ETSA Utilities

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Spark Infrastructure SA (No. 2) Pty Ltd
ABN 19 091 143 038
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ABN 50 091 142 362
each incorporated in Australia
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ABN 65 090 718 880
HEI Utilities Development Limited
ABN 82 090 718 951
each incorporated in The Bahamas

19 March 2009

Mr Chris Pattas
General Manager
Network Regulation South
Australian Energy Regulator
GPO Box 520
Melbourne VIC 5000

Dear Chris,

<u>Subject Amendment to Service Target Performance Incentive Scheme February 2009</u>

ETSA Utilities is appreciative of the opportunity to provide comments on the proposed amendment to the Service Target Performance Incentive Scheme.

Please find attached our submission to the AER's paper "Proposed amendment, Service Target Performance Incentive Scheme, February 2009".

If you have any queries or clarifications on our submission please contact Mr Grant Cox on 08 8404 5012.

Yours sincerely,

Eric Lindner
General Manager Regulation & Company Secretary
ETSA Utilities

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Submission to AER's Proposed amendment to the STPIS

February 2009

March 2009
This report contains 11 pages
EU_Submission_AER_revised_proposed_STPIS_Feb09_final.doc

Contents

Glossary

AER	Australian Energy Regulator
ESCoSA	Essential Services Commission of South Australia
EBSS	Efficiency benefit sharing scheme
EDC regions	Comprise: Adelaide Business Area (ABA), Barossa/ Mid-North/ Riverland/ Murraylands (BMRM), Eastern Hills/ Fleurieu Peninsula (EHFP), Kangaroo Island (KI), Major Metropolitan (MM), South East (SE) and Upper North/ Eyre Peninsula (UNEP).
EDPD	Electricity Distribution Price Determination (2005 – 2010)
EU	ETSA Utilities
Feeder Categories	SCoNRRR Feeder categories comprise CBD (Central Business District), Urban, Rural Short (RS) and Rural Long (RL)
IEEE	Institute of Electrical and Electronic Engineers
MED	Major Event Day – as defined by the IEEE Guideline 1366
NER	National Electricity Rules
OMS	Outage Management System introduced from 1 July 2005 to report on reliability performance and enable automatic payment of reliability GSL payments.
SAIDI	System Average Interruption Duration Index (the time in minutes an average customers is without supply per annum)
SAIFI	System Average Interruption Frequency Index (the number of times an average customer experiences an interruption)
SCoNRRR	Steering Committee on National Regulatory Reporting Requirements
STPIS	Service target performance incentive scheme
VCR	Value of Customer Reliability
LN	Natural Logarithm

1 Executive Summary

ETSA Utilities supports in general the amendments to the STPIS and will provide comments on each of the proposed amendments and one additional item which has been highlighted by our recent experience:

- Fixed STPIS targets versus Targets based on previous years performance and incentive received for one year not five;
- Modification of the cap from 3% to 5%
- Modification to the method in calculating the MED day threshold in regard to the IEEE's method of using the natural logarithm to determine the MED threshold; and
- The inclusion of third party events which are beyond the control of the DNSP (eg vandalism, theft of infrastructure, bushfires, floods etc).

a. Fixed targets not based on previous years performance

ETSA Utilities considers that this simplifies the scheme and we would support the change.

b. The introduction of a 5% cap versus a 3% cap where the performance target ratchets.

ETSA Utilities in accepting the 5% cap, is cognisant of that the exclusions proposed to apply in the future to the measures (eg MEDs) should reduce the volatility in performance caused by weather relative to the service Incentive Scheme that ETSA Utilities currently operates under.

Under the current STPIS the maximum year or year change is 3% but under the amended scheme it is possible for customers to see a 10% variation in prices from one year to the next. Although this degree of variation is theoretically possible but unlikely, it is perceivable that 5% variation in customer prices could occur under the amended scheme. Customers in SA would have seen a 4.4% variation in real prices if the scheme operated during the current period even with use of the s-bank.

c. Major Event Days exclusion and MED threshold determination

As advised previously, in submissions to the STPIS papers (Issues and Proposed) and the preliminary positions to our Framework and Approach, we are concerned at the IEEE's use of the natural logarithm to convert daily SAIDI data into a normal distribution, to determine the MED threshold. The use of the natural logarithm on ETSA Utilities' daily SAIDI data in accordance with the IEEE 2.5 Beta method does not produce a normal distribution.

