

30 May 2003

Mr Sebastian Roberts
Acting General Manager
Electricity Group
Regulatory Affairs Division
Australian Competition and Consumer Commission
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Dear Mr Roberts,

**Transend Networks' Revenue Cap Application
Hydro Tasmania's Supplementary Submission – Service
Standards**

As foreshadowed in Hydro Tasmania's main submission (dated 30 April 2003) on Transend Networks' Revenue Application, please find enclosed our supplementary submission on service standards.

As you would expect, we will continue to actively engage in this process, and would welcome an opportunity to discuss this supplementary submission further with the Commission's representatives. I am contactable on 03 6230 5485.

Thank you for providing Hydro Tasmania with the opportunity to furnish this supplementary submission.

Yours sincerely,

[Electronic Version]

Greg Jones
Manager, Power Delivery

CC: Sabesh Shivasabesan, ACCC, sabesh.shivasabesan@acc.gov.au

Transend Networks' Revenue Cap Application

Hydro Tasmania Service Standards – Supplementary Submission

May 2003

1 Introduction

This document sets out Hydro Tasmania's more detailed proposals in respect of service standards, as foreshadowed in its main submission, dated 30 April, on Transend Networks' Revenue Cap Application ("the Application").

1.1 Performance Framework

Figure 1 provides an overarching framework for describing the performance of a Transmission Network Service Provider (TNSP). The figure illustrates:

- those service standards that are suitable for incentivisation,
- those service standards that are amenable to performance monitoring in the impending revenue reset period and potentially should be incorporated into a Performance Incentive scheme (PI scheme) in the following revenue reset period¹; and
- one service standard that would require more complex consideration.

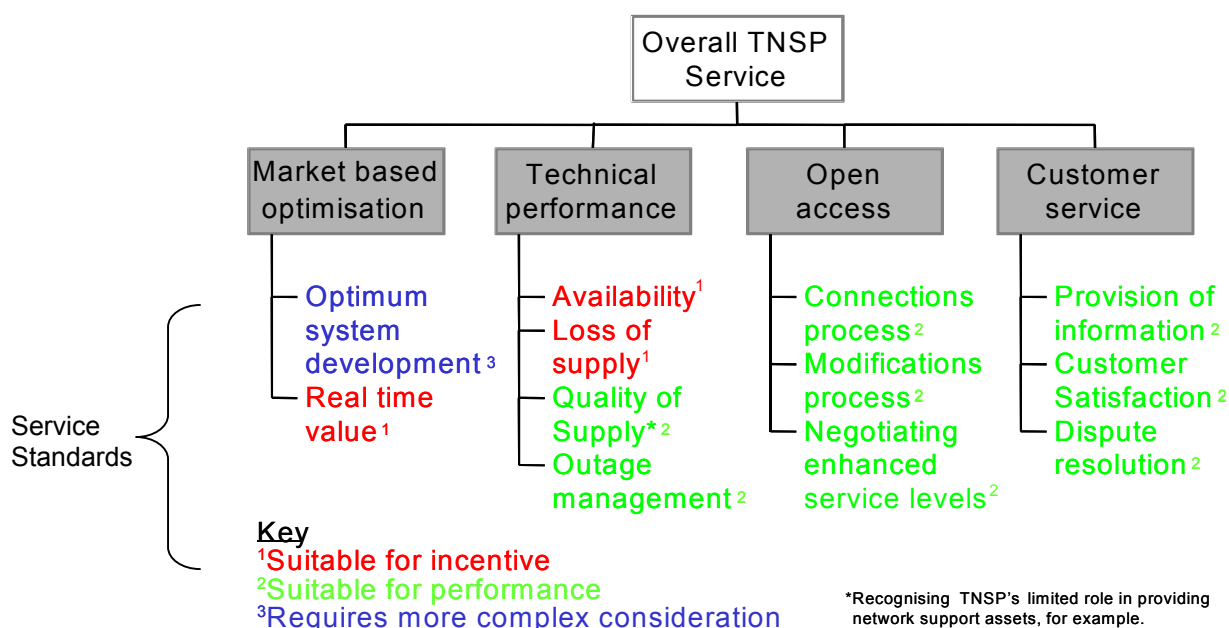


Figure 1 Overview of TNSP performance

¹ Throughout this document, the 'impending revenue reset period' refers to the 1 January 2004 to 30 June 2009 reset period and the 'following revenue reset period' refers to the reset period commencing 1 July 2009.

Each of the service standards above are defined and cross referenced to the relevant section of the document at Attachment 1.

For Transend, each of these service standards should be picked up in the PI scheme (either in the impending revenue reset period or the following one), in reporting to the Commission more generally or through commercial arrangements in which the Commission may have a regulatory interest in. As such this document contains:

- **Section 2:** Discussion of the service standards and associated performance measures currently proposed by Transend, broadly recommending that the proposed performance measure targets be tightened and one additional target be applied.
- **Section 3:** Proposals in respect of service standards and performance measures that Hydro Tasmania considers the Commission should require Transend to report against over the impending revenue reset period² and, where appropriate, to propose performance incentive schemes for the following revenue reset period.
- **Section 4:** Discussion on the regulatory issues associated with the development of an enhanced performance regime that could be negotiated between Hydro Tasmania and Transend.
- **Section 5:** A listing of Hydro Tasmania's recommendations proposed in sections 2 through 4.

1.2 Transend's Reporting Framework

Figure 2 illustrates our understanding of the current reporting requirements for Transend. As a result of National Electricity Market (NEM) entry, there is scope for confusion with respect to reporting requirements, however certain conclusions can be drawn:

- The Commission has an interest in service standards over and above the PI scheme to ensure that the TNSPs deliver adequate service during the revenue control, particularly during the transition to a more complete PI scheme.
- The Commission may have an interest in matters such as connection process performance to ensure that the TNSPs are meeting the terms of their access undertakings under Schedule 5.8 of the National Electricity Code (Code).

² Recognising Transend's obligations to report to OTTER and its customers.

