

TRANSPower NEW ZEALAND LIMITED

Commerce Act
(Transpower Thresholds)
Notice 2006
Compliance Statement
Assessment Date
(30 June 2007)

Public Version

16 August 2007

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1. Introduction

1. This Compliance Statement has been prepared by Transpower New Zealand Limited (“Transpower”) to demonstrate to the Commerce Commission (the “Commission”) its compliance, or otherwise, with the Commerce Act (Transpower Thresholds) Notice 2006 (the “Gazette Notice”) at the assessment date 30 June 2007.
2. Unless the context otherwise requires, terms used in this Compliance Statement have the same meanings as in the Commerce Act 1986 or the Gazette Notice and references to clauses are references to clauses in the Gazette Notice.
3. As required by clause 7(1) of the Gazette Notice, this Compliance Statement comprises a written statement, an Auditor’s report and a certificate executed by two directors of Transpower.
4. Pursuant to clause 7(4) of the Gazette Notice, Transpower has requested that the information set out in Schedule 14 be excluded from the public version of the Compliance Statement.
5. In this Compliance Statement, Transpower:
 - a. demonstrates that it has not complied with clause 5(1)(a) and clause 5(1)(b) of the price path threshold during the assessment period;
 - b. lists the excluded services (and the reasons and supporting evidence for excluding these services) for which revenue is not included in Transpower’s calculation of “notional revenue” for assessment against the price path threshold, viz.:
 - i. the purchase of ancillary services in so far as they relate to costs incurred, if Transpower demonstrates beyond reasonable doubt that there is effective competition for the provision of those services;
 - ii. goods and services provided by Transpower under new investment contracts entered into prior to 5 June 2003, as well as goods and services provided by Transpower under new investment contracts entered into after 5 June 2003 only if the other party has agreed in writing that the terms and conditions are reasonable or reflect contestable provision of the goods and services;
 - iii. services for which loss and constraint rentals are paid, if Transpower demonstrates beyond reasonable doubt that the amounts resulting from settlement of those services are passed on transparently and in full to Transpower’s customers;
 - iv. non-conveyance services, namely pricing services provided to M-Co¹, metering and profiling services provided by Energy Market Services² to generators, distributors and retailers; the provision of telecommunication facilities services to third parties; and other miscellaneous non

¹ Market Place Company Limited, as market administrator under the EGRs.

² Energy Market Services Limited, a wholly owned subsidiary of Transpower (formerly d-cypha Limited).

conveyance services where Transpower demonstrates beyond reasonable doubt that those services are not directly related to the provision of electricity transmission; and

- c. demonstrates that it has not complied with the quality threshold (unplanned interruptions and customer interruptions);
- d. demonstrates that it has complied with the quality threshold (customer communication).

2. Price Path Threshold Statement

6. This section demonstrates that Transpower has not complied with the price path threshold set out in clause 5(1)(a) and 5(1)(b) of the Gazette Notice at the assessment date.
7. Clause 5(1)(a) requires that Transpower's notional revenue (including any EV adjustment charges) at the assessment date is not to exceed Transpower's allowable notional revenue (excluding any EV adjustment charges) under the CPI-X price path at the assessment date.
8. Transpower's notional revenue (including any EV adjustment charges) at the assessment date is \$534,871,921.
9. Transpower's allowable notional revenue (excluding any EV adjustment charges) under the CPI-X price path at the assessment date is \$516,021,397.
10. Therefore, Transpower does not comply with the clause 5(1)(a) price path threshold.
11. Clause 5(1)(b) requires that Transpower's notional revenue at any time during the assessment period is not to exceed the greater of Transpower's allowable notional revenue (excluding any EV adjustment charges) at the assessment date, and Transpower's allowable notional revenue (excluding any EV adjustment charges) at the reference date of 30 June 2004 under Clause 5 of the Commerce Act (Electricity Lines Thresholds) Notice 2003 (the "2003 Gazette Notice").
12. Transpower's maximum notional revenue during the assessment period 1 July 2006 to 30 June 2007 is \$534,871,921.
13. The greater of the allowable notional revenue (excluding any EV adjustment charges) at the assessment date and the allowable notional revenue (excluding any EV adjustment charges) at the reference date of 30 June 2004 (2003 Gazette Notice) is \$516,021,397.
14. Therefore, Transpower does not comply with the clause 5(1)(b) price path threshold.
15. Further evidence supporting the price path threshold is provided in section 4 of this Compliance Statement.

3 Quality Threshold Statement

16. This section demonstrates that Transpower has not complied with the quality threshold set out in clauses 6(1)(a) and 6(1)(b) of the Gazette Notice, but it has complied with 6(1)(c) at the assessment date.

Number of unplanned interruptions

17. Clause 6(1)(a) requires that the total number of unplanned interruptions of Transpower for the period of 12 months ending on the assessment date does not exceed the 1 July 1998 to 30 June 2003 five year average total number of unplanned interruptions of Transpower.
18. The total number of unplanned interruptions of Transpower for the period of 12 months ending on the assessment date of 30 June 2007 is 104.0.
19. The 1 July 1998 to 30 June 2003 five-year average total number of unplanned interruptions of Transpower is 92.4.
20. Therefore, Transpower does not comply with clause 6(1)(a).
21. Refer to section 6 for more detail as to the calculation of the number of unplanned interruptions of Transpower.

Customer interruptions

22. Clause 6(1)(b) requires that the total customer interruptions, calculated in system minutes, of Transpower for the 12 months ending on the assessment date does not exceed the five year average total customer interruptions for the period 1 July 1998 to 30 June 2003, calculated in system minutes of Transpower.
23. The total customer interruptions, calculated in system minutes, of Transpower for the 12 months ending on the assessment date is 11.6.
24. The 1 July 1998 to 30 June 2003 five-year average total customer interruptions, calculated in system minutes, of Transpower is 8.3.
25. Therefore, Transpower does not comply with clause 6(1)(b).
26. Refer to section 6 for more detail as to the calculation of the customer interruptions of Transpower.

Customer communication

27. Clause 6(1)(c) prescribes the customer communication criterion. Transpower is required to meaningfully engage with customers to determine their demand for service quality (with reference to price) and to reflect these service quality demands in its asset management decisions.

28. For the purposes of compliance with the 2003 Gazette Notice, Transpower developed and implemented a thorough set of policies and processes in relation to:
- a. advice to customers of price-quality trade-offs available to them;
 - b. consultation with them as to the quality they require with reference to price;
 - c. consideration of their views; and
 - d. adequately taking those views into account when making asset management decisions.

These processes have now become part of Transpower's normal business processes, undertaken annually.

29. Therefore, Transpower complies with clause 6(1)(c).
30. Refer to section 7 for more details as to the policy and procedure and their implementation.

4 Price Path Threshold Calculation

31. Clause 5(1)(a) requires that Transpower's notional revenue (including any EV adjustment charge) at the assessment date (calculated in accordance with the numerator of the left hand side of the expression below) **is not to exceed** Transpower's allowable notional revenue (excluding any EV adjustment charge) under the CPI-X price path at the assessment date (calculated in accordance with the denominator of the left hand side of the expression below).

32. The expression is $\frac{NR_t}{R_t} \leq 1$.

33. Notional revenue NR_t at the assessment date is equal to $\sum P_{i,2007} Q_{i,0} - K_{2007}$.

34. $P_{i,2007}$ is the i^{th} price pertaining to every specified service at the assessment date.

35. The term "price" is defined as:

- a. a price in nominal terms (such as a tariff, fee or charge) or a component thereof that Transpower charges in relation to specified services, and includes (but is not limited to):
 - i. each connection charge for each customer at each point of connection to the national grid;
 - ii. each interconnection rate for each customer at each point of connection to the national grid;
 - iii. each HVDC rate for each customer at each point of connection to the national grid;
 - iv. each EV adjustment charge for each customer at each point of connection to the national grid; and
 - v. each component charge associated with the provision of System Operator services,

but does not include

- b. any amounts described in paragraph (b) of the definition of pass-through costs of the Gazette Notice.

36. To determine the price for every specified service, Transpower has taken:

- a. for the assessment date (i.e. 30 June 2007), the annual charges for the pricing year commencing 1 April 2007; and
- b. for the reference date (i.e. 30 June 2004), the annual charges for the pricing year commencing 1 April 2003.

37. To calculate its notional revenue, Transpower has used:

- a. a base quantity corresponding to the i^{th} price for the year ending 30 June 2003 (i.e. pricing year 1 April 2003 to 31 March 2004) in relation to HVDC and interconnection rates; and
- b. a base quantity of 1 for each of its charges that are fixed in nature (i.e. connection charges, EV adjustment charges, long-term contracts, new investment charges, notional embedding fees, transitional charges, HVDC adjustment charges, and system operator fees). The summation of the

annual charges for the specified services for which the quantity is 1 equates to the notional revenue for those services.

38. The Gazette Notice requires Transpower's compliance statement to contain prices (including each charge or rate referred to in paragraphs (a)(i) to (iv) of the definition of price stated separately for each customer and point of connection) and base quantities (including the base quantity corresponding to each such separate charge or rate). This information is set out in Schedule 14. Schedule 14 also includes details of the fees associated with long term contracts, notional embedding fees and HVDC adjustment charges.
39. The calculation of $\sum P_{i,2007}, Q_{i,0}$ is shown in an aggregated form in column P of Table 2 set out below.
40. K_{2007} = sum of all estimated pass-through costs (rates and Electricity Commission levies) for the pricing year 1 April 2007 to 31 March 2008 is equal to \$12,174,799. Its calculation is shown in cells P29 and P30 of Table 2 below.
41. Therefore, $\sum P_{i,2007}, Q_{i,0} - K_{2007}$ (i.e. notional revenue at the assessment date 30 June 2007) is \$534,871,921. The notional revenue for the 1 April 2007 pricing year is based on three months April 2007 to June 2007 of actual invoiced charges while the revenue for the remaining months July 2007 to March 2008 is based on estimates³.
42. Allowable notional revenue R_t at the assessment date is equal to $MR_{2004} (1 + \Delta CPI_t)(1 + \Delta CPI_{t-1})(1 + \Delta CPI_{t-2})(1 - X)(1 - X)(1 - X)$ excluding any EV adjustment charges.
43. MR_{2004} is the maximum notional revenue (excluding any EV adjustment charges) at the reference date 30 June 2004 which would not have caused Transpower to breach the price path threshold under the 2003 Gazette Notice at that date, subject to clauses 5(2) and 5(3). At the reference date 30 June 2004, the 1 April 2003 notional revenue (excluding any EV adjustment charges) was \$487,057,834 (its calculation is shown in column D of Table 2 below), and the 1 April 2004 notional revenue was \$501,985,727 (its calculation is shown in column G). The maximum notional revenue (excluding any EV adjustment charges) at the reference date 30 June 2004 which would not have breached the price path threshold under the initial Notice is \$487,057,834⁴.
44. X is 1 percent.

