that Powerlink will have the same capacity to control events within each range, as they each produce the same number of events. Therefore, it is reasonable to expect that Powerlink will be:

- unable to always exert control on the number of events in the 0.05 to 0.07 system minute range (the range in which Powerlink's absolute minimum controllable loss of supply event threshold of 0.06 exists).
- able to exert control on the number of events in the 0.08 to 0.12 system minute range (4 events on average with 3 to 5 events per year historically) as this range is above the minimum threshold; and
- able to exert control on events in the 0.13 to 0.18 system minute range (3 events on average with 2 to 4 events per year historically) as this range is well above the minimum threshold.

The 0.08 to 0.12 system minute range, which results in an average number of 4 events, will provide a greater incentive to improve performance than the 0.13 to 0.18

[5] The range 0.01 to 0.04 system minutes is not considered appropriate as it is below Powerlink's absolute minimum of 0.06 system minutes.

system minute range, which results in an average of just 3 events. Therefore the range of 0.08 to 0.12 system minutes is the most suitable range from which to select an appropriate threshold.

The AER considers the most appropriate threshold to incentivise improved performance would be the mid-point of this range at 0.10 system minutes. The AER considers that the 0.10 system minute threshold would balance the higher risk of a loss of supply event on Powerlink's radial network, with the need to incentivise Powerlink to minimise the number of controllable loss of supply events.

Reasons for rejection of a 0.15 threshold

The AER rejects Powerlink's proposed 0.15 system minute threshold for the following reasons:

- Powerlink provided only limited information about how the proposed threshold was derived, and provided no specific reasons as to why 0.15 system minutes should be adopted;

- a threshold of 0.15 system minutes would likely have a lower target and therefore create a lower incentive to improve performance than at the 0.10 system minute threshold;

- although the AER does not accept that the severity index is sufficient to justify a specific threshold, even if it was accepted as valid, the severity index derives a threshold of 0.125 i.e. lower than the 0.15 proposed by Powerlink.

Large loss of supply (y) threshold

With respect to the large loss of supply event frequency sub-parameter, the aim is to minimise:

- the number of large (y) threshold events; and

- the magnitude of each controllable large (y) loss of supply event.

In addition the AER considers that the large (y) loss of supply event threshold for each TNSP can either be set to incentivise the TNSP to minimise:

- the number of large outages that occur based on its performance level; or

- the magnitude of the largest outages that can occur on its transmission system.

The AER has generally set the large (y) loss of supply event threshold to reduce the number of large loss of supply events that occur. Powerlink stated it was also aiming to minimise the magnitude of large events.

Powerlink provided further information to support its application of the alternative interpretation of the large loss of supply incentive. This information indicated that:

- due to the nature of Powerlink's radial network, there is a greater likelihood of a large system minute outage occurring on Powerlink's network

- the future load increases expected by Powerlink, with a large number of new direct connect customers, will increase demand and therefore the potential size of outages on its radial network.

On the basis of the further explanation of Powerlink's proposed approach, the AER supports Powerlink's proposal to incorporate a large loss of supply event threshold at 0.75 system minutes. The AER considers this will incentivise Powerlink to control large outages on its network. The AER notes that this interpretation of the large (y) threshold has implications for targets and weights to be set during Powerlink's next revenue determination.

While the AER has accepted Powerlink's proposed 0.75 system minute threshold the AER does not consider the parallels Powerlink has drawn concerning the severity index and the loss of supply parameter to be appropriate. While the AER considers that the severity index result is consistent with a radial network not having the redundancy that normally exists in a meshed transmission system, it does not accept that a loss of supply threshold for a radial network should be 'x' times greater than one for a meshed network.

4.1.3 Market impact of transmission congestion

The AER developed the MITC parameter to incentivise TNSPs to value the minimisation of disruptions on each TNSPs respective transmission network that can affect the spot price. Under this parameter the financial reward increases as the total number of dispatch intervals, where an outage on a TNSP's network results in a network outage constraint with a marginal value greater than $10/MWh, decreases.

Powerlink proposed that for outages that can affect embedded generation, i.e. generation connected to the transmission system through the distribution system, responsibility should be shared with the DNSP providing the connection. That is, if a DNSP and a TNSP take an outage at the same time, on a circuit connected to an embedded generator, this outage should only account for half of the total dispatch interval count to the TNSP in recognition of the shared responsibility for the outage with the DNSP. Powerlink stated this would result in a decrease in the total number of outages caused by both the TNSP and DNSP as they now share responsibility for them. This would increase the financial reward to the TNSP under this parameter.

