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Mr Sebastian Roberts
General Manager
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Australian Energy Regulator
GPO Box 520
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Dear Mr Roberts

TransGrid Submission on Draft Service Target Performance Incentive Scheme (Version 2)

Thank you for the opportunity to respond to the AER's proposed Service Target Performance Incentive Scheme (STPIS) that will apply to TransGrid's next Revenue Determination period.

TransGrid has two sections of the proposed scheme that it wishes to provide comments on:

- Appendix B relating to the threshold levels applying to the Parameter 2 Loss of supply event frequency; and
- Appendix C relating to the new market impact performance component.

TransGrid is supportive of the separate submission being provided by ETNOF and is in agreement with the comments contained in that document. As TransGrid is soon to submit its Revenue Submission for the 2009-2014 period the outcome of the current consultation process is of vital importance.

As previously discussed with the AER TransGrid has sought the assistance of SAHA International in determining appropriate threshold levels for the x and y values in Parameter 2. TransGrid has provided an amended version of Appendix B Part 4 as Attachment A. The paper prepared by SAHA International is also attached in support of TransGrid's submission.

In addition to the points raised in the ETNOF submission regarding the market impact scheme, TransGrid wishes to expand on a number of the points raised and these are provided as Attachment C.

As always TransGrid is happy to discuss or clarify any of the issues raised in this submission at your convenience. Should you have any questions on the above, please contact Andrew Kingsmill on (02) 9620 0208.

Yours Sincerely

Philip Gall 4/1/08

Philip Gall
Manager/Regulated Transmission Access

Attach.

Attachment A: TransGrid's Proposal for Appendix B, Part 4

Part 4 - TransGrid

Parameter 1	**Transmission circuit availability**
This definition applies instead of the standard definition.	
Sub-parameters	Transmission line availability Transformer availability Reactive plant availability
Unit of measure	Percentage of total possible hours available.
Source of data	TNSP outage reports and system for circuit availability
Definition/formula	Formula: $\frac{\text{No. of hours per annum defined circuits are available}}{\text{Total possible no. of defined circuit hours}} \times 100$ Definition: The actual circuit hours available for defined (critical/noncritical) transmission circuits divided by the total possible defined circuit hours available.
Inclusions	'Circuits' includes overhead lines, underground cables, power transformers, phase shifting transformers, static var compensators, capacitor banks, and any other primary transmission equipment essential for the successful operation of the *transmission system* (TransGrid to provide lists) Circuit 'unavailability' to include outages from all causes including planned, forced and emergency events, including extreme events
Exclusions	For all sub-parameters: Unregulated transmission assets Any outages shown to be caused by a fault or other event on a 'third party system' e.g. intertrip signal, generator outage, customer installation (TNSP to provide lists) Outages to control voltages within required limits, both as directed by *NEMMCO* and where *NEMMCO* does not have direct oversight of the network (in both cases only where the element is available for immediate energisation if required) *Force majeure events* Transient interruptions less than one minute For the transmission line availability sub-parameters only: The opening of only one end of a transmission circuit (eg where the transmission circuit remains energised and available to carry power with immediate manual or automatic return to service) Outages for remedial repairs to an underground power cable damaged by an external party are capped at 14 days if the external party did not enquire with 'dial-before-you-dig' or enquired and received accurate information

For the transformer availability sub-parameters only:

Auxiliary transformers

Static Var Compensator transformers (which are counted as part of the SVC)

The opening of only one or both sides of a transformer for operational purposes, such as to control losses, fault levels, incompatibility of tap changes etc but where the transformer remains available to carry power on immediate manual or automatic return to service

The period where a transformer is made available for service, but not switched in, at the end of each day of a multi-day planned outage

For the reactive plant availability sub-parameters only:

Capacitor banks and reactors operating less than 66kV

Reactive plant switched out by System Operations, or left out after repairs that make it available for service for operational purposes

