

11 February 2005

Sebastian Roberts
General Manager
Regulatory Affairs – Electricity
Australian Competition and Consumer Commission
Level 35, The Tower
360 Elizabeth Street
Melbourne VIC 3000

By email: sebastian.roberts@acc.gov.au

Dear Sebastian,

Annual Performance Incentive Scheme Report for 2004 Calendar Year

I am pleased to submit with this letter ElectraNet's annual Performance Incentive (PI) Scheme Report for the 2004 calendar year, which has been prepared in accordance with the ACCC's Service Standards Guidelines dated 12 November 2003.

The Guidelines require that ElectraNet report:

- Actual performance against the performance measures decided by the ACCC in ElectraNet's revenue cap decision;
- A list of force majeure events that ElectraNet believes should be excluded from the performance measures, and for each event a description of the event and its impact, quantification of the impact and the reasons for the exclusion request; and
- Calculation of the financial incentive as per the revenue cap decision.

While ElectraNet is required to report within two months after the end of the reporting period the ACCC has requested an earlier date of 11th February to facilitate the timely conduct of the necessary audits of performance reports.

The PI scheme is based on service standard measures that are common to all TNSPs. However, the ACCC recognised in its November 2003 decision on service standards that there must be flexibility in how these performance measures are implemented for each TNSP. In particular, the importance of measuring performance consistently over time was emphasised. The PI

scheme is based on the assumption that performance measurement will be consistent with the way in which historical performance was derived for target setting.

The performance measures implemented for ElectraNet are defined in the attached paper, a copy of which was also provided with the report for the 2003 calendar year. These definitions are consistent with the definitions used for submitting data to the ACCC for target setting. ElectraNet's annual performance report has been prepared consistent with these definitions.

ElectraNet's actual performance is shown in the following attachment:

- Annual Performance Incentive Scheme Report – This worksheet summarises actual performance against each performance measure, including calculation of the S factors and the revenue bonus/ penalty.

Two additional confidential worksheets will be provided directly to the ACCC's consultant to assist in assessing ElectraNet's performance report.

- Details of Customer Supply Interruptions – This worksheet provides details of unplanned interruptions to customer supply that impact on the Average Outage Duration and Loss of Supply Event Frequency Index performance measures; and
- Transmission Line Circuit Outages – This worksheet provides details of transmission line circuit outages impacting on the Transmission Circuit Availability performance measure.

Due to the confidential nature of this information ElectraNet reserves the right to withhold the information contained in these two worksheets from publication by the ACCC.

ElectraNet is not applying for the exclusion of any force majeure events during the period.

A specific exclusion is incorporated for the rebuilding of the Para – Waterloo 132kV transmission line consistent with the performance indicator definitions used in the PI scheme for target setting. The relevant definition excludes:

“Transmission lines decommissioned for an extended period of time for major line rebuilding activities, such as restringing, reinsulation or multiple structure replacements.”

The Para – Waterloo 132kV transmission line forms a major part of the former Northfield (Adelaide) – Waterloo – Bungama 132 kV transmission line built in 1953 as part of the network connecting the then new Playford Power Station at Port Augusta to Adelaide. It is one of the oldest lines in the ElectraNet network and is of an early steel/concrete composite (Stobie Pole) construction designed to a British design standard for 49°C conductor temperature.

While close to the end of its economic life, the 90km Para – Waterloo section was considered suitable for rebuilding to the contemporary 80°C conductor temperature with an associated life extension of 25 years, effectively allowing the deferral of a \$20m line replacement.

The project entailed a major rebuild of the line including replacement of all cross-arms and insulators, replacement of 20% of the structures, upgrading the earthing and retensioning the conductors.

Please do not hesitate to contact me on 08 8404 7983 or by email should you require clarification of any of the information provided in this report.

Yours sincerely,



Rainer Korte
NEM DEVELOPMENT AND REGULATION MANAGER

ATTACHMENT 1**Annual Performance Incentive Scheme Report****ElectraNet S Factor and Bonus/(Penalty) Calculation 2004 Calendar Year**

Start Date 1-Jan-04
End Date 31-Dec-04

Indicator	Result	S Factor
Average Outage Duration	48.92 minutes	0.2500%
Event Frequency Index > 1.0	0	0.3000%
Event Frequency Index > 0.2	7	-0.0200%
Transmission Line Availability	99.38%	0.1300%
S Factor (Total)		0.6600%

ARt-2 (2003/2004 financial year)	\$156,103,395
ARt-2 (2004/2005 financial year)	\$162,316,995
Revenue for PI Calculation	\$159,210,195
S Factor (Total)	0.6600%
Bonus/(Penalty)	\$1,050,787

Service Standards Performance Incentive Scheme Implementation for ElectraNet

1. Purpose

In its December 2002 revenue cap decision for ElectraNet, the Australian Competition and Consumer Commission (ACCC) established a Performance Incentive (PI) scheme to provide ElectraNet with additional incentive to maintain and improve service quality.