³ The revenue charges for the period July 2007 to March 2008 are based on estimated charges as, at the time of the preparation of this compliance statement, they have not yet been invoiced. The method for estimating revenues used for the calculation of the notional revenue is as follows:

- The EC levies from July 2007 to March 2008 have been based on the previous year's quantities for the same period adjusted for growth of 2 percent.
- Council rates have been based on the previous year's rates with a CPI adjustment;
- All other parts of the notional revenue (connection charges, the volume adjusted interconnection and HVDC charges, fixed contracts, notional embedding contracts, EV adjustment charges and the System Operator charges) are fixed for the period April 2007 to March 2008. As a result they were assumed to remain constant at the level of June 2007.

⁴ The base quantities used to determine allowable notional revenue were determined by reference to the definition of "specified services" set out in the Commerce Act (Transpower Thresholds) Notice 2006.

45. The average change in the consumer price index over the 12 month period that ends on 31 March during the assessment period is required to be calculated as follows:

$$\Delta \text{CPI}_t = \frac{\text{CPI}_{\text{Q2,t-1}} + \text{CPI}_{\text{Q3,t-1}} + \text{CPI}_{\text{Q4,t-1}} + \text{CPI}_{\text{Q1,t}}}{\text{CPI}_{\text{Q2,t-2}} + \text{CPI}_{\text{Q3,t-2}} + \text{CPI}_{\text{Q4,t-2}} + \text{CPI}_{\text{Q1,t-1}}} - 1.$$

46. The CPI figures published by Statistics New Zealand⁵ for the period ending March 2007 are:

Table 1: Quarterly CPI Figures

Quarterly		CPI
2005	Jun	962
	Sep	973
	Dec	979
2005	Mar	985
	Jun	1000
	Sep	1007
	Dec	1005
2007	Mar	1010

The average change in the consumer price index over the 12 month period ending 31 March 2007 is 3.15%.

47. The allowable notional revenue (excluding EV adjustment charges) under the CPI-X price path at the assessment date is \$516,021,397 (its calculation is shown in cells D36 to D44 of Table 2 below).
48. Transpower does not comply with Clause 5(1)(a) of the Gazette Notice. The breach of the price path threshold is \$18,850,524 (the calculation of the breach amount is shown in cell D46 of Table 2 below).
49. Clause 5(1)(b) requires that Transpower's notional revenue (including EV adjustment charges) at any time during the assessment period is **not to exceed** the greater of the allowable notional revenue (excluding any EV adjustment charges) at the assessment date under clause 5(1) of the Gazette Notice, and the allowable notional revenue (excluding any EV adjustment charges) at the reference date 30 June 2004 of the 2003 Gazette Notice.
50. The notional revenue (including any EV adjustment charges) at the assessment date under Clause 5(1) of the Gazette Notice is \$534,871,921 (its calculation is shown in column P of Table 2 below).
51. The allowable notional revenue (excluding any EV adjustment charges) at the assessment date under clause 5(1) of the Gazette Notice is \$516,021,397 (its calculation is shown in cells D36 to D44 of Table 2 below).
52. The allowable notional revenue (excluding any EV adjustment charges) at the reference date 30 June 2004 of the 2003 Gazette Notice is \$501,985,727 (its calculation is shown in column G of Table 2 below).

⁵ Statistics New Zealand, Consumer Price All Groups Index SE9A. (Note this index was rebased to June 2006. The 2006 September quarter CPI was the first index published using the new base)

53. Transpower does not comply with Clause 5(1)(b) of the Gazette Notice. The breach of the price path threshold is \$18,850,524 (the calculation of the breach amount is shown in cell D53 of Table 2 below).

5 Price Path Threshold Excluded Services

54. Clause 3 defines specified services for which the notional revenue is to be assessed against in the price path threshold. As described in Section 4 of Transpower's revised Compliance Statement dated October 2004, in respect of the first assessment date the services for which notional revenue has been calculated are:
- a. transmission asset owner services; and
 - b. system operator services.

See Schedule 1 for a full definition and explanation.

55. The definition permits certain activities of Transpower to be excluded from the assessment. Four categories have been excluded:
- a. Ancillary Service Purchase Costs, as explained in Schedule 2; and
 - b. New Investments, as explained in Schedule 3; and
 - c. Loss and Constraint Rentals, as explained in Schedule 4; and
 - d. Non-Conveyance Services; as explained in Schedule 5.
56. For each category of excluded service, the relevant schedule sets out the basis for the exclusion as provided under the relevant provision in the definition of specified services in clause 3 of the Gazette Notice.

6 Quality Threshold Reliability Information

57. Clauses 6(1)(a) and 6(1)(b) of the Gazette Notice require that reliability measures in relation to unplanned interruptions and the total customer interruptions of Transpower, for the 12 months ending on the assessment date, do not exceed the annual average of the five years between 1 July 1998 to 30 June 2003.

Unplanned Interruptions

58. Clause 6(1)(a) requires that:

$$I_{2007} \leq \left[\frac{I_{1999} + I_{2000} + I_{2001} + I_{2002} + I_{2003}}{5} \right]$$

where:

I_{year} = the total number of unplanned interruptions for the period of 12 months ending on 30 June in that year.

59. The total number of unplanned interruptions used to calculate the five year average are set out in table 3 below:⁶

Table 3: Five Year Average Unplanned Interruptions from 1999 to 2003

<i>Year to 30 June</i>	<i>Number of unplanned interruptions</i>
<i>1999</i>	<i>110.0</i>
<i>2000</i>	<i>62.0</i>
<i>2001</i>	<i>105.0</i>
<i>2002</i>	<i>113.0</i>
<i>2003</i>	<i>72.0</i>
<i>Total</i>	<i>462.0</i>
<i>Five Year Average</i>	<i>92.4</i>

60. The number of unplanned interruptions for the period of 12 months ending on the assessment date is 104.0.
61. 104.0 exceeds 92.4 and, therefore, Transpower has not complied with the requirement in clause 6(1)(a).

⁶ The number of unplanned interruptions for 2000/01 has increased to 105 from 102 as disclosed in the 2002/03 Information for Disclosure Gazette. This increase is due to a technical reclassification of the Waipawa substation as having two points of supply (originally one) for interruption reporting purposes. This reclassification affects the number of unplanned interruptions in 2000/01 only.

Customer Interruptions

62. Clause 6(1)(b) of the Gazette Notice requires that:

$$SM_{2007} \leq \left[\frac{SM_{1999} + SM_{2000} + SM_{2001} + SM_{2002} + SM_{2003}}{5} \right]$$

where:

SM_{year} = the total customer interruptions, calculated in system minutes, for the period of 12 months ending on 30 June in that year.

63. The total customer interruptions, calculated in system minutes, used to calculate the five year average are set out in the table 4 below:

Table 4: Five Year Average Customer Interruptions from 1999 to 2003

<i>Year to 30 June</i>	<i>Total customer interruptions calculated in system minutes</i>
<i>1999</i>	<i>9.7</i>
<i>2000</i>	<i>4.9</i>
<i>2001</i>	<i>12.7</i>
<i>2002</i>	<i>8.1</i>
<i>2003</i>	<i>6.3</i>
<i>Total</i>	<i>41.7</i>
<i>Five Year Average</i>	<i>8.3</i>

64. The total customer interruptions, calculated in system minutes for the period of 12 months ending on 30 June 2007 is 11.6.

65. 11.6 exceeds 8.3 and, therefore, Transpower has not complied with the requirement in clause 6(1)(b).

66. In deriving the statistics for customer interruptions and number of unplanned interruptions Transpower has applied the definitions as set out in the Gazette Notice and the Electricity (Information Disclosure) Requirements 2004 (“Information Disclosure Requirements”). In applying these definitions, interruptions that were backfed via alternate connection points or through embedded generation; and interruptions to controllable load or interruptible load have been excluded from the statistics where one or more of the following is relevant:

- a. there has not been a cessation of supply;
- b. load has been shifted rather than lost;
- c. load has the same function as spinning reserve.

67. Transpower considers the application of the definitions under these circumstances is consistent with the overall purpose of the Gazette Notice and Information Disclosure

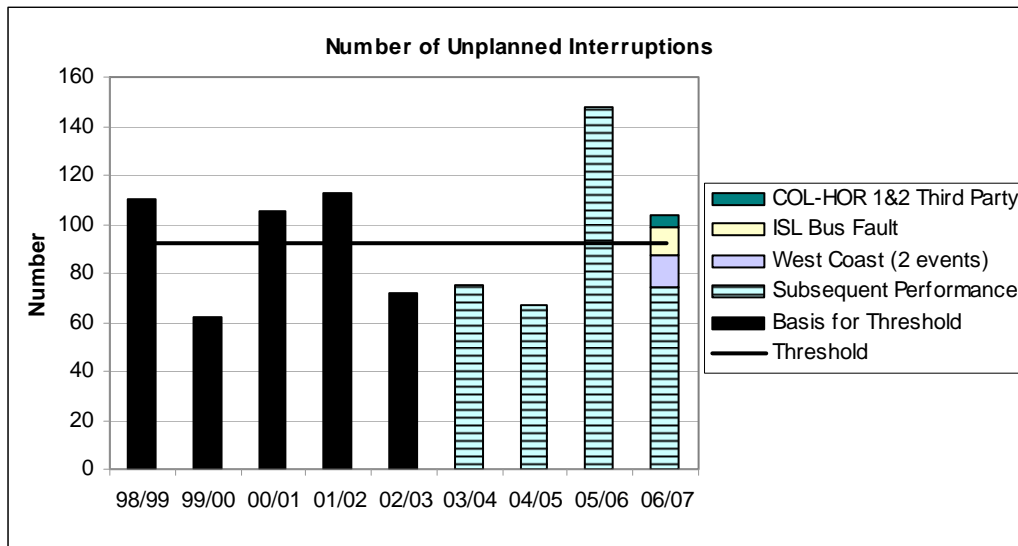
Requirements. This application has been consistently applied across the period 1 July 1998 to 30 June 2007.