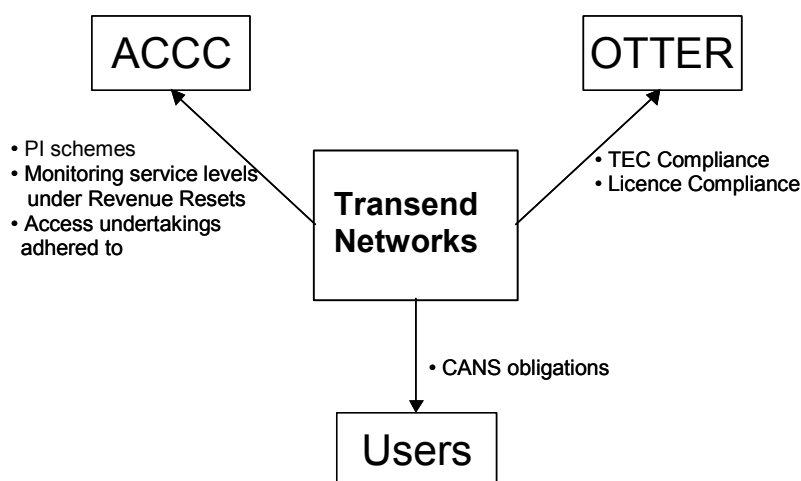


Figure 2 Reporting Obligations Framework

1.3 Approach

In preparing this document, and in particular section 3, Hydro Tasmania has reviewed a wide-range of domestic and international service standards including those contained in the Sinclair Knight Merz (SKM) report³. In selecting specific service standards and associated performance measures for incorporation into this document, Hydro Tasmania has undertaken detailed analysis against the following conditions:

- priority / importance;
- likelihood of implementation; and
- value and impact on customers, Transend and Hydro Tasmania.

In developing this proposal, Hydro Tasmania has endeavoured to develop a proposal that will provide genuine commercial benefits for Transend whilst improving customer service.

Hydro Tasmania had hoped to discuss these proposals in detail with Transend before providing this supplementary submission to the Commission. However, the Commission's timescales have meant that we have provided Transend with a late draft of this report only. We anticipate that Transend will comment on our proposals direct to the Commission and Hydro Tasmania will continue to engage in discussion with Transend on the continued development of service standards and associated performance measures and incentives.

³ Transmission Network Service Provider (TNSP) Service Standards, Australian Competition and Consumer Commission, November 2002.

2 Transend's Proposals

Broadly speaking, we consider the existing proposals on service standards contained in the Application to be unsatisfactory in two main respects:

- Transend's targets proposed in the PI scheme should be tightened to ensure Transend's acknowledged inadequate performance is at least marginally improved over the course of the reset period, as discussed in 2.1 below.
- The targets that have been selected do not represent the full spectrum of Transend's services to transmission users, both in terms of other SKM measures not adopted, which are discussed in 2.2 and other measures not identified in the SKM scheme⁴, which are discussed in Sections 3 and 4. This means some aspects of the TNSP's performance will not be reported to the Commission and/or OTTER.

2.1 Existing Performance Incentive Scheme

As flagged in Hydro Tasmania's main submission, dated 30 April, the targets proposed by Transend would actually reward the existing level of performance (that Transend has acknowledged as being unsatisfactory). In the figures provided in Attachment 2⁵, we have proposed that the performance incentives in the first 2½ years of the impending revenue reset period (phase I) reward Transend where performance levels exceed their best historical level. In the last three years of the impending revenue reset period (phase II) additional improvements in service levels are required before Transend is rewarded⁶. This additional increase in service levels reflects:

- the expected and continual improvement in performance resulting from capital and operational spend over the application period;
- continual and expected improvement in performance driven by the self funded PI scheme; and
- a corresponding increase in service levels reflecting the increasing incentive base (i.e. 1% of an increasing annual revenue cap).

In developing this approach Hydro Tasmania has ensured the proposal is consistent with the objectives of the PI scheme as described in the SKM report:

- "...effective incentive-based regulation should include an explicit level of service, for which the TNSP has been provided by the regulators sufficient income to maintain the assets necessary to provide that level of service."⁷;

⁴ Transmission Network Service Provider (TNSP) Service Standards, Australian Competition and Consumer Commission, November 2002.

⁵ The targets in attachment 2 are based on the 1998/1999 Draft Network Connection Performance Report and the 2001/2002 Transmission Performance Report. It is understood that no other reports have been received.

⁶ The deadband commences at Transend's historical best level of performance.

⁷ Transmission Network Service Provider (TNSP) Service Standards, Australian Competition and Consumer Commission, November 2002, pg 1.

- "...performance incentives should have a balance between providing rewards for good performance and substantial incentives for improvement where performance is below standard."⁸;
- "...a TNSP should only be accountable for the outcomes it can control, which it is best placed to manage"⁹;
- "...financial incentives in the service standard regime should provide positive incentives by allowing the TNSP to earn additional revenue over and above the revenue caps."¹⁰; and
- "Performance measures must reflect structural differences between jurisdictions..."¹¹.

For the avoidance of doubt, the achievement of these targets should not require additional capital or operational expenditure in the main revenue cap – any additional expenditure should be self-funding within the terms of the PI scheme within the revenue cap.

2.2 Other SKM Measures

Transend has excluded the following SKM measures:

- average outage duration;
- hours constrained (intra-regional); and
- hours constrained (inter-regional).

In its report, SKM deemed that the measures, average outage duration and hours constrained (intra-regional) were or could be applicable to Transend. In addition historical data for the measure, average outage duration, was available to set performance incentive targets.

Average Outage Duration

Transend has not adopted average outage duration time on the grounds that "performance is volatile as a result of a small number of significant events". It is exactly these events that impact so dramatically on the operation of the market. Although Transend is required to report this data under the Connection and Network Services (CANS) Agreement with Hydro Tasmania¹², this reporting, in itself, provides no incentive to Transend to improve its performance in this area. In Attachment 3, we have proposed a target performance incentive for this measure based on firm and non firm connection asset performance reported by Transend under the CANS agreement¹³. We do not, however, have access to the SKM model that

⁸ IBID, pg 13.