In ETSA Utilities final position Framework and Approach Paper for the 2010-2015 period, the AER have indicated that, subject to further information, they propose to adopt the “Box-Cox” method of converting EU’s daily SAIDI data for determining the MED threshold.

Dr Field has now incorporated an additional six months of data in his analysis. The inclusion of this additional data strengthens his finding that ETSA Utilities’ daily SAIDI cannot be normalised by using the natural logarithm and instead the “Box-Cox” method should be applied. From this recent analysis including the additional data, Dr Field stated:

Statement No. 1, page 3.

> *There are no substantial changes induced by adding the extra 6 months’ data. The difference between the mean and median are consistent with skewed data, as is the negative skewness. There are several available tests of normality; we use the Anderson-Darling test since it is more sensitive than others to departures from normality in the tails of the distribution. The test shows that there is a significant difference between log(SAIDI) and a normal distribution in both data sets.*
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> *We conclude, as before, that log(SAIDI) is not normally distributed.*

and, Statement No.2, page 7.

> *Considering individual years, then log(SAIDI) is in fact distributed normally in 2007-08, but not in the other two years. However, as we accumulate years, the distribution remains non-normal. In fact for this sequence of years the trend is away from normality rather than towards it (indicated by the significance levels for the Anderson-Darling tests). Adding further years is extremely unlikely to return the distribution of log(SAIDI) to normality.*

The report unequivocally concludes that the Box-Cox transformation should be used to transform ETSA Utilities’ data to determine the Major Event Day threshold.

d. Inclusion of third party events

Currently, the STPIS specifically excludes certain events as specified in Clause 3.3. These types of events generally have a significant effect on the reliability performance. Most of these exclusions relate to third parties causing interruptions to supply. It would appear that the intent of these exclusions is to ensure that a DNSP is not rewarded or penalised by events which are beyond the reasonable control of a DNSP.

All distribution networks experience third party caused interruptions. Those interruptions are generally as a result of vandalism, theft of equipment, vehicle damage of equipment (eg car hit pole) and contractors damaging our equipment (eg felling a tree onto mains, digging up cables etc). These interruptions though generally minor in impact make up about 10% of SAIDI for a DNSP.

Third party related interruptions contribute in similar amounts to SAIDI each year with the exception of abnormal impact events. For example, ETSA Utilities experienced copper theft from a substation (which is not an usual event) but it had an abnormal impact on SAIDI (ie 6.7 minutes). This impact was due to the thieves removing/stealing part of the substations earthing system with the interruptions affecting 27,000 customers. ETSA Utilities is very likely to incur a $3M penalty from this event from our current SI Scheme. We consider that such types of events should be excluded as they are abnormal, thereby not included in the targets and outside of our control.

ETSA Utilities previous largest impact third party event was about 2 minutes of SAIDI which would have a $2.2M penalty under the amended STPIS. ETSA Utilities considers that DNSP should not be penalised under the STPS for events reasonable beyond our control and similar events have not been included in our targets.

ETSA Utilities considers that these abnormal impact events could either be covered by:

- excluded from the STPIS; or
- insurance to cover the associated penalty be an allowable cost.

ETSA Utilities considers that either of these options is suitable.

2 Proposed amendments to the STPIS

2.1 ETSA Utilities performance if STPIS applied to the current period

The following Table depicts ETSA Utilities' reliability performance over the last three financial years and includes an assessment of the variability in revenue that would occur from the STPIS with an overall neutral outcome (ie target is equivalent to average performance).

	2005/06		2006/07		2007/08	
	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
CBD	23.5	0.22	21.0	0.27	20.9	0.21
Urban	142.8	1.65	115.1	1.49	94.7	1.15
Rural Short (RS)	192.9	2.25	295.0	2.27	149.4	1.53
Rural Long (RL)	345.0	2.34	430.2	2.82	274.5	2.04
STPIS Incentive	-$11.1M (-2.2%)		-$7.8M (-1.6%)		+$18.9M (+3.8%)	

Note: Incentive based on STPIS amended VCR and the STPIS target based on the average performance over the three financial years.

