16 October 2012

Mark Wilson
Director
Wholesale Markets
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Dear Mark,

SP AusNet Submission – Draft Service Target Performance Incentive Scheme

SP AusNet welcomes the opportunity to make this submission in response to the AER's Draft Service Performance Target Incentive Scheme.

SP AusNet strongly supports the use of incentives to efficiently improve the reliability of TNSPs to the benefit of customers. SP AusNet considers that in general the AER's draft STPIS will provide effective incentives to align the performance of TNSPs with the public interest during the forthcoming regulatory periods.

This submission outlines SP AusNet's views on the proposed amendments to the STPIS. Under Victoria's jurisdictional arrangements, SP AusNet uniquely does not plan the transmission network. Therefore this submission considers the draft scheme in the context of the Victorian arrangements. In addition, SP AusNet has provided commentary on our experiences participating in the Market Impact Component (MIC) of the STPIS. This outlines two particular issues – swamping of the scheme by congested areas of the network and the connection of assets associated with the provision of non-prescribed services – where minor changes and/ or clarifications could improve the operation of the MIC. Solutions are proposed and discussed.

SP AusNet also supports the submission made by Grid Australia.

If you have further questions regarding this submission, please contact Charlotte Coster on 9695 6309.

Yours Sincerely,

Alistair Parker
Director, Regulation and Network Strategy

SP AusNet's Submission on the Draft Service Target Performance Incentive Scheme

1. Introduction and Background

This submission responds to the AER's proposed amendments to the Service Target Performance Incentive Scheme ('the scheme'). SP AusNet supports the scheme's objectives and the need for it to change over time, to continue to provide incentives to businesses to improve the performance of their networks. Many of the proposed changes should enhance these incentives, although there is a need for some further refinement and clarification.

SP AusNet has participated in the Service Component of the AER's STPIS since the scheme's inception, and has achieved significant improvements in reliability. SP AusNet requested early application of the Market Impact Component, which has applied since August 2011.

SP AusNet proposed amendments of the STPIS to the AER on 31 May 2012. While the AER's Draft Decision takes a different direction to that proposed by SP AusNet, the AER's proposed scheme does address a number of the key concerns raised in relation to the existing scheme.

SP AusNet supports Grid Australia's submission on the draft scheme. As SP AusNet will be the first Transmission Network Service Provider (TNSP) to participate in the Revised STPIS, it has a strong interest in ensuring that the scheme is 'ready to go'. Hence, issues of the practical implementation of the scheme, together with consideration of the unique issues that arise in Victoria due to the State's arrangements for Transmission planning, are the focus of this submission.

2. Service Component

SP AusNet is broadly supportive of the new parameter definitions proposed for the Service Component and agrees that they target measures of performance that are likely to be valued by customers.

The changes proposed by the AER have the general effect of narrowing the focus of service performance measurement to events which are more infrequent and, hence, have a more volatile distribution. The AER will need to be mindful of this when setting targets, caps, collars and weightings for these parameters to provide an incentive to improve performance that is not repeatedly swamped by 'random' variation.

Nonetheless, narrowing the focus of the Service Component is appropriate following the first phase of the scheme which has successfully delivered improved performance and generally stabilised performance against existing measures.

The two Service Component parameters for which substantial changes are proposed (Average Circuit Outage Rate parameter and the Average Outage Duration parameter) are discussed below.

2.1. Average Circuit Outage Rate Parameter

The AER propose amendments to the 'Transmission Circuit Availability parameter', to be replaced with the 'Average Circuit Outage Rate parameter'.

SP AusNet supports the AER's proposal for this parameter to focus on unplanned outages only. The frequency of unplanned outages is an effective indicator of long-term network health, and reducing this frequency should promote the improvement or maintenance of network reliability. In addition, the Market Impact Component of the scheme will continue to provide incentives to minimise the market impact of planned outages on the shared network.

However, excluding planned outages has significantly reduced the number of incidents that this parameter relates to. Preliminary internal data analysis has shown that the parameter has the potential to be relatively volatile, particularly the transformer and reactive plant components. This could present difficulties when setting a meaningful target. Calculating performance using a rolling average of previous years could reduce this volatility.

SP AusNet agrees that it is sensible to weight forced outages as zero for an initial period, to allow consistent data to be accumulated.

Definitional Issues

The proposed definition for forced outages contains the qualification that 'less than 24 hours notification was given to affected customers'. SP AusNet does not always notify end customers of forced outages, but notifies AEMO and/or the affected customers. The definition should be amended accordingly.