⁹ IBID, pg 12.

¹⁰ IBID, pg 12.

¹¹ IBID, pg 12.

¹² In Hydro Tasmania's main submission on Transend Networks' Revenue Cap Application, it was indicated that Transend was not reporting against Hydro Tasmania's connection contracts. Hydro Tasmania has since received the 2001-02 connection agreement performance report.

¹³ The proposed target in attachment 3 is based on the 1998/1999 Draft Network Connection Performance Report and the 2001/2002 Transmission Performance Report. It is understood that no other reports have been received.

generates performance incentive targets, and so the Commission may wish to apply SKM's model to confirm our proposed target.

Hours Constrained (Intra-regional)

Hydro Tasmania acknowledges that there is no historical information on hours constrained (intra-regional) in Tasmania. Nonetheless, as Tasmania joins the NEM, it will be important to ensure that the operation of the system, in the most general sense, does not become more conservative and reduce the commercial opportunities available to all market participants. While hours constrained provides no information on either the magnitude nor the value of constraints, it does at least provide some indicator of the extent of constraints on the system.

Hours Constrained (Inter-regional)

Transend has not adopted hours constrained (inter-regional) on the grounds that Basslink will be a Market Network Service Provider. However this rationale seems flawed to Hydro Tasmania.¹⁴ The operation of the Tasmanian regulated transmission system will affect how Basslink is operated, for example, the impact of any voltage constraints at the George Town substation will affect dispatch across Basslink. It is unlikely that these voltage constraints would be picked up under the hours constrained (intra-regional) measure. Accordingly, it would seem appropriate to report hours constrained (inter-regional) in the impending revenue period, perhaps with a view to including this measure in the PI scheme for the following reset.

Recommendations

- a) Transend should be required to develop performance incentives consistent with the targets in Attachments 2 and 3.
- b) Transend should be required to propose a mechanism to capture information on hours constrained (intra-regional and inter regional).

¹⁴ There is also the question of SKM's allocation of this measure to the importing TNSP, which does not appear a rigorous nor appropriate approach, but instead is arbitrary.

3 Other Desirable Performance Measures

As Hydro Tasmania has noted previously, and SKM has acknowledged in their report, the five service quality indicators developed by SKM are a good start, but are not sufficient in the longer run¹⁵. Equally the Commission has prudently adopted a policy of only setting performance incentives for measures where there is good historical data upon which to base the targets.

As such, it is important to consider at this stage the performance measures that it may be desirable to apply at the following revenue reset, and therefore the historical information that should be gathered over the next 5½ years. Furthermore, other performance measures are necessary to fully describe Transend's performance. This section describes the measures that Hydro Tasmania considers should be gathered.

3.1 Critical Circuit Availability, Network Capability, System Minutes and Related Indicators

Critical Circuit Availability

While Transend's proposed PI scheme includes circuit availability, this measure includes all of Transend's transmission circuits. Given that Transend operates voltages that would be considered sub-transmission in other States, there is a danger that good performance on less strategic circuits could mask inadequate performance on critical circuits. To avoid this risk, Hydro Tasmania propose the creation of a critical circuits list upon which Transend would monitor and report on each individual circuit¹⁶. If over the impending revenue reset period, it becomes clear that these critical circuits suffer from inadequate performance, it will be possible to subject each of them to a specific performance incentive.

Initially, Hydro Tasmania proposes that the circuits listed in Attachment 4 are monitored and reported on individually for availability. However, this list should be reviewed as system developments take place, to ensure that the most critical circuits continue to be monitored.

Network Capability

Availability is of itself a binary measure which does not reflect the capability of the network fully. For example, a line could achieve an availability of 100% even though it had been significantly down-rated, as it is simply the hours in service, rather than the rating of the line. In the longer term, the Commission should look to develop a performance measure which reflects network capability. By developing a measure that reflects the capability that a transmission network provides, the Commission will be able to focus on the

¹⁵ Transmission Network Service Provider (TNSP) Service Standards, Australian Competition and Consumer Commission, November 2002, pg 14

¹⁶ Hydro Tasmania acknowledges that SKM have included critical circuit availability as a sub-measure under circuit availability. This sub-measure has been excluded from Transend's proposed PI scheme.

elements that the TNSP can manage, and then understand the extent to which NEMMCO has used that capability wisely.

Hydro Tasmania is concerned that as the operation of the network in Tasmania is formalised through the development of limit equations, there is potential for network capability to be lost through conservative decisions in that formalisation process. Similar risks pertain when Basslink and the System Protection Scheme (SPS) are brought into service. A network capability measure (that reflects both availability and the rating of the network elements) would help provide assurances in this regard.

It is likely that a network capability measure would be based on limit equations. This would have the added benefit of providing an explicit link between capital and operating expenditure and enhancements to service. As the Commission is aware, Hydro Tasmania wants to ensure that the development of limit equations in Tasmania should be at least as transparent as the current approach in the NEM for constraint equation formulation.

Other Related Indicators

As detailed in Attachment 5, other related performance indicators that should be monitored and reported on with a view to a future PI scheme include:

- Network Capability*
- Availability of synchronous condensers
- Line forced outage rate
- Availability of capacitor banks¹⁷
- Availability of static VAR compensators¹⁷
- Average restoration time
- Frequency of unplanned interruptions
- Average unplanned interruption time

*Discussed above

System Minutes

We note SKM's concerns with System Minutes as a sound statistical basis for a PI scheme. However, this performance measure has been used over many years both in Australia and extensively overseas. As such, Hydro Tasmania considers that it is a worthwhile indicator of service performance, and should continue to be reported until confidence is gained with the new PI scheme.