Analysis of Transpower's Performance

Analysis of the Unplanned Interruptions:

68. The threshold value for the number of unplanned supply interruptions (Clause 6(1)(a) of the Gazette Notice) was exceeded by 11.6 (13% of the threshold).
69. The number of interruptions for 2006/07 falls within the range of values averaged to form the threshold, and is less than the median value of these five years (see Figure 1 below).

Figure 1: Transpower's Number of Unplanned Interruptions from 1999 to 2007⁷



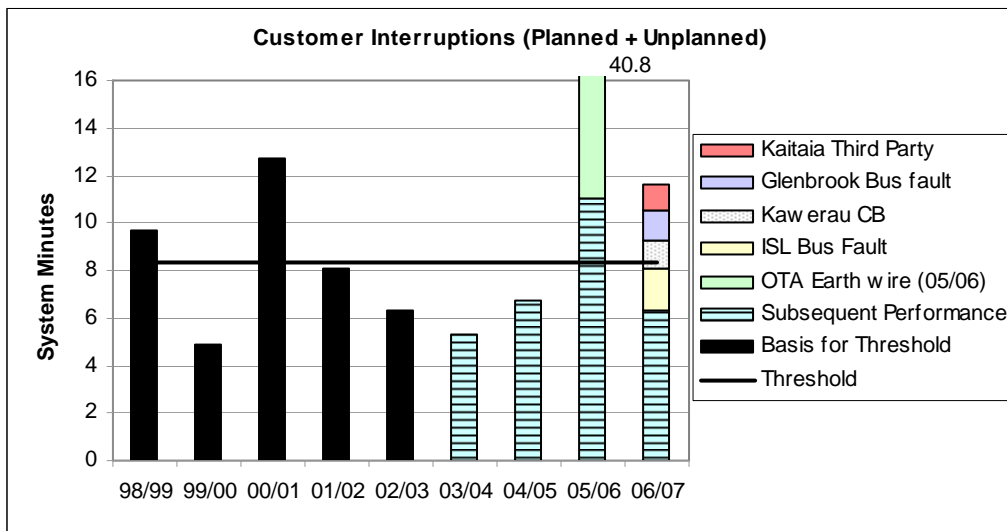
70. There were four incidents out of a total of 62 during 2006/07 which caused 30 separate interruptions or 29% of the 104 interruptions that occurred during the year. One of these incidents caused five interruptions and was the result of third party interference with Transpower transmission circuits. These four incidents are:-
- i) Earth sticks were left on part of the Islington 220 kV bus in error after planned maintenance and caused a bus fault and consequent interruptions to 12 points of supply throughout the north of the South Island;
 - ii) In February 2007 during a planned outage on a line supplying the West Coast, agricultural irrigating equipment made contact with the Coleridge-Hororata (COL-HOR 1 & 2) circuits supplying the region causing interruptions at 5 points of supply;
 - iii & iv) During planned outages of lines supplying the West Coast, the remaining line tripped for transient faults causing interruptions at a number of points of supply. This occurred on two occasions in September 2006 and May 2007 causing six and seven interruptions respectively.

⁷ Subsequent performance referred to in Figure 1 means Transpower's performance during the period following 30 June 2003.

Analysis of the Planned and Unplanned System Minutes:

71. The threshold for system minutes of planned and unplanned interruptions (Clause 6(1)(b) of the Gazette Notice) was exceeded by 3.3 system minutes. The total of 11.6 system minutes falls within the range of values which were averaged to form the threshold (see Figure 2 below) and is within the range of normal variation expected for relatively random events such as these.

Figure 2: Number of Customer Interruptions from 1999 to 2007⁸



72. 45% of the total system minutes were the result of just 4 incidents. One of these incidents resulted in 1.1 system minutes and was the direct result of third party interference with Transpower transmission assets. The four incidents which contributed significantly to the 2006/07 outcome are:-

- i) Conductor damage caused by third party quarry operations near the 110 kV Kaitaia-Kaikohu line in October 2006 resulted in loss of power to Kaitaia for 7.5 hours and 1.1 system minutes of non-supply.
- ii) In August 2006, part of the Glenbrook 33 kV bus tripped when a bus insulator failed causing a partial supply interruption to NZ Steel. This resulted in 1.3 system minutes of non-supply;
- iii) At Kawerau in August 2006 one of two circuit breakers which provided a dual supply to an 11 kV supply point had inadvertently been left in the 'racked out' position after maintenance, and not noticed because of an indication design error. When the other circuit breaker was opened for maintenance there was a partial interruption to the supply to the customer that amounted to 1.15 system minutes.
- iv) The Islington 220 kV bus fault in September 2006 resulted in 1.8 system minutes of non-supply.

⁸ Subsequent performance referred to in Figure 2 means Transpower's performance during the period following 30 June 2003.

Transpower Interruption Recording Process

73. Clause 7(1)(a)(iii) of the Gazette Notice requires that Transpower describes the process by which it determines the total number of unplanned interruptions and total customer interruptions for the assessment period. A flowchart presenting Transpower's Interruptions Recording Process is shown below on page 21.
74. The process by which Transpower collects supply interruption data is as follows:
- a. identification of interruptions;
 - b. collation of supply interruption data;
 - c. Transpower processing of interruptions data;
 - d. end of year work.

Identification of Interruptions:

75. Transpower's Operating Contractor is required to record a range of operational events in accordance with Transpower Service Specification TP.SS 01.01 "Reporting by Contractors". Accordingly, the contractor is required to prepare an Interruption to Connection Report ("ITCR") for each Transpower initiated event that results in an interruption to connection ("ITC") in accordance with Appendix H of TP.SS 01.01 (Schedule 6). This applies to both planned and unplanned interruptions.
76. Planned interruptions are notified to customers in accordance with Transpower's "Outage Protocol" Appendix A of the Transpower Service Specification TP.SS 07.01 (Schedule 7).
77. SCADA records showing switching operations and manually entered operator notes are time-tagged and recorded in TPIX (Transpower Information eXchange). Time series analogue data from the SCADA system is recorded in Transpower's HabConnect database.

Collation of Supply Interruption Data:

78. Transpower engages a Technical Report Analyst contractor ("TRA") to check and collate the ITCRs at the end of each month. The collation and coding of interruptions by the TRA is performed according to Transpower's "Coding Instructions for Interruptions". The TRA:
- a. scans TPIX data to ensure all ITCs have been collected;
 - b. checks ITCRs for accuracy using TPIX to confirm time and duration;
 - c. adds additional data (customer details, cause codes, etc) from TPIX information and by contacting Transpower staff and contractors as necessary; and

- d. codes and formats the interruptions data for addition to Transpower Interruptions database, and dispatches it to Transpower's Performance Analysis Engineer (PAE).

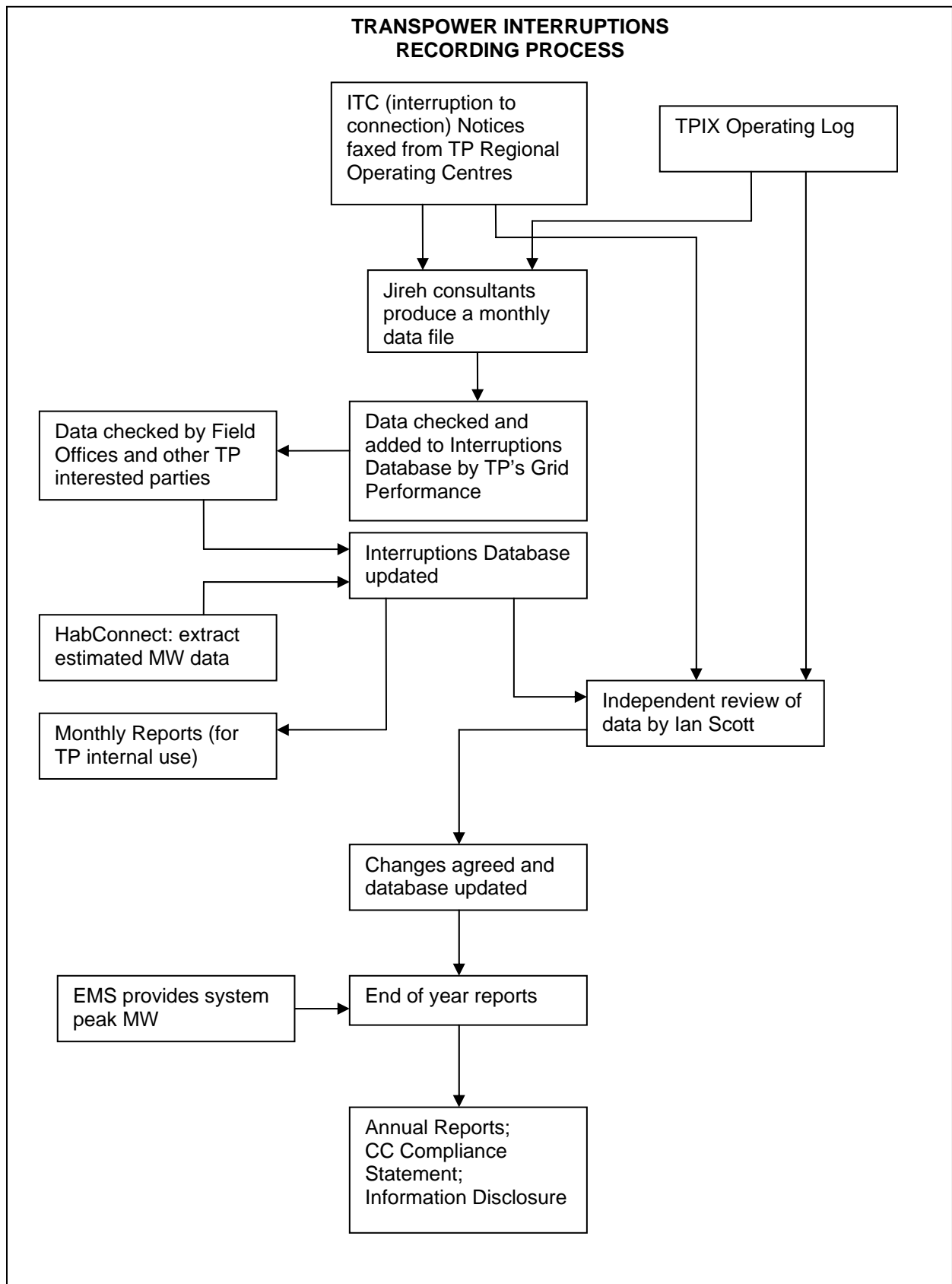
Transpower Processing of Interruptions Data:

- 79. On receipt of the monthly data file from the TRA:
 - a. the ITC data is again checked against ITCR notices and TPIX, and checked for consistency with "Coding Instructions for Interruptions";
 - b. check sheets for the Planned and Unplanned interruptions are circulated to the Operations Co-Ordinators at each of Transpower's three Field Services Offices seeking confirmation that:
 - i. the interruptions did occur as shown;
 - ii. the interruptions were Transpower caused; and
 - iii. there were no other interruptions that have not been recorded.
 - c. data from HabConnect is used to estimate the MW interrupted and the MW-minutes not supplied as a result of the interruption; and
 - d. the interruptions for the month are added to Transpower's Interruptions database.