2.2. Average Outage Duration Parameter

This parameter previously measured the average duration of all forced and fault outages for transformers and lines. The draft STPIS proposes that this should apply only to loss of supply events, for single and multi-circuit assets.

The small number of events that will now be captured by this parameter is prohibitive to its success. Loss of supply events are infrequent; only a handful of events occur on the network each year. They also vary widely in duration from a few minutes to several minutes, depending on the unique circumstances of the outage, including the location and cause of the incident. Because of this, the average annual duration for loss of supply incidents varies significantly year to year. In addition, a single incident can significantly impact performance against the target. The AER notes the small number of events may be a weakness of this parameter in the Explanatory Statement, and proposes to re-assess the parameter's effectiveness during the next review.

Internal data analysis carried out to assess expected performance against this parameter has highlighted the volatility of this parameter. Between around 2 and 10 relevant loss of supply incidents have occurred annually since 2006. While the analysis was only indicative as clarity is needed in the definitions for single and multi-circuit assets, the standard deviations of the average outage durations for single and multi-circuit assets equalled 33 minutes in both cases, for the years 2006 to 2011 inclusive. Comparing this with the average outage duration for multi-circuit assets of between 30 and 40 minutes for these 7 years demonstrates the high volatility of performance.

SP AusNet considers that previous performance has been too volatile to base a meaningful target on. In addition, there are already strong incentives to minimise the outage duration associated with loss of supply events. The loss of supply event frequency parameter places an incentive on reducing the number of loss of supply system minutes. There are also reputational incentives particularly in the transmission network where such an event is likely to affect a large number of customers. During a loss of supply event, every reasonable step is already taken to restore supply to customers as quickly as possible. Therefore, the extra benefit associated with the financial incentive provided here is likely to be marginal at best.

Asset Categories

SP AusNet supports the principle behind differentiating between outages by redundancy level through classifying assets into single and multi-circuit assets. However, as under the Victorian arrangements SP AusNet does not undertake planning for the transmission network, SP AusNet is unable to respond to the parameter by changing the level of redundancy in the network.

In addition, the division of the already small number of loss of supply events into two categories increases the parameter's volatility. Therefore, this division should not be enforced in every jurisdiction.

Definitional Issues

SP AusNet supports the requests for clarification of the definitions for single and multi-circuit assets outlined in Grid Australia's submission.

2.3. Proper Operation of Protection and Control Equipment

SP AusNet supports the inclusion of the proposed Proper Operation of Protection and Control Equipment parameter in the scheme. There is potential for these incidents to impact customer supply, and as such, it is appropriate to incentivise the reduction of these events.

SP AusNet has reliable historic data on the number of events that have occurred for each of the three sub-parameters proposed, namely:

- Failure of protection systems
- Material failure of SCADA
- Incorrect operational isolation of primary or secondary equipment

SP AusNet considers it may be in a position to seek early application of this parameter. However, it acknowledges that not all TNSPs will have consistent and robust data to allow them to participate. SP AusNet requests that TNSPs be given the option to adopt this parameter from the start of the next regulatory period. This could be set at 0.2% of the MAR, consistent with the lowest parameter weighting in the proposed scheme (for Average Outage Duration) reflecting that the parameter is new and untested.

Applying a financial incentive to this parameter as soon as the new scheme applies enables any benefits associated with performance improvement to be realised sooner than would otherwise be the case. Where data sufficient to set a target exists, it is appropriate to link the parameter to a financial incentive straight away. This will create a stronger

incentive for improvement during the next regulatory period than would a reporting only parameter.

3. Market Impact Component

SP AusNet welcomes the continued asymmetry of the Market Impact Component (MIC) parameter, particularly as the MIC is still in its early stages of operation. Also, as the AER states, market outcomes are unpredictable and, therefore, it may not be appropriate to expose TNSPs to a potentially large financial penalty. SP AusNet did not achieve a bonus during the first year of participation in the MIC, and has identified circumstances that can result in large MIC penalties, which SP AusNet has limited ability to avoid. This is the case where maintenance is required on congested parts of the network.

SP AusNet supports the use of rolling averages to calculate the performance target and performance measures. This methodology provides TNSPs with a stronger incentive to achieve continuous improvement for the duration of the regulatory period. In addition, the use of relatively recent performance data will better reflect current network conditions.

However, using just three years of performance data to set the performance target increases the likelihood that infrequent, large-scale projects such as generator connections will not be included in the target. The connection of the Tarrone Terminal Station into SP AusNet's network is an example of such a project (see Attachment for details).