3.2 Outage Planning Measures

While the Projected Assessment of System Adequacy (PASA) process provides a framework for the management of outages for TNSPs and market

¹⁷ We note that these measures are not yet applicable in Tasmania. However, Hydro Tasmania understands that plant of this type may well be constructed in Tasmania over the impending regulatory period.

participants particularly given recent Code changes, it does not monitor the accuracy of that process. Hydro Tasmania considers that a measure which monitors the accuracy of transmission planning information is desirable both in terms of:

- unplanned outages which are booked at short notice; and
- planned outages which are substantially changed at short notice.

In defining this measure, it would be necessary to consider outages that are interrelated. For example, if Hydro Tasmania had booked an outage on one of its plants, and Transend had nested an outage within that window, it would be unfair to report a late outage change if Hydro Tasmania had to move its outage at short notice, and Transend followed it.

Attachment 6 provides further detail on specific outage planning performance measures that could be measured in the impending revenue reset period and possibly incorporated into the following revenue reset period PI scheme.

3.3 System Protection Scheme performance

The SPS is a protection scheme which is provided to allow the Tasmanian power system to operate in a satisfactory and secure operating state whilst allowing Basslink power flows. The SPS will:

- control the Tasmanian system frequency in the event of a sudden loss of transfers across Basslink; and
- prevent overload of transmission lines remaining in service in the event of transmission line faults in Tasmania.

Accordingly the performance of the SPS will be need to be measured. Appropriate performance measures include:

- Availability
- Optimal volume transfer
- Number of mal-operations
- Timely volume re-optimisation following augmentation

Whilst further work is required to define these performance measures (dependant on the final technical configuration of SPS), Transend should be required to work with NEMMCO and other market participants to bring forward proposals in this regard.

3.4 Market Based Service Standards

Market based service standards provide an important link between 'technical' performance and the impact of that performance on 'market' outcomes.

Although Hydro Tasmania recognises the difficulties associated with the development of market based performance measures (particularly in isolating or removing non-network impacts), the use of appropriately designed performance incentives incorporating caps, collars and sharing factors will ensure that a TNSP can be broadly incentivised in the right direction.

In its report, SKM noted that "the initial suite of performance measures only goes part of the way in terms of meeting the desire to incorporate some

measures of 'market impact'."¹⁸ While further work is required to gather this information, Transend should be required to work with NEMMCO and other market participants to bring forward proposals in this regard, such that the gathering of historical performance can begin immediately NEM entry is complete.

For the avoidance of doubt, this performance measure would be the impact of network constraints on the whole market whilst the negotiated enhanced services discussed in Section 4 refer to measures targeted for Hydro Tasmania.

3.5 Connection Process Performance

TNSPs play a vital role in facilitating competition by providing open access to their transmission systems. A key aspect of this open access is the efficacy and timeliness of the connection enquiry, application and agreement process. The main Hydro Tasmania submission, dated 30 April, highlighted our concern about Transend's performance to date in this area.

It is interesting to note that in 1999 Ofgem in the UK considered connections so significant that it placed an enforcement order requiring Transco (UK TNSP) to:

- obtain ISO 9001 certification for its connection quotation operations;
- introduce compensation schemes for people adversely affected by late and wrong quotations; and
- audit these activities.

Even though Transco has improved significantly in these areas since 1999, Ofgem has revisited the subject and considered that further regulatory action is required.

While we are not arguing that Transend's performance warrants action of this sort, we are highlighting the need for regulatory oversight of this important area, even if some of the services provided might be considered contestable.

To this end, we would propose performance measures that monitor:

- how long it takes for Transend to respond to connection enquiries;
- how long it takes to provide an offer to connect, after a completed connection application has been received
- how long it takes to complete a connection agreement; and
- the extent to which Transend over or under estimates the costs of connection¹⁹.

Many of the performance measures listed above may not be suitable for a PI scheme and in fact may be monitored in part under Transend's Licence

¹⁸ Transmission Network Service Provider (TNSP) Service Standards, Australian Competition and Consumer Commission, November 2002, pg 14

¹⁹ Hydro Tasmania is not suggesting Transend's estimates are inaccurate. However, with 5½ years before a monitoring process of this type can be considered again, Hydro Tasmania believes it would be prudent to commence data collection during the impending revenue reset period to potentially allow implementation in the following reset period.

requirements with OTTER. Nonetheless the Commission may also consider that it has a monitoring role in relation to Transend's compliance with its Access Undertaking under schedule 5.8 of the Code.

Recommendations

- c) Transend should, over the impending revenue reset period, monitor and report on the availability of individual critical circuits (as listed in Attachment 2) with a view to potentially incorporating them into the PI scheme for the following revenue reset period.
- d) Where information on the performance measures detailed in this section and Attachments 5 and 6 is readily available, Transend should capture and report relevant information to ensure, where appropriate, performance incentives can be developed for the following revenue reset.
- e) To the extent that information on the performance measures detailed in this section and attachments 5 and 6 is not currently available, Transend should propose a mechanism to capture the relevant information.
- f) SPS related measures, network capability measures and market based measures should be formulated by Transend in conjunction with relevant market participants as soon as possible to enable Transend propose a mechanism to capture relevant information.

4 Negotiated Enhanced Service Levels

4.1 Congestion Incentives

As discussed in Hydro Tasmania's main submission, dated 30 April, Hydro Tasmania has been seeking to engage Transend in discussion of enhanced service levels. To date, this has been unsuccessful due to Transend's concerns about:

- whether such a process would have implications under the TPA;
- diverting resources away from its preparation of the Application;
- entering into contracts that have not fully considered the implications of NEM entry;
- the potential for those contracts to be impacted by subsequent regulatory changes; and
- offering an 'unregulated' performance agreement which relates to a regulated asset.

In this section, we set out the broad framework that we would envisage for the negotiation of an enhanced service level.

Potential scheme attributes

Hydro Tasmania seeks to negotiate an arrangement with Transend that broadly provides Transend with an incentive to maximise the value of transmission capability that effects Hydro Tasmania's plant. The incentive payments should be based on sharing factors, caps and collars analogous to the SKM scheme.