End of Year:

- 80. At the end of each financial year:
 - a. the system peak MW for the financial year is provided by EMS Ltd;
 - b. Transpower engages an independent contractor to review the Supply Interruptions data as per the Scope of Work (Schedule 8);
 - c. changes are agreed and the database is updated; and
 - d. the interruptions data is summarised for:
 - i. reporting against Targets in Transpower's Statement of Corporate Intent;
 - ii. reporting as required by Information Disclosure Requirements; and
 - iii. Threshold Compliance Statement for the Gazette Notice.

Figure 3: Flowchart of Transpower's Interruption Recording Process



7 Quality Threshold Customer Communication

81. Clause 6(1)(c) requires Transpower, during the assessment period, to have:
- a. properly advised its customers about the price-quality trade-offs available to them in relation to the goods and services provided by Transpower; and
 - b. consulted with its customers about the quality of goods and services that they require, with reference to the prices of those goods and services; and
 - c. properly considered the views expressed by customers during and after that consultation; and
 - d. adequately taken these views into account when making its asset management decisions.

82. To ensure compliance, Transpower implemented a policy for *Customer Communication on Quality* (attached as Schedule 9) (the "Policy Document") and a *Procedure for Customer Communication on Quality* (attached as Schedule 10) (the "Procedure Document"). The policy and procedure now form part of Transpower's normal business processes and are part of ongoing communications with customers about quality of service and price. As the policy and procedures are now part of Transpower's normal business processes, the year specific dates should be read as the current year in which the review is being undertaken. In addition, Transpower also communicates regularly with customers on specific issues which may be initiated either by Transpower or the customer itself.

83. The following terms used in the attachments have the following meanings:

- a. Quality:

In the context of the quality threshold, 'quality' is defined as the total number of planned interruptions and the total number of customer interruptions measured in system minutes. Therefore, the quality issues relevant for the purposes of the customer communication component of the quality threshold relate to quality as measured by these means.

- b. Price-quality trade-offs available to customers:

The price-quality trade-offs that are available to customers are set out in Transpower's:

- i. Asset Management Plan price-quality trade off opportunities;
- ii. connections contract documents (the Connections Contract and the Posted Terms); and
- iii. new investment contract documents.

These are described in more detail below.

- c. Central register / Customer file:

The customer file is the central register containing correspondence relating to the customer consultations, meeting notes and other information as outlined in the attachments, that provides an appropriate paper trail to show compliance with the policy and processes.

Price-Quality Trade-offs Available to Customers

84. The price-quality trade-offs available to consumers are those set out in Transpower's:
- a. Annual Planning Report;
 - b. Asset Management Plan;
 - c. connections contract documents; and
 - d. new investment contract documents.

Annual Planning Report

85. Transpower's 2007 Annual Planning Report (APR) provides information about:
- a. The capabilities of the existing National Grid;
 - b. Demand and generation forecasts for the next 10 years using information from the Electricity Commission's Statement of Opportunities (SOO);
 - c. The National Grid's ability to meet future demand and generation needs;
 - d. National Grid investment that may be required to meet future needs for the next 10 years and beyond, by way of:
 - i. Thirteen regional plans; and
 - ii. Grid backbone transmission plans for the main North and South Island transmission corridors, and for the HVDC link.
 - e. The role of the transmission grid in facilitating renewable energy;
 - f. Transpower's earlier work on a long term strategic development plan for the National Grid.
86. The APR also includes all the requirements of the Grid Reliability Report (GRP_ as defined under Part F of the Electricity Governance Rules).
87. The role of the APR is to signal proposed and possible transmission investments within a 10 year horizon, so that current and future market participants have a greater degree of information about Transpower's plans in order to confirm their own.

Asset Management Plan

88. Transpower's Asset Management Plan identifies Transpower's Policy and Network Development Stream as well as the Customer Stream of the Capital Works Process. In summary:
- a. the Policy and Network Development stream is a process that seeks to ensure that the grid reliably, efficiently and economically maintains the service quality (and capacity) obligations of Transpower in a least cost way; and
 - b. the Customer Stream is a process that seeks to meet customer-driven changes in quality or security (or capacity requirements for growth in demand) over and above that already included in the Policy and Network Development Stream. Changes are identified by working with individual customers or groups of customers.
89. Transpower's Asset Management Plan is available on www.transpower.co.nz.

Connections Contract Documents

90. Transpower's Connections contract documents (i.e. the Connections Contract and Posted Terms) are structured to reflect the outcomes expected from Transpower's Policy and Network Development Stream.
91. The Connections contract documents include an obligation on Transpower to maintain the grid and design and construct any replacement grid assets, to meet the "Required Service Capability" in accordance with good industry practice. When an asset necessary to meet the Required Service Capability needs to be replaced, Transpower must notify the customer of options for replacement including the associated charges (i.e. in essence, the price-quality trade-offs available to customers).
92. Transpower's Connection contract documents also include:
 - a. an obligation on Transpower to advise customers of the number of interruptions and duration of the interruptions in the previous year ending 30 June. This informs customers of the performance achieved under Transpower's Connections obligation to provide the Required Service Capability, in terms germane to the performance quality threshold;
 - b. an obligation to advise customers of the steps it intends to take or other options available to reduce unplanned interruptions. This informs customers of the price-quality trade-offs available to them in relation to unplanned interruptions; and
 - c. an obligation on Transpower to, prior to 30 November each year, propose a new point of service schedule (identifying a forecast loading table and voltage table) for the next financial year, and either party may call a meeting to discuss the same. This provides a basis for Transpower to consult with customers as to the quality that they require, with reference to Transpower's prices.

New Investment Contracts

93. Transpower's New Investment Contracts are the outcome of Transpower's Customer Stream. They are the outcome of customer driven changes in quality or security (or capacity requirements for growth in demand) and are entered into as bilateral contracts once the customer and Transpower have discussed and agreed the appropriate price-quality outcome.

Procedure for Customer Communication on Quality

94. Set out below is a brief outline of:
 - a. the Procedure Document by reference to clause 6(1)(c) (see Schedule 10); and
 - b. the outcomes from implementing the Policy Document and Procedures Document.

Properly advise its customers about the price-quality trade-off (Clause 6(1)(c)(i)):

95. The first limb of the customer communication component requires Transpower to "properly advise its customers about the price-quality trade-offs available to them in relation to the goods and services provided by the lines business". Paragraph 6 of the Procedure Document outlines the process Transpower follows to advise its customers about price quality trade-offs.

96. Pursuant to paragraph 6 of the Procedure Document:
- a. on 29 November 2006 , Transpower wrote to each of its customers in relation to their proposed point of service schedule for 1 April 2006; and
 - b. on 20 March 2007 Transpower wrote to each of its customers in relation to:
 - i. their Performance Indicators report, including graphs showing:
 - Average number of interruptions per Point of Supply;
 - Number of unplanned interruptions by Point of Supply; and
 - Duration of unplanned interruptions by Point of Supply.
 - ii. information on the process under which opportunities for price-quality trade-off options are available to customers.

The letter included a summary of the Policy and Network Development Stream, and Customer Stream of the Capital Works Process.
 - c. Information concerning Transpower’s policy in relation to its customer consultation process was posted on Transpower’s website under Customer Information. This section of the website contains a summary of and links to:
 - i. Transpower’s Asset Management Plan which identifies the Policy and Network Development Stream and Customer Stream of the Capital Works Process;
 - ii. the Connections Contract and Posted Terms and in particular highlighted Transpower’s obligations to:
 - maintain the grid and design and construct any replacement grid assets, so as to meet the “Required Service Capability” in accordance with good industry practice; and
 - advise customers annually of the number of interruptions and options available to reduce unplanned interruptions; and
 - The standard form New Investment contracts which provide for the price-quality trade-off chosen by the customer.
97. Customers were invited to contact their Account Manager if they required any further information concerning Transpower’s practices in relation to the quality threshold.
98. In addition Transpower has held a number of Stakeholder forums in the past 12 months including:
- a. Canterbury (Christchurch) in July 2006;
 - b. Southland (Invercargill) in August 2006;
 - c. Otago (Dunedin) in August 2006;
 - d. North Otago/South Canterbury in August 2006;
 - e. Waikato (Hamilton) in October 2006;
 - f. Nelson-Marlborough (Nelson) in October 2006;
 - g. Eastern Bay of Plenty (Opotiki) in March 2007;
 - h. System Operator National (Auckland, Wellington and Christchurch) in April 2007;

- i. MEUG (Wellington) in April 2007;
- j. South Island project consultation (Christchurch) in May 2007;
- k. Demand side trial workshop (Christchurch) in May 2007;
- l. HVDC stakeholder workshop (Wellington) in June 2007;
- m. Bay of Plenty (Tauranga) in June 2007.

Consult with its customers about the quality of goods and services that they require, with reference to the prices for those goods and services (Clause 6(1)(c)(ii)):

- 99. The second limb of the customer communication component requires Transpower to “consult with its customers about the quality of goods and services that they require, with reference to the prices of those goods and services”. Paragraph 7 of the Procedure Document outlines the process Transpower follows to consult with its customers.
- 100. Transpower’s Account Managers have consulted with customers as to the level of service they require with reference to Transpower’s prices at a meeting called by Transpower to discuss the customer’s Point of Service Schedule. At this meeting, the Account Managers invited input from customers as to the quality of service they require in terms of the quality threshold.
- 101. This process is described in paragraph 7.1 of the Procedures Document. Notes from these meetings are included in the customer file in the central registry. The following paragraph documents the exception to the general procedures contained in the Procedures Document.