The PI scheme is based on a number of service standard measures, which are common to all TNSPs. However, the ACCC's November 2003 decision establishing Service Standards Guidelines recognises that there must be flexibility in how these performance measures are implemented for each TNSP:

“For each revenue cap decision in the future, the standard definitions will be modified to align with appropriate information that the TNSP has been collecting in the past. Performance must be measured consistently over time to preserve the incentive for the TNSP to improve.”

The targets in the PI scheme have been set based on ElectraNet's historical performance data. Therefore, the PI scheme is based on the assumption that performance measurement will be consistent with the way in which the historical performance data was derived.

This paper defines the performance measures implemented for ElectraNet consistent with the definitions used for submitting data to the ACCC for target setting and for calculating performance outcomes. The paper also sets out how ElectraNet intends to satisfy its performance reporting requirements.

2. Performance Measures

2.1 Measure 1 - Transmission Circuit Availability

Definition/Formula

$$1 - \frac{\sum (\text{number of interrupted circuit hours})}{\text{total possible circuit hours available}}$$

where:

Circuits include regulated overhead lines and underground cables (each with a designated ElectraNet transmission segment identification number). Transformers, reactive plant and other primary plant are excluded from the performance measure because reliable historical data for these items of plant is unavailable.

number of interrupted circuit hours means in relation to each circuit, the number of hours during each reporting period in which that circuit was unavailable to provide transmission services.

total possible circuit hours available is the number of circuits multiplied by 8760 hours.

This definition, while expressed differently, is consistent with the definition/formula set out in the ACCC's revenue cap decision. No time, plant type or criticality sub measures have been defined.

Inclusions

Subject to the exclusions specified below, outages on all parts of the *regulated* transmission system from all causes including planned, forced and fault events.

Exclusions

- Unregulated transmission assets.
- Any outages caused by a 3rd party such as intertrip signals, generator outage, customer installation, customer request or NEMMCO direction.
- 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).
- The opening of only one end of a transmission line (e.g. where the transmission line remains energised and available to carry power).
- Transmission lines decommissioned for an extended period of time for major line rebuilding activities, such as restringing, re-insulation or multiple structure replacements.
- Force majeure events (including multiple structure failures)

2.2 Measure 2 - Loss of Supply Event Frequency Index

Definition/Formula

Number of events greater than 0.2 *system minutes* per annum.

Number of events greater than 1.0 *system minute* per annum.

System minutes are calculated for each supply interruption by the "Load Integration Method" using the following formula:

$$\frac{\Sigma (\text{MWh unsupplied} \times 60)}{\text{MW peak demand}}$$

where:

MWh unsupplied is the energy not supplied as determined by using NEM metering and substation load data. This data is used to estimate the profile of the load over the *Period of the Interruption* by reference to historical load data.

Period of the Interruption starts when a loss of supply occurs and ends when ElectraNet offers supply restoration to the customer.

MW peak demand means the maximum amount of aggregated electricity demand recorded at entry points to the ElectraNet transmission network and interconnector connection points during the financial year in which the event occurs or at any time previously.

Inclusions

Subject to the exclusions specified below, all unplanned customer outages on all parts of the *regulated* transmission system.

Exclusions

- Successful reclose events (less than 1 minute duration).
- Unregulated transmission assets.
- Any outages caused by a 3rd party such as intertrip signals, generator outage, customer installation, customer request or NEMMCO direction.
- Planned outages.
- For supply outages resulting from an interconnector outage, the *Period of the Interruption* is capped at half an hour. This is done to include the impact of automatic under-frequency load shedding, but to exclude the impact of any market failure to respond and restore load within required timeframes (i.e. excluding factors outside of ElectraNet's control).
- Pumping station supply interruptions. These interruptions were excluded from historical data used for target setting due to the highly irregular nature of these loads, which makes accurate estimation of load profiles unreliable.
- Force majeure events.

Notes

The following points further clarify the implementation of the Loss of Supply Frequency Index performance measure:

- The performance measure applies to exit points only.
- An interruption >1.0 system minute also registers as a >0.2 system minute event.
- Where ElectraNet protection operates incorrectly ahead of 3rd party protection, the portion of customer load that would have been lost had ElectraNet protection not operated is removed from the total lost load.

- Where ElectraNet protection operates correctly due to a fault on a 3rd party system no lost load is recorded.
- Interruptions affecting multiple connection points at exactly the same time are aggregated (i.e. system minutes are calculated on the basis of events rather than connection point interruptions).