The scheme would be based on pre-defined congestion costs. As various parties have noted this is a non-trivial matter, complicated even further by the nature of hydro and wind generation. The principles upon which any scheme would be designed would be as follows:

- that an objective and forecastable definition of congestion costs can be developed;
- that an objective and auditable measurement of congestion costs can be developed;
- that effects outside Transend's influence can be excluded from the definition of congestion costs;
- that other transmission users will either:
 - continue to receive their existing level of service; and/or
 - be able to join the scheme to receive an enhanced level of service;
- that an incentive mechanism can be designed which provides Transend with adequate incentives that are consistent with their preferred risk/reward profile, and these incentives are broadly outside the revenue cap.

Regulatory issues

While the Code clearly envisages arrangements of this type, it does not specify, for example, safe harbour provisions to provide reassurance to the TNSP nor the transmission user that the arrangement will withstand regulatory scrutiny. Absent these safe harbour provisions, it would appear that any arrangement would need to be robust in respect of the following issues:

- the enhanced service does not preclude or limit new entry by other market participants;
- service to existing users is not worsened;
- recognition of the use of existing regulated assets and therefore an appropriate sharing factor of any incentive payments between Transend and consumers;
- incentives to the TNSP that are sufficient in magnitude to deliver the enhanced service; and
- achieving an adequate balance between transparent information disclosure and maintaining commercial confidentiality.

Recommendations in this regard are provided at the end of this section.

4.2 Customer Service Charter

Competitive large scale business to business relationships often involve 'partnering arrangements' to focus the customer and supplier on working more closely to ensure win-win outcomes. In the regulated domain, this type of arrangement might well give rise to competition concerns.

However, it should be possible to agree a Customer Service Charter that provides for two companies to work closely together within the regulatory framework. Given the exciting opportunities that face the Tasmanian industry over the next five years, it is essential that Hydro Tasmania and Transend work closely together, while ensuring that new entrants are afforded similar high levels of service.

To this end, Hydro Tasmania is seeking to develop a Customer Service Charter with Transend that would cover issues such as:

- Timelines for negotiations
- Customer satisfaction surveys
- Alternative dispute resolution
- Information sharing protocols
- Other generic customer service issues

It is not Hydro Tasmania's intention that this should be an exclusive arrangement, but that its terms should be publicly available, and available to any customer who wishes to 'formalise' the softer aspects of their relationship with Transend.

Equally, Hydro Tasmania is mindful that a Customer Service Charter could be misconstrued as having the potential to lead to anticompetitive outcomes.

Recommendations

- g) Although Hydro Tasmania will continue to seek to engage Transend in negotiations working towards an enhanced incentive arrangement of this nature, at this stage, we look to the Commission to provide some further guidance on the suitability of the arrangements we are seeking to develop.
- h) The Commission provide guidance around TPA implications and interaction with the Code whilst cognisant that shared ownership requires a transparent process consistent with commercial confidentiality.
- i) The Commission consider whether it is appropriate to develop enhanced service level negotiating guidelines, similar to the Negotiating Discounts guidelines.
- j) Seek the Commission's confirmation that there are no prima facie substantive regulatory issues involved with the development of a customer service charter.

5 Hydro Tasmania Recommendations

The following table summarises Hydro Tasmania's recommendations as detailed in sections 2, 3 and 4 of this document.

Section 2

- a) Transend should be required to develop performance incentives consistent with the targets in Attachment 2 and 3.
- b) Transend should be required to propose a mechanism to capture information on hours constrained (intra-regional and inter regional).

Section 3

- c) Transend should, over the impending revenue reset period, monitor and report on the availability of individual critical circuits (as listed in Attachment 2) with a view to potentially incorporating them into the PI scheme for the following revenue reset period.
- d) Where information on the performance measures detailed in Section 3 and Attachments 5 and 6 is readily available, Transend should capture and report relevant information to ensure, where appropriate, performance incentives can be developed for the following revenue reset.
- e) To the extent that information on the performance measures detailed in Section 3 and attachments 5 and 6 is not currently available, Transend should propose a mechanism to capture the relevant information.
- f) SPS related measures, network capability measures and market based measures should be formulated by Transend in conjunction with relevant market participants as soon as possible to enable Transend propose a mechanism to capture relevant information.

Section 4

- g) Although Hydro Tasmania will continue to seek to engage Transend in negotiations working towards an enhanced incentive arrangement of this nature, at this stage, we look to the Commission to provide some further guidance on the suitability of the arrangements we are seeking to develop.
- h) The Commission provide guidance around TPA implications and interaction with the Code whilst cognisant that shared ownership requires a transparent process consistent with commercial confidentiality.
- i) The Commission consider whether it is appropriate to develop enhanced service standard negotiating guidelines, similar to the Negotiating Discounts guidelines.
- j) Seek the Commission's confirmation that there are no prima facie substantive regulatory issues involved with the development of a customer service charter.

ATTACHMENT 1 PROPOSED PERFORMANCE INCENTIVE TARGETS

Each of the service standards listed in Figure 1 (section 1) are defined below. In addition each service standard is referenced to the relevant section in this document.

Service Standard	The associated performance measure should reflect the extent to which:	Section		
		2	3	4
Market-based optimisation				
• Optimum system development	The TNSP optimally develops the transmission system in response to market signals.			
• Real time value	The transmission system allows optimum market benefits to be realised.		✓	✓
Technical performance				
• Availability	The transmission system is available for service.	✓	✓	
• Loss of supply	Transmission faults and outages result in losses of supply.	✓	✓	
• Quality of supply	The transmission network provides adequate resources to manage quality of supply issues.	✓	✓	
• Outage management	The process for notifying outages to market participants provides adequate notice and information.	✓	✓	
Open access				
• Connections process	The TNSP responds to connection enquires, makes and offers and concludes agreements in a timely and effective manner.		✓	
• Modifications process	The TNSP responds to modification enquires, makes and offers and concludes agreements in a timely and effective manner.		✓	
• Negotiating enhanced services	The TNSP responds to enquires in respect of negotiating enhanced services, makes and offers and concludes agreements in a timely and effective manner.		✓	
Customer service				
• Provision of information	The TNSP provides adequate information to their customers.			✓
• Customer satisfaction	Customers are satisfied with all aspects of the TNSP's service.			✓
• Dispute resolution	The TNSP manages the dispute resolution process effectively.			✓

Table1 Service Standard Definition and Reference

ATTACHMENT 2 PROPOSED PERFORMANCE INCENTIVE TARGETS

For each performance measure included in Transend's proposed PI scheme, this attachment details Transend's past performance and Transend's and Hydro Tasmania's proposed performance incentive targets.