Properly consider the customer views and taking customers’ views into account when making asset management decisions (Clause 6(1)(c)(iii) and (iv)) :

- 102. The third limb of the customer communication component requires Transpower to "properly consider the views expressed by customers during and after that consultation". Paragraphs 8 and 9 of the Procedure Document outline the process Transpower follows to consider the views expressed by its customers.
- 103. The process followed depends on the responses received from customers:
 - a. a number of customers had no issues with the current level of quality and price being provided by Transpower (or issues that were raised were outside the scope of the consultation on price-quality issues), whereupon Transpower took this into account and determined no further asset management decision making was required. In respect of these customers, Transpower fulfilled its obligation under clause 6(1)(c) after advising and meeting with the customers and determining no further action was required;
 - b. input from customers who suggested changes to services delivered under the Connections Contract documents were forwarded onto the appropriate division of Transpower for consideration. Feedback was provided to customers via the Account Managers and any asset management actions taken were recorded in the customer file in the central registry. Where the customers’ views have been declined, the reason for doing so has been recorded and communicated to the customer;
 - c. input from customers seeking investigation of a service change are considered as part of the Customer Stream of the Capital Works Process (see paragraph 76(b)). As described in paragraph 7.2 of the Procedure

Document, the Customer Stream of the Capital Works Process requires Transpower to:

- i. develop transmission solutions and calculate charges to meet the customer driven changes in quality or security;
- ii. notify the customer of the price-quality trade-offs available to provide a transmission solution to meet the customer-driven changes in quality or security; and
- iii. negotiate an investment contract with the customer to implement the preferred option.

104. The Customer Stream of the Capital Works Process involves the same elements as required by clause 6(1)(c). A number of customers requested a Customer Stream investigation as a result of the meeting with Transpower on the reliability standards (paragraph 7.1 of the Procedure Document). Customers have requested investigations for new and upgraded plant on an on-going basis during the assessment period (1 July 2006 to 30 June 2007)). These requests were in response to the need for increased capacity to cater for load growth and / or a change to security of supply requirements. Where requested, consideration was also given to the broader asset management planning issues, including customers' expected load increases, specific customer augmentations and wider network augmentation. Where relevant, the customer file includes a copy of the New Investment Contract as evidence of the fact Transpower and the customer completed the Service Change process. Transpower has kept all its correspondence relating to the development of transmission solutions, price-quality trade-offs and negotiation of new investment contracts on separate 'product files'.
105. In conclusion, Transpower has complied with the customer communication component of the quality threshold by following the processes as set out in the Policy and Procedure Documents and maintaining regular communication with customers on specific issues of price and or quality as they arise.
106. Refer to Schedule 10 for a copy of Transpower's Procedure for Customer Consultation on Quality.

Schedule 1

Definition of Transpower's Specified Services

A. Introduction

1. This Schedule lists Transpower's charges for specified services.

B. Transmission Asset Owner Services

2. Transpower's charges for the provision of transmission asset owner services comprise:
 - a. Charges levied in accordance with the Transmission Pricing Methodology as set out in the 1 April 2001 Pricing for Connection Services booklet, namely :
 - Connection Charges;
 - Interconnection Charges;
 - HVDC Charges; and
 - Economic Value Adjustment Charges; and
 - b. Other Charges, namely:
 - New Investment Charges;
 - Notional Embedding Fees; and
 - Input Connection Contract Charges.

C. System Operator Services

3. Transpower charges for system operator services comprise:
 - System Operator charges under the System Operator Services Provider Contract with the Electricity Commission (excluding ancillary purchase costs as explained in Schedule 2);
 - Information Access Fees payable by the Electricity Commission for the licence fee Transpower pays M-co for access to COMIT as system operator; and
 - dispensation and equivalent fees for granting dispensations to asset owners from AOPOs and/or technical codes under Rule 7.3, Section III of Part C, Electricity Governance Rules.

Schedule 2

Ancillary Services Purchase Costs

1. In the case of Transpower, the price path threshold does not include notional revenue from the provision of system operator services if Transpower demonstrates beyond reasonable doubt that there is effective competition for the provision of those services.⁹
2. For the purpose of assessment against the price path threshold, Transpower has included notional revenue from the provision of system operator services, other than Ancillary Services purchase costs, in its calculation of notional revenue.
3. Clause 3(1) defines “system operator services” as meaning:

...co-ordination services for the control, dispatch and security functions necessary to operate the transmission system.
4. It is a question of fact as to what co-ordination services for the control, dispatch and security functions are necessary to operate the transmission system.
5. Ancillary Services are services to enable grid control and security are by Transpower as System Operator appointed by the Electricity Commission under the Electricity Governance Rules 2004 (“EGRs”).¹⁰ The charges for these services are payable to the Electricity Commission’s Clearing Manager (and ultimately distributed via Part H of the EGRs to the System Operator).
6. A description of each of the services was set out in Schedule 2 of Transpower’s compliance statement for the second assessment date (30 June 2004) (“June 2004 Compliance Statement”) which demonstrated that they were “system operator services” and that beyond reasonable doubt that there is effective competition for the provision of these services (which, Transpower understands, the Commission accepts). There has been no change in circumstances since the June 2004 Compliance Statement and as a consequence, rather than repeating the content of the same, Transpower relies on Schedule 2 of the June 2004 Compliance Statement.

⁹ See clauses 5(1) to (3), the definition of notional revenue, and price, and sub clause (b)(iii) of the definition of Specified Services in clause 3 of the Gazette Notice.

¹⁰ These services are provided by Transpower as system operator appointed under the Electricity Governance Rules 2004 pursuant to a System Operator Services Agreement (“SOSPA”) between Transpower and the Electricity Commission.

Schedule 3

New Investment Charges

A. *Introduction*

1. In the case of Transpower, the notional revenue to be assessed against the price path threshold does not include revenue from new goods and services provided by Transpower under new investment contracts entered into prior to 5 after 2003, as well as goods and services provided by Transpower under those new investment contracts entered into after 5 June 2003 if the other party agrees in writing that the terms and conditions are reasonable or reflect contestable provision of the goods and services.
2. New Investment revenues comprise revenues generated from:
 - a. New Investment Contract ("NIC") charges relating to the provision of the new investment assets (Services relating to the maintenance and operation of the relevant new investment assets are not provided under the NIC. The costs associated with the provision of these services are instead recovered via connection charges and the associated revenue is included in the calculation of Transpower's notional revenue);
 - b. Agreement for Alteration to Grid Assets ("AAGA") charges relating to the provision of the new investment assets (Services relating to the maintenance and operation of the new investment assets are not provided under the AAGA. The costs associated with the provision of these services are instead recovered via connection charges and the associated revenue is included in the calculation of Transpower's notional revenue);
 - c. Grid Asset Improvements Contracts ("GAIC") charges relating to the provision of the new investment assets which are charged under connection charges (Services relating to the maintenance and operation of the new investment assets are not provided under the GAIC. The costs associated with the provision of these services are recovered via connection charges and the associated revenue is included in the calculation of Transpower's notional revenue).

B. *Change in Contracts:*

3. Clause 3 of the Gazette Notice defines specified services for which the notional revenue is to be assessed against in the price path threshold. The definition permits the exclusion of new services charges under new investment contracts entered into after 5 June 2003 if Transpower can demonstrate that the other party agrees in writing that the terms and conditions are reasonable or reflect contestable provision of the goods and services.
4. Subsequently new investment products were modified by adding the word "reasonable" in clause 11.1(b) of the AAGA contracts and in clause 16.9 of the Standard NICs, so as to state:

Each party agrees that the terms and conditions of this Agreement:

- ***constitute the entire agreement between the parties and supersede and extinguish all earlier negotiations, understandings whether oral or written between the parties relating to the subject matter of this Agreement; and***
- ***are reasonable.***

5. The revenue from new services which are covered by the modified new investment products are therefore excluded from the notional revenue and allowable notional revenue.
6. The revenue associated with the maintenance and operation of the new investment assets, which are covered under connection charges, are included in the notional revenue and allowable notional revenue.

Schedule 4

Loss and Constraint Rentals

A. *Introduction*

1. In the case of Transpower, notional revenue to be assessed against the price path threshold does not include revenue from services for which loss and constraint rentals are paid, if Transpower demonstrates beyond reasonable doubt that amounts received from those services are passed on transparently and in full to customers.¹¹
2. Loss and constraint rentals comprise revenues generated in respect of the marginal cost of losses and marginal costs of system constraints.¹² During the assessment period, loss and constraint rentals accrued for each month and were passed on by the Clearing Manager to Transpower.¹³

B. *Customers*

3. The loss and constraint rentals that Transpower received from the Clearing Manager under the EGRs are allocated by Transpower to customers the following month using an allocation methodology.
4. Under the rentals allocation methodology, all customers are allocated a share of the loss and constraint rentals received corresponding to the connection and grid charges that they pay. Injection customers (i.e. generators) receive the portion of rentals received allocated to their connection assets. South Island generators also receive a portion allocated to the HVDC link in proportion to their Anytime Maximum Injection (AMI)¹⁴. Similarly, offtake customers receive the portion of the rentals received allocated to their connection assets and the portion corresponding to their payment of grid charges in respect of interconnection assets.
5. The methodology is designed to ensure that the amount of loss and constraint rentals received by Transpower from the Clearing Manager was fully passed on to Transpower's customers. A full explanation of the allocation methodology, including illustrations of the methodology and worked examples, has been published by Transpower.¹⁵

C. *The Contractual Position*

6. During the assessment period, Transpower customers were party to:
 - a. Transpower's Input and Output Connection Contracts;
 - b. Transpower's Connections Contract;

¹¹ See clauses 5(1) to (3) of the Gazette Notice and the definitions of Notional Revenue, Price and subclause (f) of the definition of Specified Services in clause 3 of the Gazette Notice.

¹² An explanation of how loss and constraint rentals arise is set out in Transpower's Information Booklet entitled *Transmission Rentals from 1 April 2000*, December 1999, section 2 available on Transpower's website: www.transpower.co.nz.

¹³ See Rule 12, Part H of the EGRs.

¹⁴ Anytime Maximum Injection for a customer at a point of supply is the single highest injection peak, at that point of supply, for that period: see Transpower's publication *Pricing for Grid Connection Services from 1 April 2003*, December 2002, Glossary of Terms, at page 4, available on Transpower's website: www.transpower.co.nz.

¹⁵ See *Transmission Rentals from 1 April 2000*, section 3, based on the system prevailing under the NZEM Rules which continued until 1 March 2004 .