The Attachment outlines two operational aspects of the MIC that SP AusNet requests should be considered as part of this review, namely that the scheme can be swamped in congested parts of the network, and exempting the connection of non-prescribed services.

4. Interaction of the STPIS with the AIS

While the draft STPIS resolves conflicting incentives within the scheme, conflicting incentives remain for SP AusNet due to its participation in AEMO's Availability Incentive Scheme (AIS). The AIS seeks to ensure the availability of transmission assets that are most important for securing energy supply to customers. However, as described in SP AusNet's submission of 31 May 2012, for some assets the incentives provided by the AIS conflict with the signals provided by the MIC. This is because for many assets the AIS assigns a lower value to asset availability during off peak times, whereas it is during these off peak times that market constraints are more likely to occur, potentially leading to reduced MIC revenue when outages are taken during off peak hours. The overlapping operation of the two schemes blunts the incentives associated with both schemes.

The proposed Service Component in the draft STPIS incentivises the availability of transformers, lines and reactive plant through reducing the number of fault and forced outages. Where these assets are also subject to the AIS, the incentives provided by the Service Component and the AIS reinforce each other.

Because the current AIS conflicts with the MIC and duplicates the Service Component of the STPIS, SP AusNet is seeking to rationalise the incentive schemes operating in Victoria. The AIS has been extremely effective in incentivising availability improvements during the current and past regulatory periods, particularly during peak periods. However, the draft STPIS has been developed by the AER as a comprehensive incentive scheme to apply to all TNSPs, and SP AusNet does not see additional public benefit in continuing to participate in the AIS into the next regulatory period. Indeed, where conflicting incentives

are created this detracts from the public benefit and achievement of the National Electricity Objective.

As outlined in its 31 May 2012 submission, SP AusNet's preferred outcome is to cease the operation of the AIS. This will be subject to the outcome of discussions with AEMO, which are still in early stages.

5. Network Capability Improvement Parameter

SP AusNet supports the inclusion of this parameter in the STPIS. This parameter provides an allowance for TNSPs to implement approaches to significantly improve the capability of the network at a low cost.

In participating in this parameter, SP AusNet will be able to identify a selection of projects to improve the limits of various points of the transmission network. However, due to the different network planning arrangements in Victoria compared to those in other jurisdictions, SP AusNet will be limited in the types of projects that can be proposed.

SP AusNet's transmission licence specifies that SP AusNet must not augment the transmission system except:

- In accordance with Essential Services Commission guidelines
- Pursuant to a network agreement with VENCorp, or a connection agreement with a distributor, generator or customer.

To enable SP AusNet to undertake the full range of projects that are incentivised and funded by this parameter, an additional exception could be included to allow SP AusNet to carry out minor augmentation works subject to a total cost threshold which could be set at 1% of Maximum Allowed Revenue per annum, consistent with maximum expenditure under the proposed parameter.

In addition, AEMO, as the planner of the Victorian transmission network, would be the most appropriate body to undertake the whole-of-network study of the limits for each transmission circuit or load injection point. SP AusNet does not have access to data or tools required to undertake this study in a detailed way. For example, SP AusNet could identify where limits are caused by the thermal capability of the network, but not where the limits are caused by voltage or dynamic stability.

Quantifying the likely benefits of these projects will be problematic, as SP AusNet is not the network planner and, therefore, does not carry out market impact studies related to the transmission network.

SP AusNet notes this problem would also be solved if the planning recommendations from the Transmission Frameworks Review were implemented in Victoria.

6. Proposed Transitional Arrangements for the AEMC's '*Economic Regulation of Network Service Providers'* Rule Change

While not raised in the AER's Discussion Paper, the proposed transitional arrangements under the AEMC's '*Economic Regulation of Network Service Providers'* rule change could affect the scheme's operation.

It is currently proposed that TNSPs (expect ElectraNet) will be subject to an interim determination for a period of one year. The AEMC intends not to apply an incentive scheme as part of the interim determination.

SP AusNet strongly supports the continued application of the STPIS during the interim year (if this approach is adopted) to mitigate operational discontinuities which may arise. The benefits of the scheme continuing to apply far outweigh the cost of applying the scheme during the interim year.

SP AusNet agrees the hybrid approach proposed in Grid Australia's submission should apply for the interim year.

Attachment – Market Impact Component

1. Introduction

The AER's STPIS review provides SP AusNet with an opportunity to provide further commentary on the MIC scheme. SP AusNet has participated in the MIC scheme since August 2011 and has not previously provided reflections on the scheme's workings as an active participant.