2.3 Measure 3 - Average Outage Duration

Definition/Formula

Aggregate minutes duration of all unplanned outages
Number of connection point events

The cumulative summation of the outage duration time for the period, divided by the number of connection point outage events during the period.

where:

Outage duration time for a connection point starts when a loss of supply occurs and ends when ElectraNet offers supply restoration to the customer.

Inclusions

Subject to the exclusions specified below, customers supply outages on all parts of the *regulated* transmission system.

Exclusions

- Successful reclose events (less than 1 minute duration).
- Unregulated transmission assets.
- Any outages due to a 3rd party such as intertrip signals, generator outage, customer installation, customer request or NEMMCO direction.
- Planned outages.
- For supply outages resulting from an interconnector outage, the duration is capped at half an hour. This is done to include the impact of automatic under-frequency load shedding, but to exclude the impact of any market failure to respond and restore load within required timeframes (i.e. excluding factors outside of ElectraNet's control).
- Force majeure events.

Notes

The following points further clarify the implementation of this performance measure:

- The performance measure applies to exit points only.

- Outage duration extends to the point at which supply restoration is offered to the customer.
- Where ElectraNet protection operates correctly due to a fault on a 3rd party system no outage duration is recorded.

2.4 Measure 4 - Transmission constraints (Intra-regional)

This performance measure has not been implemented at this stage.

2.5 Measure 5 - Transmission constraints (Inter-regional)

This performance measure has not been implemented at this stage.

3. Reporting PI Scheme Performance

The ACCC's Service Standards Guidelines require ElectraNet to report annually on its PI scheme performance, including calculation of the S factor performance outcome.

ElectraNet intends to satisfy its performance reporting obligations as follows:

- All events that fall within the broad definitions of the performance measures as set out in this paper will be reported;
- Force majeure events that ElectraNet believes should be excluded from calculation of the S factor will be identified including the reasons for the exclusion request. The impact of the requested force majeure event on the S factor will be included in the report.

The annual performance report will be submitted to the regulator within two months after the end of the calendar year reporting period, as required by the ACCC guidelines.

4. S Factor Calculation

ElectraNet calculates PI scheme performance in accordance with the S factor equations set out in Appendix 7 of the ACCC's revenue cap decision. These equations are repeated in the following subsections.

The total S factor is equal to the sum of the individual S factors for each performance measure, that is:

$$S=S_1+S_2+S_3+S_4$$

4.1 Circuit Availability

Total circuit availability (%)			
Where:			
$S_1 = -0.0035000$			Actual availability < 98.50
$S_1 = 0.0046667 \times \text{Actual availability} - 0.46317$		98.50 ≤	Actual availability ≤ 99.25
$S_1 = 0.0000000$			Actual availability = 99.25
$S_1 = 0.0100000 \times \text{Actual availability} - 0.99250$		99.25 <	Actual availability ≤ 99.60
$S_1 = 0.0035000$		99.60 <	Actual availability

4.2 Average Outage Duration

Average outage duration (mins)			
Where:			
$S_2 = -0.00250000$		190.00 <	Actual average outage duration
$S_2 = -0.00003125 \times \text{Actual average outage duration} + 0.003437$		110.00 <	Actual average outage duration ≤ 190.00
$S_2 = 0.00000000$		100.00 ≤	Actual average outage duration ≤ 110.00
$S_2 = -0.00008333 \times \text{Actual average outage duration} + 0.008333$		70.00 ≤	Actual average outage duration < 100.00
$S_2 = 0.00250000$			Actual average outage duration < 70.00

4.3 Loss of Supply Event Frequency Index

Loss of supply event frequency index - >0.2 minutes per annum			
Where:			
$S_3 = -0.0010$	Actual frequency =		10
$S_3 = -0.0007$	Actual frequency =		9
$S_3 = -0.0003$	Actual frequency =		8
$S_3 = -0.0002$	Actual frequency =		7
$S_3 = 0.0000$	Actual frequency =		6
$S_3 = 0.0000$	Actual frequency =		5
$S_3 = 0.0002$	Actual frequency =		4
$S_3 = 0.0003$	Actual frequency =		3
$S_3 = 0.0007$	Actual frequency =		2
$S_3 = 0.0010$	Actual frequency =		1
$S_3 = 0.0010$	Actual frequency =		0

Loss of supply event frequency index - >1.0 minutes per annum			
Where:			
$S_4 = -0.0030$	Actual frequency =		5
$S_4 = -0.0015$	Actual frequency =		4
$S_4 = -0.0005$	Actual frequency =		3
$S_4 = 0.0000$	Actual frequency =		2
$S_4 = 0.0008$	Actual frequency =		1
$S_4 = 0.0030$	Actual frequency =		0