- c. Transpower's Posted Terms and Conditions for connection to grid assets, as supplemented by section 19 of the Electricity Amendment Act 2001; and
 - d. In the case of Contact Energy, an Injection Contract dated 26 September 1997.
7. Some of the Output Connection Contracts and Transpower's Connection Contracts and Posted Terms and Conditions effective throughout this period provide for the loss and constraint rentals received by Transpower from the Clearing Manager to be passed on to customers as required by the allocation methodology, and some do not. The reason for this is that Transpower's contract documents implemented the obligation to pass on the loss and constraint rentals over time as any one customer shifted from one form of contract to another. However, whether or not any one particular contract document provides for the pass on, Transpower still allocates and passes on the loss and constraint rentals as provided by the allocation methodology notwithstanding, in some instances, the absence of a written contractual obligation to do so.
8. The Injection Contract between Transpower and Contact Energy provides for a reduced Injection Charge on the basis that the loss and constraint rentals received by Transpower from the Clearing Manager and that would otherwise be allocated to Contact Energy under the rental allocation methodology, are withheld by Transpower. As a consequence, Transpower's notional revenue used for assessment against the price path threshold as at the first assessment date includes the loss and constraint rentals which have been withheld by Transpower and not passed on to Contact Energy under the terms of the Contact Energy Injection Contract: see paragraph 2(b) of Schedule 1.

Schedule 5

Non-Conveyance Services

A. Introduction

1. In the case of Transpower, the price path threshold does not include notional revenue from non-conveyance services, such as consultancy or information services, not directly related to the provision of electricity transmission, if Transpower demonstrates beyond reasonable doubt that those goods and services are not directly related to the provision of electricity transmission.
2. Transpower's notional revenue excludes revenue from:
 - a. Pricing software and support services to the Pricing Manager;
 - b. Energy Market Services' Limited (formerly named d-cypha) reconciliation and deemed profiling information services provided to generators, retailers and distributors;
 - c. Transpower's telecommunication facilities services; and
 - d. Other miscellaneous non-conveyance services.

B. Pricing

3. During the assessment period, under a bilateral contract between Transpower and the Pricing Manager, Transpower provided pricing services to the Pricing Manager.
4. Under Section V, Part G of the EGRs, the Pricing Manager collects data and produces provisional prices, and final prices and other price and compensation related information for the conduct of the wholesale market. For example, under Section V, Part G of the EGRs, the purpose of the pricing process is to achieve certainty as to final prices and final reserve prices for each trading period, these are then used by the Clearing Manager in the clearing and settlement processes for the sale and purchase of electricity by Spot Market participants. Thus, Transpower provides Services to the Pricing Manager in order to enable the Pricing Manager to undertake the pricing processes provided for in the EGRs. Naturally, the production of prices to enable settlement and clearing of transactions in the wholesale electricity market established by the EGRs are services not directly related to the provision of electricity transmission.¹⁶

C. Energy Market Services

5. Energy Market Services Limited ("EMS") is a wholly-owned subsidiary of Transpower that provides electricity data management services to the electricity industry (and as noted above was formerly named d-cypha Limited).
6. EMS was during the assessment period contracted to perform the function of the National Reconciliation Manager ("NRM") for the New Zealand electricity market.
7. Its responsibilities includes calculating, at the wholesale level, how much electricity is bought and sold by each participant who injects and takes-off electricity from the National Grid so this can be matched against contracts to enable payment between the parties involved in electricity trading ("reconciliation").

¹⁶ The Commerce Commission has established that the electricity wholesale market is a discreet market from the national transmission market: see Decision 369.

8. EMS is also responsible for converting the cumulative consumption data measured on non-interval domestic meters into half-hour blocks (“profiling”) for the purposes of performing the NRM reconciliation service.
9. These reconciliation and profiling services are not directly related to the provision of electricity transmission. Transmission services do not rely on or give rise to these reconciliation and profiling services. Transpower does not (either directly or through a subsidiary) need to perform these reconciliation and profiling services in order to perform its transmission services; they are separate and independent of Transpower’s electricity transmission services, but are an integral part of the operation of the electricity wholesale market.
10. In addition to these reconciliation and profiling services, EMS’ services comprise:
 - a. geographic information systems;
 - b. market establishment such as Energy Futures, including advice on risk management, secondary and derivative markets; and
 - c. consulting and project management services, including business analysis and evaluation, change management, planning and co-ordination and process design.

None of these services are directly related to the provision of electricity transmission services.

D. Telecommunication facilities services

11. As part of its telecommunications infrastructure required for the operation of the national grid, Transpower owns and operates a fibre optic telecommunications network across Cook Strait (from Haywards in the North Island and Islington in the South Island).
12. During the relevant periods, Transpower:
 - a. licensed to Telecom and TelstraClear capacity in the fibre optic cables that is surplus to Transpower’s requirements in exchange for licence fees; and
 - b. licensed to Broadcast Communications Limited, Telecom and TelstraClear for access to and use of communication sites and circuits.

None of these services are directly related to electricity transmission services.

E. Other miscellaneous non-conveyance services

13. In addition to the foregoing, during the relevant periods Transpower provided other miscellaneous non-conveyance services:
 - a. industry training services provided to all participants in the electricity industry at Transpower’s training facility located in Omaka;
 - b. leasing of surplus assets e.g. land for grazing, space in buildings and miscellaneous plant to third parties for personal or business use (not directly related to electricity transmission); and
 - c. miscellaneous information and consulting services.

None of these services are directly related to electricity transmission services.

Schedule 6

Standard Specifications: Reporting by Contractors

Appendix H: Power System Events Reporting

APPENDIX H

TP.SS 01.01
Issue 4
Dec 2004

H POWER SYSTEM EVENTS REPORTING AND COMMUNICATIONS

H1 Purpose

H1.1. To set out the requirements for communications with affected parties (external and internal) when an event originating in Transpower's grid assets or a generator's equipment operated under a dispatch agreement affects, or is likely to affect, the power quality and security of the grid and results in:

- (a) an interruption of transmission services or
- (b) any other condition that has or can have an effect on the security, availability or reliability of services to connected parties.

H2 Policy

H2.1 Connected parties must be informed immediately following and during all events affecting the power quality of the power system and originating from Transpower's grid assets or generation equipment operated under a dispatch agreement.

H3 Responsibilities

H3.1 Regional operator

- H3.1.1 Issuing Interruption/Restoration Notices (form TP IRN) to connected parties for a loss of connection as a result of an unplanned event within Transpower's grid assets.
- H3.1.2 Issuing a copy of the Notice in H3.1.1 above to the police if outage will be longer than 15 minutes.
- H3.1.3 Issuing a copy of the Notice in H3.1.1 above to the relevant Field Services Asset Manager and the Security Co-ordinator.
- H3.1.4 Contacting affected connected parties by phone immediately following event and at regular intervals with progress updates for which an Interruption/Restoration Notice has been issued.
- H3.1.5 Issuing Interruption/Restoration Notice to the affected connected parties (see H3.1.1 above) within 2 hours of final restoration.
- H3.1.6 Issuing a copy of the Interruption/Restoration Notice in H3.1.5 above to the relevant Field Services Asset Manager, the Security Co-ordinator, and the police as required.
- H3.1.7 Issuing Interruption to Connection Report (TP ITC) to Transpower internal addressees (as per current distribution list) for every Transpower initiated planned or unplanned event resulting in an interruption to connection (see H3.1.1 above).
- H3.1.8 Issuing Power System Event Report (TP 495) to Transpower Field Services, Technical Report Analyst (TRA), relevant station maintenance contractor and/or lines maintenance contractor for every event resulting in the unplanned removal from service of Transpower grid assets.
- H3.1.9 Identifying events that may require, or result in news media contact and informing the nominated Transpower Field Services employee and the Security Co-ordinator of these.

H4 Communications processes and procedures

H4.1 Interruption/Restoration notice (IRN)

- H4.1.1 Interruption/Restoration Notices provide affected connected parties with information on Transpower caused events affecting normal transmission services provided by Transpower.
Note: This does not include interruption to embedded generation connections.
- H4.1.2 The Regional Operator must dispatch the notice within 30 minutes of an interruption event to each affected connected party.
A copy of the notice must also be sent to the relevant Transpower Field Services Asset Manager and the Security Co-ordinator.
- H4.1.3 All fields on the notice form TP IRN must be completed. See **Appendix G-6**.
- H4.1.4 In addition to the initial notice, the Regional Operator must contact the affected connected parties or their after-hours service by phone, immediately following the event. Progress updates must be phoned through at regular intervals until restoration.

Note During significant or prolonged events, the method of advising progress or development should be agreed on a "case by case" basis with each connected party.

H4.1.5 The Regional Operator must fax a restoration notice, using the previously issued Interruption/ Restoration Notice form to affected connected parties within two hours of restoration.

H4.2 Interruption to Connection Report (ITC)

H4.2.1 Interruption to Connection reports provides Transpower management with a key information summary relating to the reported event.

Any additional detail required for the analysis of processes or performance to be provided by an additional and more detailed report, e.g. PSER (refer H4.3), etc.

H4.2.2 ITCs are required for planned and unplanned interruptions to supply customers (line companies and direct-connected customers) and direct connected generator customers in the conveyance of electricity between the Connected Party's Assets and the Grid Assets at a Connected Party Point of Service. This includes events where:

- (a) There are total interruptions to connection to a Transpower site. This can be due to an outage of a whole bus, a circuit or transformer (where it is a spur line), or just one feeder (where it is a single feeder point of supply);
Note: This includes momentary interruptions to connection, eg auto-changeover schemes, auto-reclosures, etc.
- (b) There are partial interruptions to connection, e.g. a bus section outage;
- (c) The normal connection to a supply customer has been interrupted but where a backfeed within the customer network has prevented a lights-out loss of supply.
Note: Where unsure whether there is a backfeed, the Regional Operator shall inquire with the connected party and record details in the ITC report
- (d) A fault in a customer system causes Transpower equipment (other than the boundary circuit breaker) to trip thus interrupting the connection to themselves or other customers.

Notes:

1. Transpower initiated interruptions:
 - a) ITC reports are required for when there is:
 - A total or partial loss of connection to a supply customer or generator due to Transpower maintenance/ project activities, e.g. circuit, transformer or bus outage.
 - A total or partial loss of connection to a supply customer or generator due to Transpower protection scheme operation other than for a boundary CB unless it is a single feeder point of supply and a total loss of supply occurs.
 - A total loss of connection but not a total loss of supply at a supply customer's point of supply, due to Transpower maintenance/ project activities, where load had been transferred to another point of supply or taken up by embedded generator.
 - b) ITC reports are not required when a feeder at a supply customer's point of supply has been removed from service and the customer swaps load to another feeder at that point of supply.
2. Supply customer caused interruptions:
 - a) ITC reports are required where a supply customer fault causes Transpower backup protection to operate, e.g. supply transformer trips and clears the whole bus for a feeder fault. Required even if this may not result in a total loss of supply due to load had been transferred to another point of supply or taken up by embedded generator.
 - b) ITC reports are not required where there is a partial loss of supply, i.e. feeder CB trips.
3. Generator caused interruptions:
 - a) ITC reports are required where a generator fault causes Transpower backup protection to operate, e.g. clears the whole bus.
 - b) ITC reports are not required where a generator CB trips for a fault on their own equipment.