To date, SP AusNet has found that the scheme effectively provides incentives to plan outages to minimise market impacts, and that the business is able to respond to those incentives to improve its performance and deliver benefits to market participants. SP AusNet is also learning that there are certain events and circumstances that have the potential to distort the scheme such that it no longer achieves a socially optimal outcome.

The examples below illustrate the impact of two such circumstances. These are related to:

- Swamping of the MIC by few generators; and
- Connection of non-prescribed assets.

Proposed solutions are also presented.

2. Swamping of the MIC by a few Generators

Performance against the MIC is measured by the total number of Dispatch Intervals (DIs) for which an outage caused a network constraint with a marginal value greater than $10/MWh. Simultaneous constraints caused by a single outage each contribute to MIC performance. This approach is a practical way to approximate the overall market impact of outages taken by a TNSP, and works well where congestion within a network is reasonably homogenous. While SP AusNet recognises the need for simplicity in the scheme's design, there are circumstances where the financial incentive for a TNSP to avoid an outage is not well-aligned to the likely market impact of the potential outage.

In a network where base load generation is connected into infrastructure that is already congested, the incentives provided by the MIC to avoid constraining a few base load generators are disproportionately high compared to the likely market impact. In these circumstances a single outage often simultaneously constrains multiple generators, as it is unlikely all the associated generators will be off at the same time. The congestion implies there is a high chance the marginal value of the constraint will exceed $10/MWh at any time an outage is taken, even where the quantity of energy constrained is small. Therefore carefully scheduling the timing of outages is unlikely to have a significant impact on MIC performance.

The incentives provided by the MIC in these specific circumstances can appear perverse. Constraining multiple generators by just a small amount (e.g. as low as 1MW) in congested areas of the network has the potential to result in a multiple of the number of DIs as constraining the VIC – NSW interconnector by 1400MW.

The potential MIC revenue that is foregone by constraining base load generators in congested parts of the network at any time effectively provides 'semi-firm' access rights to these generators, funded by the MIC and not by generators themselves.

2.1. Example

The conditions described above exist on SP AusNet's network following the recent connection of Mortlake Power Station (MOPS) and Macarthur Wind Farm (MCWF) into the HYTS – APD 500kV No 1 line. This part of the network is congested, partly by the SA interconnector assets. In addition, local generators must be constrained during SP AusNet outages due to unbalanced voltage limitations.

The connection of these two generators has substantially changed the potential count of constrained DIs incurred under the MIC during outages on most of the major South Australian connection assets including the HYTS – APD No 1 line and the HYTS – MOPS lines. This change is illustrated in the following table:

Element	Without MOPS or MCWF bidding[1]	With MOPS and MCWF bidding[2]
HYTS – APD No 1[3] or MLTS – TRTS	2/hr	12-24/hr
HYTS – MOPS[4] or HYTS – TRTS	3/hr	12-24+/hr

Under these conditions up to 240 DIs could be incurred under the MIC for a typical daily 10 hour outage. This is a significant proportion (12%) of SP AusNet's five year average (and current MIC target) of 2072 constrained DIs for a single daily outage. SP AusNet's entire target can be exceeded in just over eight daily outages in this part of the network.

Given the potential for relatively few outages on a small number of localised assets to exceed the MIC target, and hence dominate MIC incentives for SP AusNet's entire network, SP AusNet considers that the balance of the scheme should be corrected.

An option would be to increase the performance target to reflect new network conditions. Typically around 10 days outages per year would be required. As up to 240 DIs could be incurred for a typical daily outage, this would require the annual target to be increased by around 2,400 DIs. The adjusted annual target would be around 4,400 DIs – more than double the current target.

If this approach is adopted, more than 50% of the performance target would relate to managing the impact of outages on MOPS and MCWF. This is not proportionate to the potential market impact of the outages, particularly as the total energy constrained can be as low as 1MWh, yet 240 constrained DIs per day can still be incurred.

[1] Historical benchmark - Typical dispatch (DI) count per hour during off-peak periods
[2] Likely constrained DIs in addition to those incurred under previous network conditions. See AEMO "VICTORIAN TRANSFER LIMIT ADVICE – VOLTAGE UNBALANCE IN VICTORIA" 31 August 2012.
[3] An outage of the HYTS – APD 500kV No 1 line typically restricts Mortlake Power Station to less than one unit (12 DIs/hr), and restricts Macarthur Wind Farm to zero (12 DIs/hr). Based on current bidding levels, the expected marginal value of this constraint is greater than $10/MWhr.
[4] An outage of the HYTS – MOPS 500kV restricts Mortlake Power station to about 100MW (12 DIs/hr) and to enable Mortlake to run, the SA – VIC interconnector is forced to send power from SA to VIC. This in turn invokes further Frequency Control Ancillary Services (FCAS) constraints. See AEMO Market Event Notice Pricing Event Report 7 June 2012.