This variation in outcome reflects the influence of weather on ETSA Utilities' reliability performance event with the exclusion of MED days determined using the "Box-Cox" method. Assuming ETSA Utilities' annual revenue was $500M then customers would have experienced considerable price variations over the three years (ie -2.2%, +0.6%, +5.4%) without the use of the s-bank for no change in the average service performance they received.

The STPIS scheme introduces significant volatility to customers' prices arising from normal variations in a DNSP's reliability performance (mainly caused by weather) ie customers should not have seen any change to their prices due to the STPIS over the three years.

The role of the STPIS is to provide incentives for DNSPs to maintain and improve service performance and ensure that the financial incentives to reduce costs are not at the expense of service levels. We consider that neither customers nor DNSPs should experience variations in prices or revenue under the STPIS for normal variations in service performance. However, the STPIS must ensure that any long term improvement in performance is rewarded and any long decline in performance is penalised.

We consider that the volatility due to normal variations in service performance could be minimised or even eliminated if there was more flexibility in the s-bank (ie allow for more than a one year deferral) without compromising the role of the STPIS. ETSA Utilities proposes an amendment to the s-bank arrangement in Section 2.4.2 that we consider meets these objectives.

2.2 Amended s-factor calculation

ETSA Utilities considers that the proposed amendment to the s-factor targets by establishing a fixed target for the regulatory period versus the current variable target (ie annual variations) is appropriate as it simplifies the scheme.

ETSA Utilities is concerned that, unlike our current SI Scheme where the subsequent year's target is directly linked to the incentive received, there is no defined method for determining future targets where the cap on revenue is breached in the previous regulatory period. However, ETSA Utilities is provided with some comfort by the following statement in the AER's explanatory statement associated with the amended STPIS, which states in the last dot point on page 5,

> *"Performance targets are to be based on the average performance over the last five years adjusted for any planned reliability improvements and having regard to any instance where the cap on revenue at risk has been breached in the previous regulatory period."*

As no guidance is provided on the mechanism to adjust the targets for the coming regulatory period, we assume that a DNSP would detail the method employed in their Regulatory Proposal for establishing the STPIS targets for the next period. This would be subject to the same test as applies to other aspects of the DNSP's submission ie the proposed mechanism is within the Rules and reasonable.

2.3 Amended cap on revenue at risk

The way the current STPIS is structured the maximum customer price variation from year to year is be 3% unless the S-Bank was employed when the variation could be as high as 6%. Under the amended STPIS the theoretical year or year variation in price to customers could be 10% ie 5% penalty and then a 5% bonus.

ETSA Utilities considers (see Section 2.1) that the 5% revenue cap will introduce larger variations in customer prices without necessarily any long term change in service performance (ie customers would have seen an annual variation in their prices but no change in their average service performance). ETSA Utilities considers that the STPIS should penalise or reward a DNSP when there is an actual change in underlying performance not normal annual variation in performance.

ETSA Utilities considers that the revenue at risk should be lower than 5% but can understand based on the argument present in the AER's explanatory statement why they have chosen 5%. ETSA Utilities is willing to accept the 5% cap but requests that a revised S-Bank arrangement should apply. See Section 2.4 below for ETSA Utilities amended proposal for the s-bank.

2.4 Changes to the S-bank arrangement

2.4.1 Proposed amendments to the s-bank formula

ETSA Utilities considers that it is appropriate to remove the (1+ pre-tax WACC) term from the s-bank equation as the incentive rates for change in service performance do not alter over the regulatory period. For example, if a DNSP incurred a penalty of $10M (for a 10 minutes decline from target) in performance and then in the following year received a $10M bonus (for a 10 improvement from target), then if they banked the initial $10M penalty and off-set the penalty with the $10M bonus the DNSP would incur a penalty of $10M times the pre-tax WACC under the existing STPIS. However, under the amendment the DNSP has a neutral outcome which is appropriate.

2.4.2 ETSA Utilities proposed amendments to the s-bank mechanism

ETSA Utilities has considered different options to minimise the variations in customer prices which are due to normal variations in service performance, with the amended 5% cap, like:

- being able to bank more than one years' incentive; or
- allow the bank to contain a maximum % of revenue.

ETSA Utilities proposes that the S-Bank arrangement be modified to allow the s-bank to hold a maximum % of revenue at any given time. If the maximum percentage of revenue allowed in the bank was ±5% then this amended scheme would mirror the AER's proposed amendment.