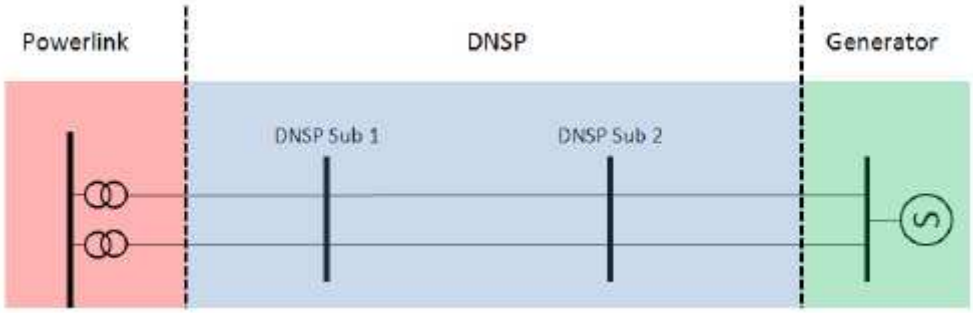
AER preliminary position

The AER stated in its explanatory statement that the inclusion of this amendment will increase, or at best not decrease, the number of disruptions affecting embedded generators. While the TNSP has an incentive to cooperate under the scheme to reduce the number of disruptions that effect embedded generation, the DNSP has no or at best a weak incentive to co-operate. On this basis the AER requested Powerlink demonstrate that this exclusion would result in a reduction in the total number or duration of outages.

Powerlink submission

Powerlink provided the AER with an example of a situation in which an embedded generator can become constrained due to an outage on a distribution system linked to an embedded generator. This can be seen in Figure 3 below.

Figure 3 – Embedded Generator Connection back to Powerlink's substation



Source: Powerlink, Response to the AER Explanatory Statement on Powerlink's proposed Service Target Performance Incentive Scheme: 1 July 2012 to 30 June 2017 regulatory period, 21 January 2011, pp15

In this situation Powerlink stated that if it had a shared exclusion with the DNSP connected to the embedded generator, it has an incentive to minimise the disruption under the MITC parameter to the embedded generator.

Powerlink further stated that "*an MITC incentive scheme does not currently apply for DNSPs. However, an outage taken by the DNSP on its network (shown in blue in Figure* [3]*) has the same potential to impact the market as an outage at Powerlink's substation.*"[6] Powerlink further stated that *"[a]n efficient DNSP or TNSP would not take a network outage unless work (be it maintenance or capital replacement/augmentation) is required on the system. The key reason is that unnecessary outages will impact circuit availability and put the network at unnecessary risk.*"

AER consideration

The AER considers that the situation Powerlink described is feasible. The AER is aware of at least three embedded generators within Queensland to which the situation could apply.

The MITC parameter was originally developed and incorporated in the March 2008 version of the scheme when no embedded generation existed in the NEM. As such the original scheme was not designed to incorporate the market impact component on embedded generation.

The AER does not consider a mechanism for sharing outages under the MITC to be appropriate at this stage. The AER considers this mechanism is not appropriate if the DNSP has no strong incentive to minimise the outages affecting scheduled embedded generation. A DNSP may take an outage at the same time as the TNSP but also take additional outages as it deems appropriate to rectify issues on its network. In this way outages will not be minimised for scheduled embedded generation and the proposed exclusion will not achieve its intended result under the market impact parameter.

The AER also considered incentives that a DNSP may have under a connection agreement with the embedded generation. They are:

---

6 Powerlink, Response to the AER Explanatory Statement on Powerlink's proposed Service Target Performance Incentive Scheme: 1 July 2012 to 30 June 2017 regulatory period, 21 January 2011, pp16

- the connection agreement between the DNSP and embedded generator; and
- the TNSP's role under Rule 11.30.2 to plan network outages and inform the network outage schedule.

The AER understands that DNSPs providing connections to embedded generation provide the same non-firm connection agreements provided by transmission businesses. Therefore the AER considers only a weak incentive is applied to DNSPs to encourage them to minimise outages to embedded generation under the connection agreement.

The AER also considered Powerlink's obligation under the NER to ensure planned outages on the distribution and transmission network are performed concurrently. Under clause 11.30.2(i)(2) of the NER the network outage schedule is not binding and only represents a TNSPs current intention and best estimates in regard to planned network outages. As such the AER considers, at this time, that a DNSP's incentive to minimise outages in conjunction with a TNSP are not strong enough to result in a reduced number of outages.

The AER considers that the proposed exclusion is unlikely to result in a reduced number of outages and therefore concludes that the exclusion should not be adopted. In future the AER may consider the application of the MITC to DNSPs. If the application of the MITC is extended to DNSPs, this amendment may then be appropriate.

4.2 Other minor amendments

AER consideration

TransGrid average outage duration exclusion amendment

TransGrid notified the AER[7] of an inconsistency in the application of the scheme to TransGrid. The AER considers that the exclusion text in appendix B for TransGrid under parameter 3—Average outage duration should read:

"*outages for capacity banks and reactors operating less than 66kV*"

instead of

"*outages for capacitor banks and reactors operating at 66kV*"

The AER has amended the scheme accordingly.

Amendment to account for Competition and Consumer Act

The AER has made amendments to the text of the scheme to account for the introduction of the *Competition and Consumer Act* which replaces the *Trade Practices Act*. These amendments do not alter the operation of the scheme.