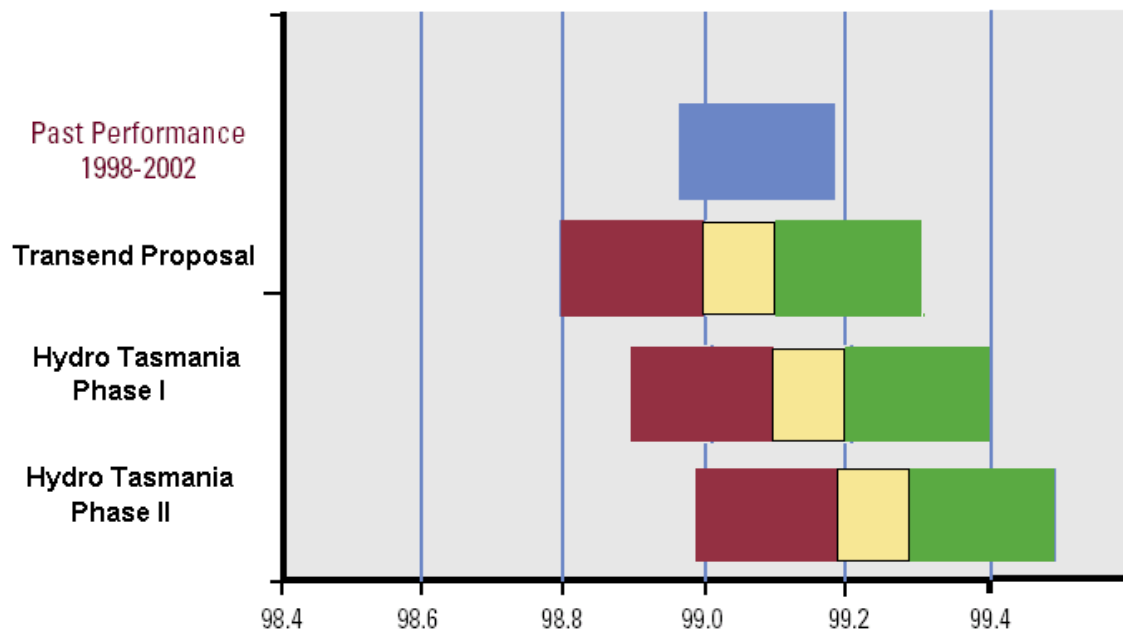
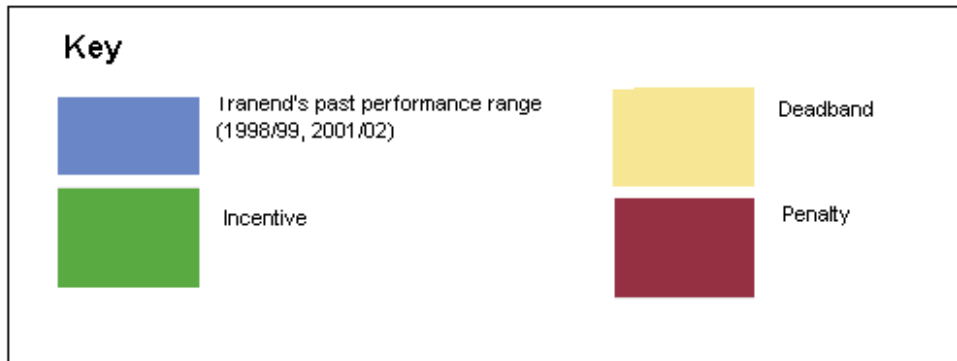


Figure 3 Transmission Circuit Availability

ATTACHMENT 2

PROPOSED PERFORMANCE INCENTIVE TARGETS (cont)