However, in ETSA Utilities case as described in Section 2.1, if ETSA Utilities had banked successive penalties in 2005/06 and 2006/07, the % of revenue in the bank would have been -3.8% at the end of 2006/07 and once 2007/08 result occurred the revenue in the bank would have been 0% and customers would have seen no variation in prices due to normal variation in service performance. ETSA Utilities considers that this is a good result for customers and for the DNSP. It still provides a significant penalty if the DNSP's performance declines in the longer term.

2.5 New Value of Customer Reliability (VCR)

ETSA Utilities considers that it is appropriate for the Value of Customer Reliability (VCR) to reflect the latest research undertaken in this area.

2.6 Amended major event day calculation

The AER is proposing eliminate Step 2 from the calculation of MED (ie no iteration in the calculation of MED threshold). ETSA Utilities does not have a concern with this process of not undertaking an additional iteration. However, as previously expressed in earlier submissions to the STPIS and to the AER's Draft framework and Approach Paper for ETSA Utilities, we are greatly concerned by the use of the natural logarithm in the IEEE methodology to determine the MED threshold.

The IEEE: 1366 – 2003 Guideline uses the natural logarithm to convert DNSP daily SAIDI data into a normal distribution, to employ statistical techniques to determine the daily SAIDI threshold to exclude Major Event Days (MEDs) from the normalised reliability service performance.

ETSA Utilities daily SAIDI data is not converted into a normal distribution by the use of the natural logarithm. See attached memorandum from Dr John Field. In our earlier, submission to the AER's Draft Framework and Approach Paper, ETSA Utilities proposed a different conversion methodology to convert daily SAIDI data into a normal distribution, to then use the rest of the IEEE's methodology to determine the MED threshold.

The AER indicated that they would consider, subject to further information and advice, employing the Box-Cox method to convert our data to determine the MED threshold. The AER expressed a view that with additional data, the natural logarithm may be a suitable method in the longer term to convert our daily SAIDI data.

Dr Field has now incorporated an additional six months of data in his analysis. The inclusion of this additional data strengthens his finding that ETSA Utilities' daily SAIDI cannot be normalised by using the natural logarithm and instead the "Box-Cox" method should be applied. From this recent analysis including the additional data, Dr Field stated:

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The memorandum clearly advises it is extremely improbable for our data to be converted into a normal distribution by using the natural logarithm and the Box-Cox transformation should be used to determine the Major Event Day threshold.

2.7 Third party events

Notionally the majority of interruptions caused by third parties are beyond the control of a DNSP, like:

- vandalism;
- theft of equipment;
- vehicles (including aircraft) colliding with our equipment;
- powerline contact and damage (eg contractor damaging underground cables during excavation, contractor felling trees onto overhead powerlines); and
- sabotage/terrorism

In the past, DNSP's have mitigated their loss (ie costs of repairs and reinstatement) by recovering the cost of the damage from the third party (where identified and possible) or their insurer. In the majority of these cases, the interruption contribution to reliability performance is minimal. However, in some cases it would lead to about a $2M penalty (ie 2 minute SAIDI impact) under the amended STPIS.

ETSA Utilities accepts the inclusion of normal impact third party caused interruptions in the STPIS, as these interruptions are also included in the targets. However, we are concerned with the inclusion of abnormal third party caused interruptions.

In October 2008, we had an incident where a person(s) stole part of a substation's earthing system which result in an interruption to 27,000 customer which had a 6.7 minute SAIDI impact. We expect to receive a $3M penalty from this event under our current SI Scheme. However, this event would have been excluded from the amended STPIS as it would be classified as a MED day, which is appropriate.

However, ETSA Utilities is exposed to abnormal third party events where the impact is between 2 minutes and the MED threshold (about 4.5 minutes), as these events have not occurred in the last 10 years. If an abnormal event of this impact occurred ETSA Utilities would incur a penalty between about $2M and $5M due to an event beyond our control. We consider that such types of events should be excluded as they are abnormal, thereby not included in the targets and outside of our control.

There are two suitable mechanisms to mitigate the impact of an abnormal third party event (ie > 1 in 5 year event), which are:

- to specifically exclude these abnormal events from the STPIS; or
- allow funding in their determination to cover the cost of insurance against these abnormal events.

ETSA Utilities considers that either of these options is suitable.