In effect, this adjustment would mean that more than 1% of Maximum Allowed Revenue could be awarded to SP AusNet to restrict the number of outages that constrain MOPS and MCWF. This would not be in the public interest as this potential bonus would not be commensurate with the relative impact of outages constraining these assets compared with the market impact of outages that may be taken on the rest of the network.

2.2. Proposed Solution: Ring-fence Specified Assets

SP AusNet proposes that the South Australia interconnector assets (ie HYTS – APD – MOPS/TRTS – MLTS lines and terminal stations) are ring-fenced from the remainder of the SP AusNet scheme with a separate allocation based on the relative annual energy contribution of the SA interconnector. This would mitigate the liability of the SA interconnector generator constraints swamping the scheme for the rest of Victoria.

This would operate by setting a separate target for the ring-fenced assets. This target would be based on the historical performance of these assets be adjusted to reflect the recent connections of MOPS and MCWF. The target that would remain for the remainder of the scheme would be adjusted to reflect the removal of the ring-fenced assets.

SP AusNet believes this relatively simple adjustment to the calculation of MIC performance would have the following benefits:

- Maintain an operational incentive on all network assets, particularly in years when maintenance work in the most congested parts of the network result in performance in excess of the benchmark.

- Reduce the likelihood that just two generators will benefit from the scheme through effective 'semi-firm' access rights.

- Increase flexibility within the congested area as the performance of the MIC is no longer determined by this area alone.

3. Connection of Non-Prescribed Services

An equally significant consideration is the connection of new infrastructure associated with the provision of non-prescribed services. To progressively meet increasing demand in Victoria, these connections typically occur once every five years and require outages of prescribed assets for the creation of non-prescribed services to connect new generation[5]. SP AusNet wishes to confirm that these assets would be excluded under the scheme under exemption 4[6].

As SP AusNet does not undertake network planning, outages must be incurred for connection at AEMO's discretion. In Victoria, during the design of the augmentation AEMO has regard to the likely market impacts and also has the ability to penalise SP AusNet for the length of the outages, the total number of outages and for limiting when outages can be undertaken. Therefore the market impact of the connection outages is considered through this mechanism.

[5] Note that under the Victorian regime, new terminal stations for distribution customers are also likely to be contestable and in the context of the incentive scheme would also be a non-prescribed service.
[6] Under exemption 4, outages on assets providing non-prescribed services are exempt from the MIC target.

In addition, outages of prescribed assets requested by other parties building non-prescribed contestable assets are exempt from the MIC under exemption 3. Therefore, parties bidding against SP AusNet to build non-prescribed contestable assets would not factor these costs into their bid. If these outages are not exempt where SP AusNet builds the asset, such that SP AusNet would be liable for reductions in MIC revenue, SP AusNet would be at a competitive disadvantage which could inefficiently distort the outcome of the bidding process.

If included within the scheme, these infrequent connections have the ability to swamp the scheme, particularly where assets are connected into heavily congested infrastructure with multiple existing base load generation.

3.1. Example

The Tarrone Terminal Station has been built by SP AusNet on a contestable basis to enable the connection of the Macarthur Wind Farm to the network. The station has been connected into the Moorabool-Heywood 500kV No. 1 line, which requires outages with significant implications for performance against the MIC if not exempt. The last major connection of this nature was Basslink in 2003, and therefore outages associated with connections are not included in SP AusNet's MIC target.

While these new terminal stations connect into assets providing prescribed transmission services, the connection is required for non-prescribed service (a wind farm). Consistent with the MICs exemptions granted to SP AusNet by the AER for non-prescribed services in developing our benchmark, there is a strong argument for an exemption of the Tarrone Terminal Station outages.

3.2. Proposed Solution: Exemption of Connections of Non-Prescribed Services

SP AusNet proposes that outages associated with the connection of non-prescribed services should be excluded on the basis that these assets are not providing prescribed transmission services. This would be consistent with the treatment of the previous non-regulated assets.

This approach would be consistent with Powerlink's TRR where the AER states that the *'STPIS allows for outage related constraints to be excluded from the performance history if the outage is associated with assets that are not providing prescribed transmission service'.*