Parameter 2	**Loss of supply event frequency**
This definition applies instead of the standard definition.	
Unit of measure	Number of events per annum.
Source of data	TNSP outage reports and system for circuit availability
Definition/formula	Number of events greater than 0.05 system minutes per annum Number of events greater than 0.25 system minutes per annum
Inclusions	All unplanned outages exceeding the specified impact (that is, 0.05 minutes and 0.25 minutes) Unplanned outages on all parts of the regulated transmission system Extreme events Forced outages where notification to affected customers is less than 1 hour (except where *NEMMCO* reschedules the outages after notification has been provided).
Exclusions	Unregulated transmission assets (e.g. some connection assets) Successful reclose events (less than 1 minute duration) Any outages shown to be caused by a fault or other event on a '3rd party system' e.g. intertrip signal, generator outage, customer installation Planned outages *Force majeure events* Where TransGrid protection operates correctly due to a fault on a customer's or a third party system Pumping station supply interruption Outage caused by customer's own control system during a transient voltage fluctuation

Parameter 3	**Average outage duration**
This definition applies instead of the standard definition.	
Sub-parameters	Total average outage duration
Unit of measure	Minutes
Source of data	TNSP outage reports and system
Definition/formula	Formula: $\frac{\text{Aggregate minutes duration of all unplanned outages}}{\text{No. of events}}$ Definition: The cumulative summation of the outage duration time for the period, divided by the number of outage events during the period Events will be capped at seven days.
Inclusions	Faults on all parts of the regulated *transmission system* (connection assets, interconnected system assets) All forced and fault outages whether or not loss of supply occurs
Exclusions	Planned outages Momentary interruptions (less than one minute) *Force majeure events* Any outages shown to be caused by a fault or other event on a 'third party system' e.g. intertrip signal, generator outage, customer installation, customer request or *NEMMCO* direction Outages for capacitor banks and reactors operating at less than 66kV

Attachment B

The SAHA International Report entitled:

"Service Standards Incentive Scheme: Review of data, methodology and parameters" is provided separately.

Attachment C

Detailed Response by TransGrid to Draft Service Standards Scheme, January 2008

Introduction

TransGrid acknowledges that the inclusion of a parameter in the STPIS to reflect the market impacts of transmission congestion is required under the National Electricity Rules. Whereas existing parameters of the STPIS are mature, TransGrid notes that a parameter related to transmission congestion is a new development and is unlike service incentive parameters in other jurisdictions and markets worldwide. TransGrid believes that:

- the market impact component of the scheme is one in its infancy, with outcomes that are difficult to predict and forecast;
- the market impact component of the scheme has a high degree of uncertainty and is affected by many factors outside a TransGrid's control, which is a considerable difference compared to the remainder of the scheme;
- targets should be set such that TransGrid's performance is on the sloping section of the incentive curve, for the scheme to actually provide an incentive; and
- a centralised system of data collection and provision needs to be developed over time to minimise administrative and audit costs.

1. Method for Setting Targets

The method for setting the targets is crucial to the ultimate success of this scheme. This is particularly the case given the lack of operating experience with the proposed MITC. To assist in this regard comments are offered on:

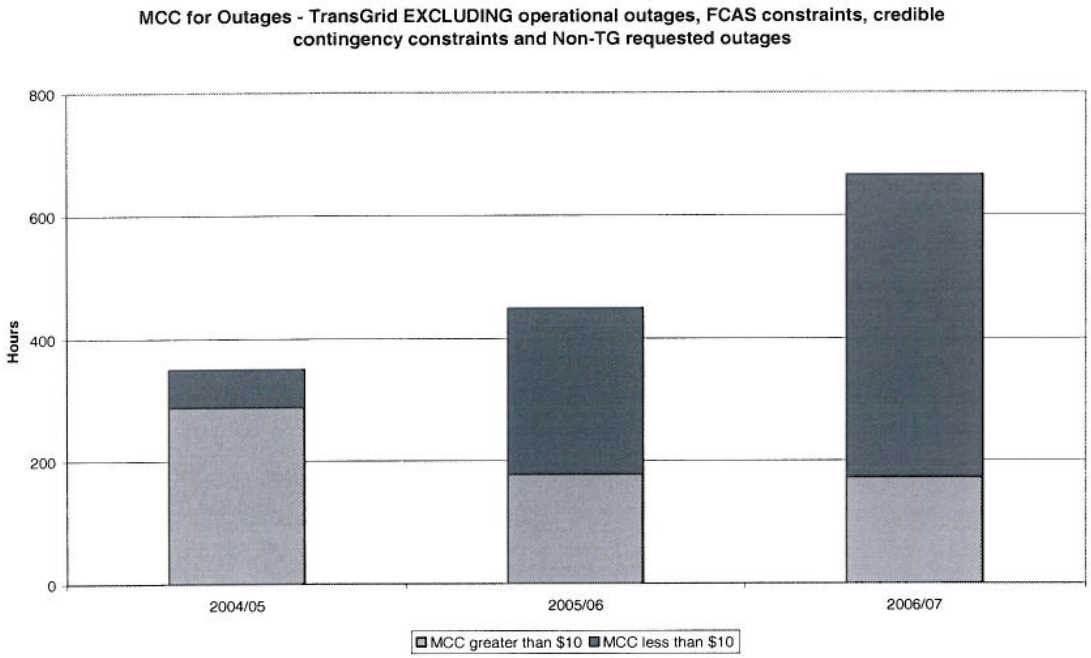
- The extent to which improvements have already been achieved reducing the prospect of further material improvements
- The increasing impact of capital works on the requirement for planned outages
- Matters raised by interested parties
- A possible alternative approach to setting the baseline

The extent to which improvements have already been achieved

The explanatory statement accompanying the draft scheme acknowledges that there is an upward trend to date in the occurrence and impact of constraints in the NEM and that many of these constraints are unrelated to transmission network outages or events. This is to be expected in a regulatory

environment that encourages network service providers to attain high levels of asset utilisation before investing in new assets.

TransGrid would like to demonstrate that even in this period when there has been a significant growth in the number of binding constraints caused by outages (350 hours to 665 hours), TransGrid has been effectively monitoring the situation and has responded to market participants desires for advance notice and a degree of predictability in our outage planning which has seen the number of hours of market impact (>$10MWh) steadily reducing.



As can be seen from the graph the total number of hours of binding constraints related to outages has increased by about 100% over the last three years, during the same period the number of hours when outages caused a market impact greater than $10/MWh has reduced by around 40% from 288 hours to 172 hours.

The increasing impact of capital works on the requirement for planned outages

TransGrid has several concerns with the assumptions that underpin the AER's proposed method for setting targets. Particularly the AER's proposition that changes to maintenance or operational aspects will see a significant reduction in the duration of high market impact outages.

Analysis has indicated that nearly all the outages with significant market impact relate to major capital works projects. While there is some scope to move these outages, they are invariably extended in nature and have longer recall times. As most of the projects involved are being undertaken to improve network capability, they are already scheduled for lower load times of

the year that should minimise any market impacts. The number of planned outages to connect new generators also appears likely to increase.

Matters raised by interested parties

In response to matters raised by market participants during our regular customer meetings, TransGrid is already taking measures to reduce market impact of their outages, such as:

- planning outages at times of the day or seasons when they are unlikely to cause a market impact;
- co-ordinating outages so that multiple packages of work are undertaken on one outage, rather than making the same impact several times; and
- consulting with market participants when planning outages and notifying participants well enough ahead to allow participants to minimise the impacts of the outage through the contract market or other actions.

Thus a number of gains envisaged of the market impact component of the scheme are already being realised in the market and the scope to improve is diminishing.

In addition, when explaining the proposal of a reward only incentive scheme, the explanatory statement states that, "if the performance targets turn out to be too difficult for the TNSPs to beat, the TNSPs are not penalised." While this is true, and of key importance in the introduction of the market impact component, it is also true that if the performance targets turn out to be too difficult for TransGrid to beat, then the scheme fail will fail to provide an incentive. Worse still if a failure to achieve an incentive payment is perceived as TransGrid not responding appropriately then future schemes proposed may seek to impose a penalty to provide a "greater incentive to perform."