Schedule 7

Standard Specifications: Operational and Assets Related Interfaces

Appendix A: Outage Protocol

APPENDIX A

TP.SS 07.01
Issue 1
Nov 2001

Outage Protocol

	Protocol Detail
Purpose	To specify a protocol Transpower will follow, to communicate and provide information to its customers on planned and unplanned outages of grid assets. Whilst Transpower – as asset owner – will discuss system security issues with the Common Quality Co-ordinator, this protocol does not include system operation communications and responsibilities.
Policy	<p>Transpower completes a scheduled maintenance programme to meet its obligations to maintain and to ensure assets meet the standard of Good Industry Practice. Consistent with this requirement, in scheduling planned maintenance, Transpower will:</p> <ul style="list-style-type: none">• discuss the impact of outages on supply and discuss options with customers;• implement processes and procedures that, where reasonably practicable, will minimise the effect of planned outages on security, power quality and availability, and customers' operations; and,• use reasonable endeavours to keep to scheduled outages. <p>Where unplanned outages of grid assets occur Transpower will:</p> <ul style="list-style-type: none">• keep customers updated on events and progress towards restoration of unplanned outages that directly affect them; and,• implement processes and procedures that, where reasonably practicable, will minimise the effect of these outages on security, power quality and availability and customers' operations.

Definitions	<p><u>Planned Outage</u>: A deliberate outage scheduled for maintenance purposes.</p> <p><u>Unplanned Outage</u>: An interruption or outage with less than 24 hours notice, or no notice at all.</p> <p><u>Annual Outage Plan</u>: An overall programme of planned outages for the year that is reviewed throughout the year as required. Transpower's annual outage plan runs from 1 July to 30 June.</p> <p><u>Rolling Approved Plant Requests Plan</u>: A programme of plant requests approved for the next four weeks.</p> <p><u>Customer</u>: A party who has assets physically connected to the grid assets. For the purpose of this protocol, <u>Affected Customer</u> means any customer who may be directly affected at their point of service by adverse effects on the security of supply or power quality and availability, as a result of a planned or unplanned outage.¹</p> <p>Any other definitions will apply as used in the Connections Contract.</p>
Responsibilities	<p>The Transpower Field Services Office prepares the Annual Outage Plan and the Rolling Approved Plant Requests, arranges the outages, manages any changes, and liaises with the Common Quality Co-ordinator and Affected Customers.</p> <p>The Regional Operating Centre communicates with Affected Customers during interruptions to connection.</p> <p>The Customer co-operates with Transpower to enable the removal from service of assets for the Annual Outage Plan, and discusses any problems they have with planned outages as soon as these are known.</p>

¹ The definition of a customer who may be directly-affected for the purposes of this Protocol does not include any parts of a customer's business, which is not related to any connection with the Grid Assets.

Planned Outages	Transpower Field Services will:
	<ol style="list-style-type: none"> 1(a) Prepare an Annual Outage Plan. This plan will be put together in discussion with each Affected Customer. An example of this Annual Outage Plan is given in Appendix A. A copy will be available on the Transpower website, and will be updated to reflect changes. 1(b) Prepare a Rolling Approved Plant Requests Plan and make this available on the Transpower website. 2. Send a copy of the Station Equipment Outage Form notifying the Affected Customer not later than 6 weeks prior to each addition or change to the Annual Outage Plan where practicable. An example of this form is attached as Appendix B. 3. If required, discuss any changes to the Annual Outage Plan with the Affected Customer as soon as practicable. 4. Notify Affected Customers of any short-notice planned outages, and discuss with Affected Customers as appropriate. These outages may be necessary for urgent projects, but it will not be practical for Transpower to give 6 weeks notice to Affected Customers.
	The Regional Operating Centre will:
	<ol style="list-style-type: none"> 1. Contact the Affected Customer by phone or fax not later than 3 calendar days prior to the planned outage – or as agreed with the customers – to discuss and confirm the outage times and details. 2. Advise and discuss with the Affected Customer's network controller any change during the planned outage as soon as this is known, including any possible overrun and the cause. 3. Advise Affected Customers by phone of any short notice postponements or cancellations to planned outages and reasons for them. This includes advising customers of any short-notice planned outages as outlined in point 4 above.

Planned Outages	The Customer will:
	<ol style="list-style-type: none">1. Advise and discuss with Transpower Field Services any changes reasonably requested by the customer to the Annual Outage Plan as soon as these changes are known. Where Transpower considers the changes are unreasonable it may refuse the request.2. Return the Equipment Outage Form to Transpower Field Services, with confirmation (and any comments on) outages, no later than 4 weeks prior to the outage, or as soon as practicable for short notice planned outages where Transpower has been unable to give 6 weeks notice.3. At the time of consultation over the Annual Outage Plan, or as soon as practicable, provide a copy of their Annual Outage Plan for customer points of connection to the Transpower Field Services Planner. This will be treated in confidence by Transpower.

Unplanned Outages	The Regional Operating Centre will:
	1. Contact the Affected Customer's controller and continue to provide updates at regular intervals as agreed with the controller until normal services have been restored.
	2. Send an Interruption/Restoration Notice to Affected Customers within 15 minutes of the interruption that caused a total loss of supply. An example of this notice is attached as Appendix C.
	3. Send a Notice to Affected Customers within 15 minutes of the restoration of supply.
	Transpower Field Services will:
	1. Contact any Affected Customers as soon as possible after an event where it is expected that information for dealing with media enquiries may be required, or where further co-ordination is appropriate.
	2. Following the outage, give the Affected Customer a brief report stating the facts as they are known together with any other relevant information. This report can be delivered verbally, or in writing if requested.

Schedule 8

Scope of Work – Independent Review of Annual Interruption to Supply Information

Introduction

Transpower requires evidence of a review of Supply Interruption information and verification of process for submission to the Commerce Commission as part of the Threshold Compliance Statement.

This document outlines the work required to complete this review.

Background

Supply Interruption data is collected by Transpower and is used to calculate the Reliability Measures required by Regulation 21 of the Electricity Information Disclosure Requirements 2004 and to complete the Threshold Compliance Statement as required by the Commerce Act (Transpower Thresholds) Notice 2005.

Initial Review of Supply Interruption Information

This year, detailed checking is required for Supply Interruption records only. All data from the database will be supplied to show the entire collection of interruption records from which the Supply Interruption records are derived.

The processes for categorising and coding interruptions data is set out in Transpower's Manual for Coding Interruptions.

The Performance Analysis Engineer will provide a printed list of interruptions to supply and generator customers for the period 1 July 2006 to 30 June 2007 which has been compiled from data supplied by Jireh Consultants.

Initially the list is to be reviewed to ascertain that all loss of supply incidents have been included and correctly classified. This is done by reviewing against all available records of losses of supply. These include:

- Interruption to Connection Reports (from Regional Operating Centres);
- Documentation prepared and collected by Performance Analysis Engineer for internal monthly reporting;
- System Fault and Interruption Reports (SFIRs)

When the reportable interruptions (Classes D,W,A) have been confirmed and agreed, the information in the list for these interruptions is to be reviewed for accuracy against available reports and records, including :

- TPIX;
- PROMS Data;
- Estimated MW calculations.

and that the data is coded correctly.

All errors found, data missed, and queries are to be recorded on the printout for resolution with the Performance Analysis Engineer.

Resolution of Errors, Omissions, Queries in Supply Interruptions Data

When the list has been checked, the errors, omissions, and queries will be reviewed and resolved by the Performance Analysis Engineer.

A second review is to be done on the supply interruptions data once the Performance Analysis Engineer has investigated the errors, omissions, and queries. Any remaining queries are to be discussed with the Performance Analysis Engineer, and agreement reached that the information is as accurate as reasonably possible.

Brief notes are to be retained on a copy of the printout to indicate the resolution to the errors, omissions, and queries.

Confirmation of Changes to Data

When all required data corrections have been agreed, the Performance Analysis Engineer will update the Transpower database, and produce a new printout of the year's data.

This is to be checked against the earlier printouts to confirm that changes as agreed have been implemented.

Preparation of Audit Report

On completion of the data review, a short report is to be submitted confirming:

- that this work-scope has been adhered to,
- that all the reportable Supply Interruption data for the current year has been correctly identified, checked, and corrected where necessary,
- that the data has been prepared in accordance with Transpower definitions and processes, and
- that this data is a complete and fair representation of the supply interruptions that actually occurred.

Schedule 9

Policy for Customer Communication on Quality

TP.GG 10.06
Issue 2
Reviewed May 2005



TRANSPOWER

Policy on customer consultation on quality

TRANSPOWER APPROVED POLICY

Implementation date: March 2004

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PREFACE

The Commerce Act (Electricity Lines Threshold) Notice 2003 (“the Notice”) prescribes customer communication criterion of the quality threshold for lines businesses, including Transpower. Transpower must demonstrate how it has engaged with consumers to explain available trade-offs between quality and price, and to assess the consumers’ willingness to pay for different quality levels.

The Customer Consultation on Quality Policy contains the obligations on Transpower in order to comply with the Notice, but does not define in detail the process Transpower will implement, which is contained in the Standard TP.AG 10.14 *Procedure for customer consultation on quality*.

CONTACT

This document is the responsibility of the Stakeholder Services Group, Transpower New Zealand Limited, Wellington. If you have any queries please contact the Stakeholder Services Group Manager.

If you would like to make suggestions to improve this document, please use the “Controlled Document Feedback Form” located at the rear of this document or online via the Controlled Documentation homepage of the Transpower website at www.transpower.co.nz

REVIEW DATE

This document is due for review not later than February 2006.

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MINIMUM REQUIREMENTS

The requirements set out in Transpower’s standards are minimum requirements that must be complied with by contractors, including designers and other consultants. The contractor is expected to implement any practices which may not be stated but which can reasonably be regarded as good practices relevant to the purpose of this standard. Transpower expects contractors to improve upon these minimum requirements where possible and to integrate these improvements into their procedures and quality assurance plans.