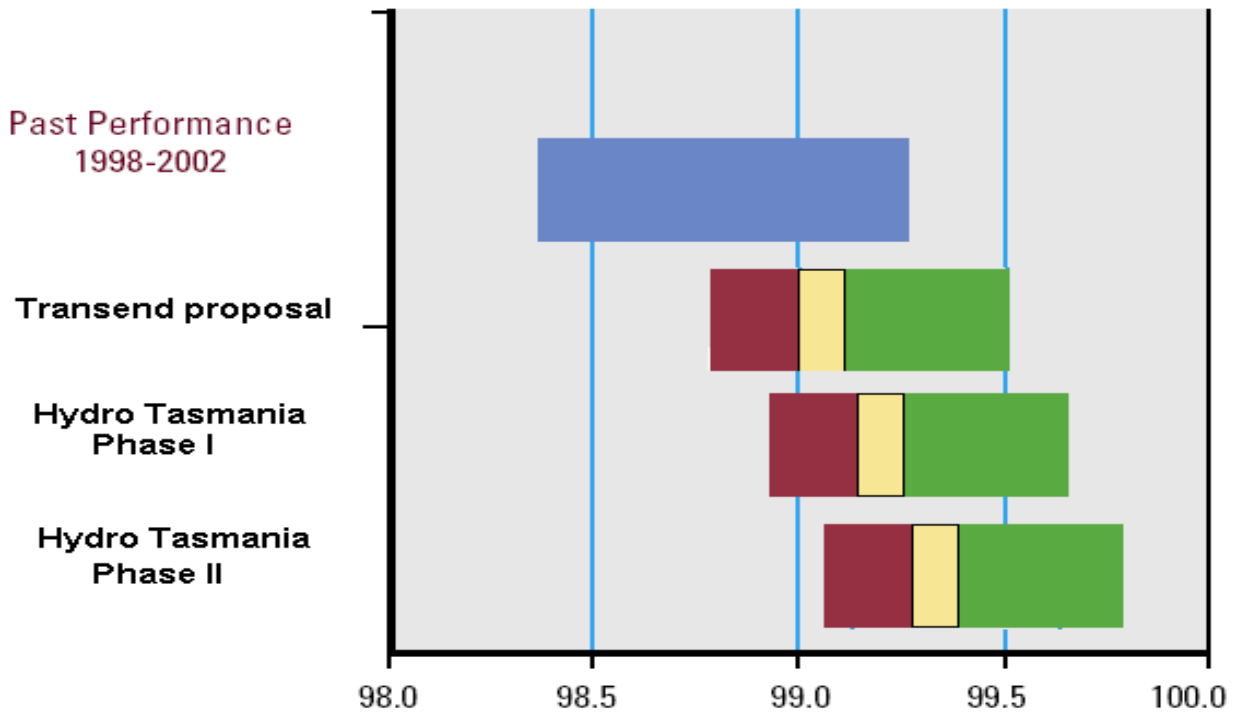


Figure 4 Transformer Availability

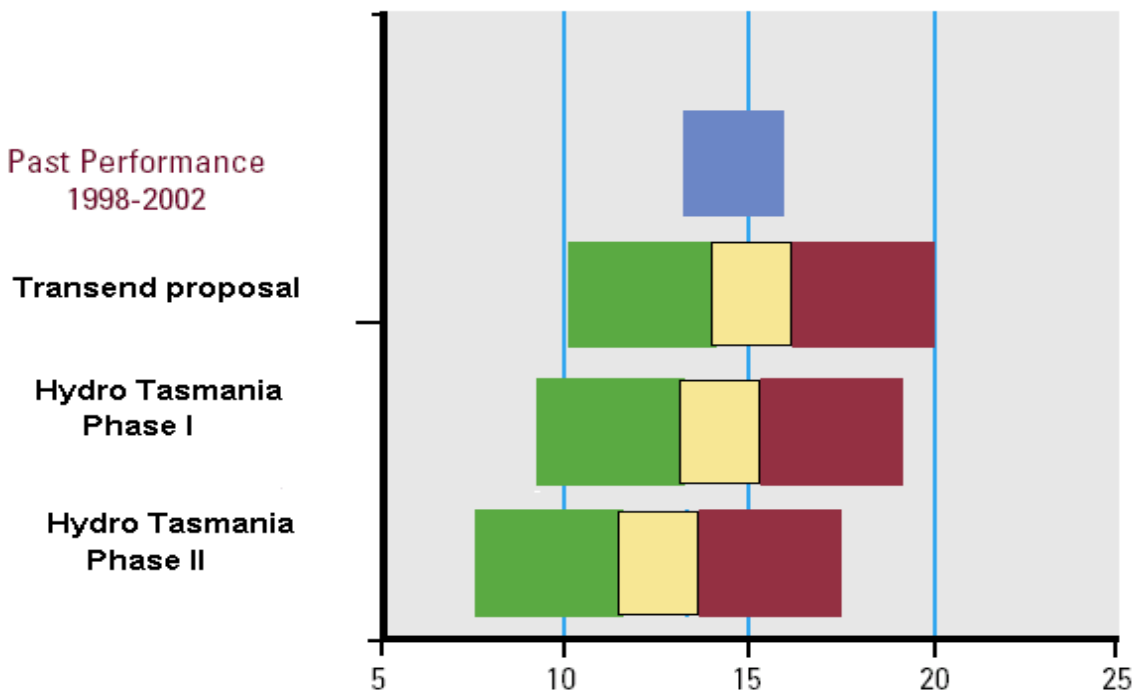


Figure 5 Loss of supply events >0.1 Minutes

ATTACHMENT 2 PROPOSED PERFORMANCE INCENTIVE TARGETS (cont)