For the scheme to provide an incentive, the target must be set such that TransGrid's performance is likely to be on the slope of the curve. It is when performing in this region that TransGrid's actions may attain an incentive, meeting the purpose of the scheme and the intent of the National Electricity Rules.[1]

A possible alternative approach to setting the baseline

An alternative method of setting a performance target that may be worth considering is to link the target for high impact outages to a decreasing percentage of the total periods of binding constraint. In this way as the network is driven harder and the total number of periods of binding constraint increases this would be reflected by an increase in the target. If network augmentations have reduced the total number of binding constraints, then this would reflect in a tighter target for the incentive scheme. Such a mechanism

[1] AEMC, *National Electricity Rules*, 6A.7.4(b)(1).

for setting the target has the advantages of simplicity, transparency and a greater accuracy in reflecting the current environment of factors outside a TNSP's control. It would also work more effectively over the long time frame involved between regulatory reset periods

TransGrid therefore proposes that the scheme be amended to permit the use of a variable target to be determined based on a decreasing percentage of the total number of binding constraints caused by outages, in order to better reflect the performance of the market generally.

2. Provision of Data for Reporting

According to Clause 5.2 of the scheme, TNSPs are required to collect data and report on all parameters including the market impact component.

One of the evaluation criteria on which the market impact component was developed is to minimise administrative costs[2]. A substantial amount of development has already taken place to provide this data and the use of the same data generated centrally would provide efficiencies in the reporting and review process under the scheme.

The eventual provision of the source data centrally would also negate the need for separate audits of data from each TNSP thus significantly reducing the costs of managing, conducting and responding to audits.

TransGrid notes that some further development will be required of the existing system that provides this data. In particular, a clear relationship between each binding constraint and a corresponding outage is required.

In summary TransGrid supports the ETNOF proposal that TNSPs, the AER and NEMMCO continue to work co-operatively on the development of data collection and reporting systems with a view to moving to a single centrally administered system over time as the scheme matures.

3. Form of the Incentive

TransGrid supports the proposal for a bonus only scheme, noting that the market impact component of the scheme creates a high business risk for TNSPs due to the number of factors influencing the outcome that are outside TransGrid's control.

TransGrid therefore supports the proposal for an incentive only scheme with zero penalty, as it removes the significant risk that is inherent in other aspects of the scheme's design while still providing a benefit to users of energy.

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[2] AER, *Draft Service Target Performance Incentive Scheme (Incorporating Incentives based on the Market Impact of Transmission Congestion) Explanatory Statement*, November 2007, p21.

4. Size of the Incentive

As the AER acknowledges in its explanatory statement, it would be unrealistic for TNSPs to be able to reach the cap and attain the full incentive payment. TransGrid questions the rationale for introducing an incentive that is not realistically achievable, whether symmetric or asymmetric. In order to provide a meaningful incentive to TNSPs TransGrid believes the scheme should be capped at 1% with an incentive curve matching Figure 4 of the Explanatory Statement.

5. Exclusions

Appendix C of the scheme provides for two types of exclusions to the market impact parameter: force majeure and constraints that are invoked to manage the reclassification of non-credible contingency events. TransGrid proposes additional exclusions to add to Appendix C:

- any outages shown to be caused by a fault or other event on a 'third party system' - e.g. intertrip signal, generator outage, customer installation;
- constraints due to the following causes:
  - manifestly incorrect input events;
  - reclassifications of a non-credible contingency event to be a credible contingency event;
  - occurrences in which a constraint applied by NEMMCO does not accurately reflect market conditions;
  - occurrences of a dispatch error by NEMMCO;
- times during which the normal market operations are modified such as:
  - periods of mandatory restriction;
  - periods of market intervention by NEMMCO;
  - periods in which the market is suspended or price caps are in effect;
- outages due to non-prescribed transmission assets/services;
- forced outages, as the market impact parameter primarily seeks to influence a TNSP's outage planning practices and there are already a parameters in the scheme incentivising TNSPs to minimise the number and duration of forced outages;
- outages required for personal safety; and
- outages required for operational security.

Summary of Key Outcomes Sought from the AER

- Targets that take account of the variability that is inherent in the MCC measure over a revenue determination period (1)
- Accurate data from a single source following further co-operative development of data collection and reporting systems (2)
- Incentive only scheme up to 1% of MAR (3, 4)
- Appropriate exclusions (5)