---

[7] TransGrid, *FW: TransGrid – 2010 STPIS Compliance Review – Template*, email dated 17 December 2010

5 AER Final Decision

The AER has published the final service target performance incentive scheme at appendix A in accordance with the consultation procedures in clause 6A.20(e) of the NER.

Appendix A – Service Target Performance Incentive Scheme

Appendix B – Summary of Issues

The following table sets out a summary of amendments to the scheme outlined in the AER's explanatory statement. Where submissions did not raise issues with proposed amendments, the AER has adopted its preliminary position in the final decision.

Issue	Powerlink's August Proposal	AER Explanatory Statement	Powerlink's Response to the Explanatory Statement	AER Decision
Transmission Circuit Availability Parameter – sub parameter amendment	Powerlink proposed changes to the sub-parameters of peak period, critical and non-critical circuit to transmission lines, transformers and reactive plant.	The AER raised concerns with the loss of a peak period availability parameter.	Powerlink proposed a peak circuit availability parameter discussed in section 4.1.1 of this decision.	Accept Powerlink's proposed sub-parameters of transmission lines, transformers and reactive plant, together with the peak circuit availability parameter.
Loss of Supply	Powerlink proposed the addition of "the period of the interruption starts when a loss of supply event occurs and ends when Powerlink offers supply restoration to the customer" to the definition of the loss of supply parameter.	The AER considered that this amendment was appropriate.	Powerlink agreed to the AER's preliminary position.	Accept amendment.
Loss of Supply	Powerlink proposed the addition of "an interruption> y system minute(s) also registers as a >x system minute(s) event" to the definition of the loss of supply parameter.	The AER considered that this amendment was appropriate.	Powerlink agreed to the AER's preliminary position.	Accept amendment.

Issue	Powerlink's August Proposal	AER Explanatory Statement	Powerlink's Response to the Explanatory Statement	AER Decision
Loss of Supply	Powerlink proposed loss of supply event frequency thresholds from 1.0 to 0.75 system minutes for the large (y) threshold and 0.2 to 0.15 systems minutes for the moderate (x) threshold.	The AER's analysis of Powerlink's performance suggested thresholds of 0.30 and 0.05 system minutes were appropriate.	Powerlink proposed loss of supply thresholds of 0.75 and 0.15 system minutes discussed in section 4.1.2 of this decision.	Amend thresholds to 0.75 system minutes (y) and 0.10 system minutes (x).
Average Outage Duration – definitional amendment	Powerlink proposed an interval mean based on the average of events from the 5^{th} to the 95^{th} percentile.	The AER did not consider the adoption of this approach would be appropriate as it would remove controllable events from the incentive.	Powerlink agreed to the AER's preliminary position.	Reject amendment.
Average Outage Duration – definitional amendment	Powerlink proposed the addition of a third party exclusion in the outage duration definition	The AER considered that a third party outage definition was appropriate to this parameter.	Powerlink agreed to the AER's preliminary position.	Accept amendment.
Market Impact of Transmission Congestion – exclusion amendment	Powerlink proposed changes to the MITC definition to allow the equal apportioning when a TNSP coordinates outages with a DNSP.	The AER did not consider this exclusion appropriate as it offered no incentive to the DNSP to minimise the market impact of its outages. Therefore it was unlikely a market benefit would eventuate from this exclusion.	Powerlink proposed the same change to the MITC definition and supplied further supporting information. This is discussed in section 4.1.3 of this decision.	Reject amendment.
Other exclusion amendments	Powerlink proposed the removal of the third party event examples "e.g. Intertrip signal, generator outage, customer installation" on the basis sufficient precedent exists to inform this exclusion.	The AER did not consider this exclusion amendment to be appropriate and that no valid argument had been made to remove it.	Powerlink agreed to the AER's preliminary position noting the example list is not exhaustive.	Reject amendment.

Issue	Powerlink's August Proposal	AER Explanatory Statement	Powerlink's Response to the Explanatory Statement	AER Decision
Other exclusion amendments	Powerlink proposed to exclude capacitor banks in off-peak months (April to October) for the Availability and Average Outage Duration parameters.	The AER considered this exclusion was appropriate on the basis of usage information provided by Powerlink. The AER further noted this exclusion would need to be reconsidered in future to ensure it remained valid.	Powerlink agreed to the AER's preliminary position.	Accept amendment.
Other exclusion amendments	Powerlink proposed the addition of an "Under Frequency Load Shedding caused by third party events" exclusion for all parameters.	The AER did not consider this exclusion was appropriate.	Powerlink agreed to the AER's preliminary position noting the clarity provided by the Explanatory Statement.	Reject amendment.
Other exclusion amendments	N/A	The AER proposed a number of amendments to parameter definitions to address legacy text and provide consistency in wording across TNSPs.	Powerlink agreed to the AER's preliminary position.	Accept amendments.