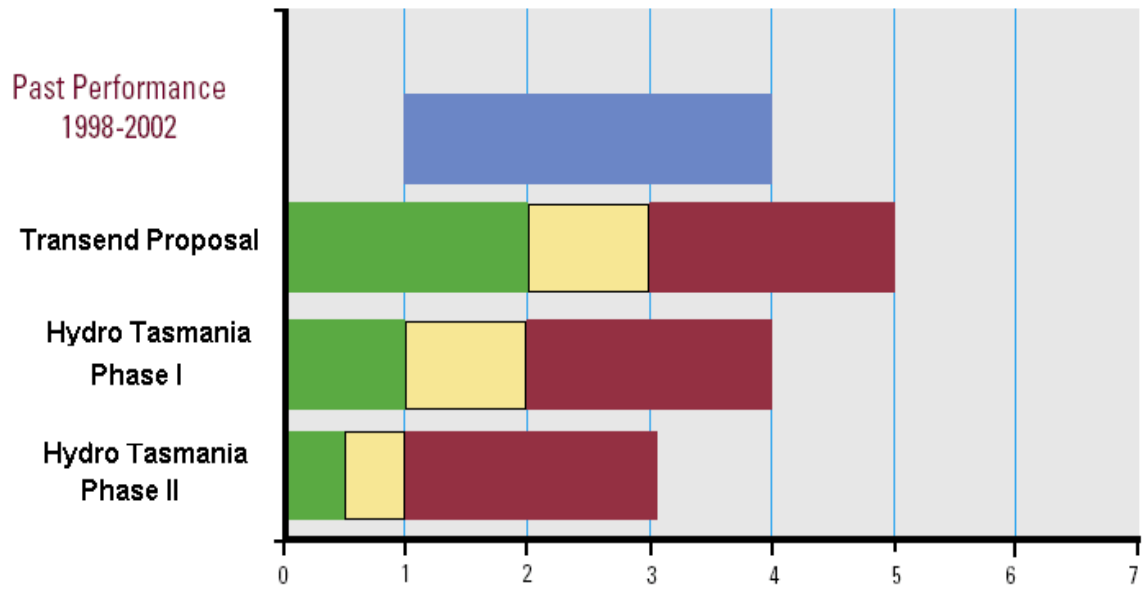


Figure 6 Loss of supply events >2 minutes

ATTACHMENT 3 PERFORMANCE TARGET – AVERAGE FORCED OUTAGE DURATION

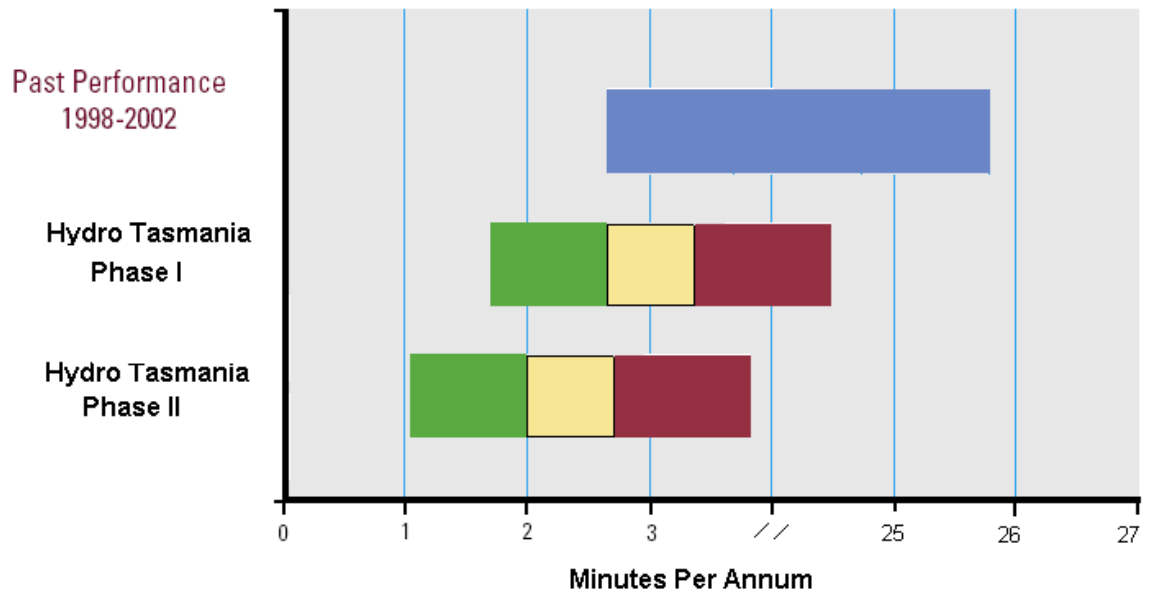
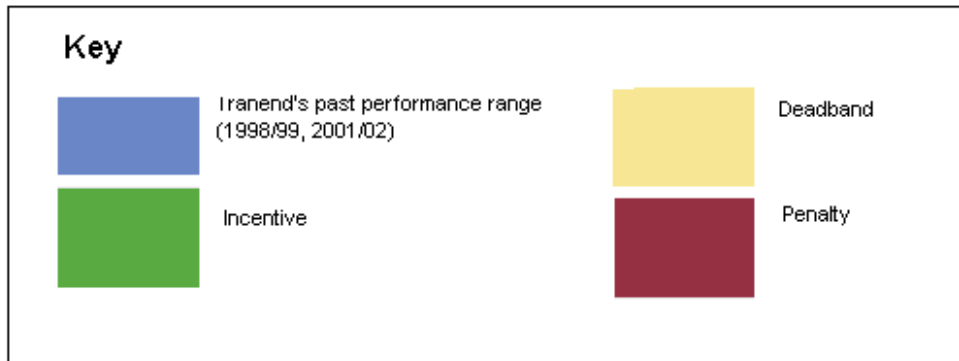


Figure 7 Loss of supply events >2 minutes



ATTACHMENT 4 CRITICAL TRANSMISSION CIRCUITS

Circuits

Gordon – Chapel Street 220kV No 1 & No 2 Circuits

Liapootah – Chapel Street 220kV No 1 & No 2 Circuits

Liapootah – Palmerston 220kV No 1 & No 2 Circuits

Palmerston – Sheffield 220kV Circuit

Palmerston – Hadspen 220kV No 1 & No 2 Circuits

Palmerston – Hadspen 110kV No 1 & No 2 Circuits

Hadspen - George Town 220kV No 1 & No 2 Circuits

Sheffield - George Town 220kV No 1 & No 2 Circuits

Farrell – Sheffield 220kV No 1 & No 2 Circuits

ATTACHMENT 5 Circuit Availability Related Service Measures

No	Standard	Measurement	Other Information
1	Network capability (based on limiting element)	To be developed in line with discussions 3.1	
2	Line forced outage rate (equipment failure, Op units, lightening & storms)	Number of incidents per critical circuit	
3	Availability of static VAR compensators	% of units available	
4	Availability of synchronous condensers	% of units available	
5	Availability of capacitor banks	% of units available	
6	Average restoration time	Duration between initiation and restoration of equipment	<ul style="list-style-type: none"> • Predominant focus on 220kV backbone • Recognise interaction with average outage time.
7	Frequency of unplanned interruptions	Number of unplanned interruptions per annum	
8	Average unplanned interruption time	Hours per annum	<ul style="list-style-type: none"> • Critical and non-critical circuits

ATTACHMENT 6 Outage Planning Service Standards

No	Standard	Measurement	Other Information
1	Period of notice for planned outages	% of planned outages booked / changed within 30 days and 7 days	<ul style="list-style-type: none"> • Cause of outages and Transend's ability to control to be considered (eg. vandalism)
2	Period of notice for planned interruptions	% of planned interruptions booked / changed within 30 days and 7 days	<ul style="list-style-type: none"> • Cause of interruptions and Transend's ability to control to be considered (eg. vandalism)
3	Duration of planned interruptions	Variation of planned duration of interruption against actual time of duration per interruption.	
4	Frequency of planned interruptions	Number of planned interruptions per annum	<ul style="list-style-type: none"> • Predominant focus on 220kV backbone