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1. PURPOSE
2. POLICY
3. PRIORITY
4. BACKGROUND
5. RISKS
6. IMPLEMENTATION

APPENDIX

- A CONTROLLED DOCUMENT FEEDBACK FORM

1. PURPOSE

The purpose of the Policy is to set out the means by which Transpower will comply with the customer communication quality threshold required by the Notice.

2. POLICY

- 2.1 Transpower will properly advise its customers about the price-quality trade-offs available to them as from 6 June 2003. The price-quality trade-offs available to customers are those set out in Transpower's Asset Management Plan, its Connections contract documents (the Connections Contract and Posted Terms) and its new investment contract documents (New Investment Contract and Agreement for Alteration of Grid Assets). Advice to customers of the price-quality trade-offs will follow the Procedure for Customer Consultation on Quality Threshold.
- 2.2 Transpower will consult with its customers as to the service they require with reference to the prices for Transpower's transmission services. The procedure for doing so is contained in the Procedure for Customer Consultation on Quality Threshold.
- 2.3 Transpower will properly consider the views expressed by customers (in relation to the service quality they require) during and after the consultation. The procedure for doing so is contained in the Procedure for Customer Consultation on Quality Threshold.
- 2.4 Transpower will adequately take customers' views into account when making its asset management decisions. Transpower will keep a record of this and the procedure for doing so is contained in the Procedure for Customer Consultation on Quality Threshold.

3. PRIORITY

Transpower will be assessed against the quality threshold by the Commerce Commission as at 30 June 2005. Transpower's compliance documents must be disclosed within 35 working days of that date (18 August 2005). With respect to the customer communication criterion, Transpower will be assessed for the assessment period from 1 July 2004 to 30 June 2005.

4. BACKGROUND

- 4.1 In the Notice the Commerce Commission sets a price path threshold and a quality threshold for the declaration of control in relation to specified services provided by lines businesses, including Transpower. The definition of "specified services" contained in the Notice has the effect of excluding revenue received under Transpower's new investment products from Transpower's revenue that will be assessed against the price path threshold if Transpower demonstrates beyond reasonable doubt that the new investment was approved under a process that provides for affected customers to make and approve price-quality trade-offs and opportunity for competitive provision of new investment by parties other than Transpower.
- 4.2 The quality threshold is to provide incentives to ensure lines businesses do not compromise quality standards in order to meet the price path threshold. It has two components: substantive criterion that measure quality in terms of reliability and a procedural criterion that requires consultation to a prescribed standard. Specifically,

the purpose of the latter is to encourage Transpower to engage with its customers and to plan future services to reflect customer demands for quality.

- 4.3 Clause 6.1(c) of the Notice contains the various customer communication criteria with which Transpower must comply. Transpower must:
- i. Properly advise its customers about the price-quality trade-offs available to them in relation to the goods and services provided by the lines businesses; and
 - ii. Consult with its customers about the quality of goods and services that they require, with reference to the prices of those goods and services; and
 - iii. Properly consider the views expressed by customers during and after that consultation; and
 - iv. Adequately take these views into account when making its asset management decisions.

Note: This follows clause 6.1(a) and (b) of the Notice, which measures Transpower's performance in terms of the total number of unplanned interruptions, and the total customer interruptions calculated in system minutes.

5. RISKS

If Transpower fails to comply with the Notice, there are no financial penalties, but may risk harming its reputation.

6. IMPLEMENTATION

A separate standard entitled TP.AG 10.14 *Procedure for customer consultation on quality* sets out in detail the process which is to be implemented by Transpower in order to meet the requirements.

A CONTROLLED DOCUMENT FEEDBACK FORM

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Schedule 10

Procedure for Customer Communication on Quality

TP.AG 10.14
Issue 2
Reviewed May 2005



Procedure for Customer Consultation on Quality

TRANSPOWER APPROVED STANDARD

Implementation date: March 2004

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PREFACE

This is the supporting procedure for TP.GG 10.06 the *Policy on customer consultation on quality*.

Keywords

Account Executive
Applications Manager
customer
quality

CONTACT

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1. BACKGROUND

The policy for *Customer Consultation on Quality (TP.GG 10.06)* was approved by the Acting General Manager National Grid and Commercial Development Manager on 20 January 2004 and reviewed by the Acting Stakeholder Services Manager on 13 May 2005.

2. APPROVALS

This standard will be effective from the date approved.

3. PROCEDURE

To comply with the Gazette Notice, this standard sets out the procedure to be followed to meet Transpower's obligations to:

- (a) Properly advise customers of price-quality trade-offs;
- (b) Consult with customers about the services they require;
- (c) Properly consider the customers' views; and
- (d) Adequately take the customers' views into account when making asset management decisions.

4. IMPLEMENTATION

The period covered by the quality threshold is from 1 July 2004 to 30 June 2005. To meet the "assessment date" of 30 June 2005, customer consultation and Transpower's consideration of the customers' views etc. is to be completed by 30 June 2005.

Customer Relations will be responsible for implementing this procedure and ensuring the timetable is met.

The Industry Integration Manager will be responsible for evaluating compliance with this procedure.

5. QUALITY

In the context of this document, and in terms of the quality threshold, "quality" is defined as the total number of unplanned interruptions and the total customer interruptions measured in system minutes.

6. PROPERLY ADVISE CUSTOMERS OF PRICE-QUALITY TRADE-OFFS

To "properly advise" customers of the trade-offs available to them, Customer Services is to write to customers (and put on its website) an explanation as to:

- The inter-relationship between the Network Development and the Customer streams of the Capital Works process set out in the Asset Management Plan and Transpower's contract documents;

- How they provide the price-quality trade-off opportunities that are available to customers; and
- How the precise nature of the price-quality trade-offs available to customers is communicated during the discussion on replacement assets under Connections, and the investigation and consultation/negotiation of the relevant new investment products.

7. CONSULT WITH CUSTOMERS ABOUT THE SERVICES THEY REQUIRE

The process for consulting with customers is as follows:

7.1 Customer Consultations on Required Service Capability:

The Account Managers will:

- a. Discuss with the customer Transpower's performance in respect of Transpower's quality of service by reference to the interruptions (as advised to them under Part C clause 3.3 of Connections) and the performance quality threshold at a meeting called by Transpower to discuss the customer's Point of Service Schedule (and the foregoing);
- b. Explain to the customers (to the extent practicable) that Transpower's performance to date is delivered at Transpower's current prices and the impact of any different level of performance on prices;
- c. Invite input from the customers as to the quality of service they require in terms of the quality threshold i.e. interruptions. For example, customers may wish to comment on changes to the overall level of service provided under Connections, maintenance of specific assets, grid availability (switching) and/or a change in the level of service at a specific location;
- d. Provide to the customers before the meeting, a letter explaining that Transpower will seek the above input at the meeting, and invite subsequent input; and
- e. Record the customers' input given at meetings and ensure that the file notes recording the same, and any subsequent input received from the customers, are recorded in a central register.

This process is summarised in Appendix A.

The customers' input received may result in:

- a. Transpower reviewing whether the customers' input suggests changes to the actions it takes to deliver its service under Connections, for instance whether Transpower's maintenance and grid availability (switching) practices meet a Good Industry Practice standard as required under Connections (in which case the processes set out in sections 7 and 8 apply);
- b. Transpower reviewing whether the customers' input suggests changes to the service it delivers under Connections, for instance whether it is appropriate to amend the current Required Service Capability standard (in which case the processes set out in sections 7 and 8 apply); and/or

- c. Transpower reviewing whether the customers' input suggests investigating a service change (in which case the processes set out at sections 6 and 8 apply).

7.2 Customer Consultations on the Capital Works process:

This relates to new investment arising from the Customer Stream of the Capital Works process. The process to be followed is as follows:

- a. The Account Managers will invite input from customers as to the quality of service they require (cl 7.1(c)) and record the customers' input in a central register (cl 7.1(e));
- b. The Account Managers will enter customer-requested changes in the level of service (e.g. quality or security) into Transpower's Capital Works process;
- c. The Accounts Managers will take the customer request through the Capital Works process (Appendix C):
 - ⇒ Develop transmission solutions and calculate charges to meet the customer-driven changes in quality or security;
 - ⇒ Notify the customer of the price-quality trade-offs available to provide a transmission solution to meet the customer-driven changes in quality or security and consider the customer's views;
 - ⇒ Negotiate an investment contract with the customer to implement the preferred option;
- d. The Account Managers will record in a central register the price-quality trade-offs considered, and the solution selected, by the customer; and
- e. The Account Manager will record the customer's input given at meetings and ensure that the file notes recording the same, and any subsequent input received from the customer, are recorded in a central register so that evidence (i.e. an adequate paper trail) is available to the auditors.

This process is summarised in Appendix B.

8. PROPERLY CONSIDER THE CUSTOMERS' VIEWS

In the process to consider customers' views, the Account Managers will:

- a. Consider the customers' views obtained from meetings and subsequent customer input in relation to the service quality they require;
- b. Forward customers' views on changes to Connections to Contracts Manager to review in conjunction with Legal;
- c. Forward customers' views on maintenance to Grid Planning to review;
- d. Forward customers' views on grid availability (switching) to Field Services to review;

- e. Enter customer-requested changes to the level of service (eg quality or security) into the Capital Works process; and
- f. Document the actions taken in the central register so that evidence (i.e. an adequate paper trail) is available to the auditors.

9. ADEQUATELY TAKE THE CUSTOMERS' VIEWS INTO ACCOUNT

The process to adequately take the customers' views into account is as follows:

9.1 General

- a. Grid Planning will review the customers' views on maintenance and provide feedback to the Account Managers;
- b. Field Services will review the customers' views on grid availability (switching) and provide feedback to the Account Managers;
- c. Contract Manager, in conjunction with Legal, will review customers' views on the level of service provided under Connections and provide feedback to the Account Managers; and
- d. The Account Executives will record the actions taken in a central register so that evidence (i.e. an adequate paper trail) is available to the auditors. Where the customers' views have been declined, the Account Executives will record the reason for doing so.

9.2 Customer-requested changes to the level of service

The Account Managers will:

- a. Follow Transpower's normal Capital Works process (Appendix C); and
- b. Document and record the options considered and the option selected by the customer;
- c. In the event the customer decides not to proceed with the service change, record the reason for not doing so; and
- d. Record the actions taken in a central register so that evidence (i.e. an adequate paper trail) is available to the auditors.

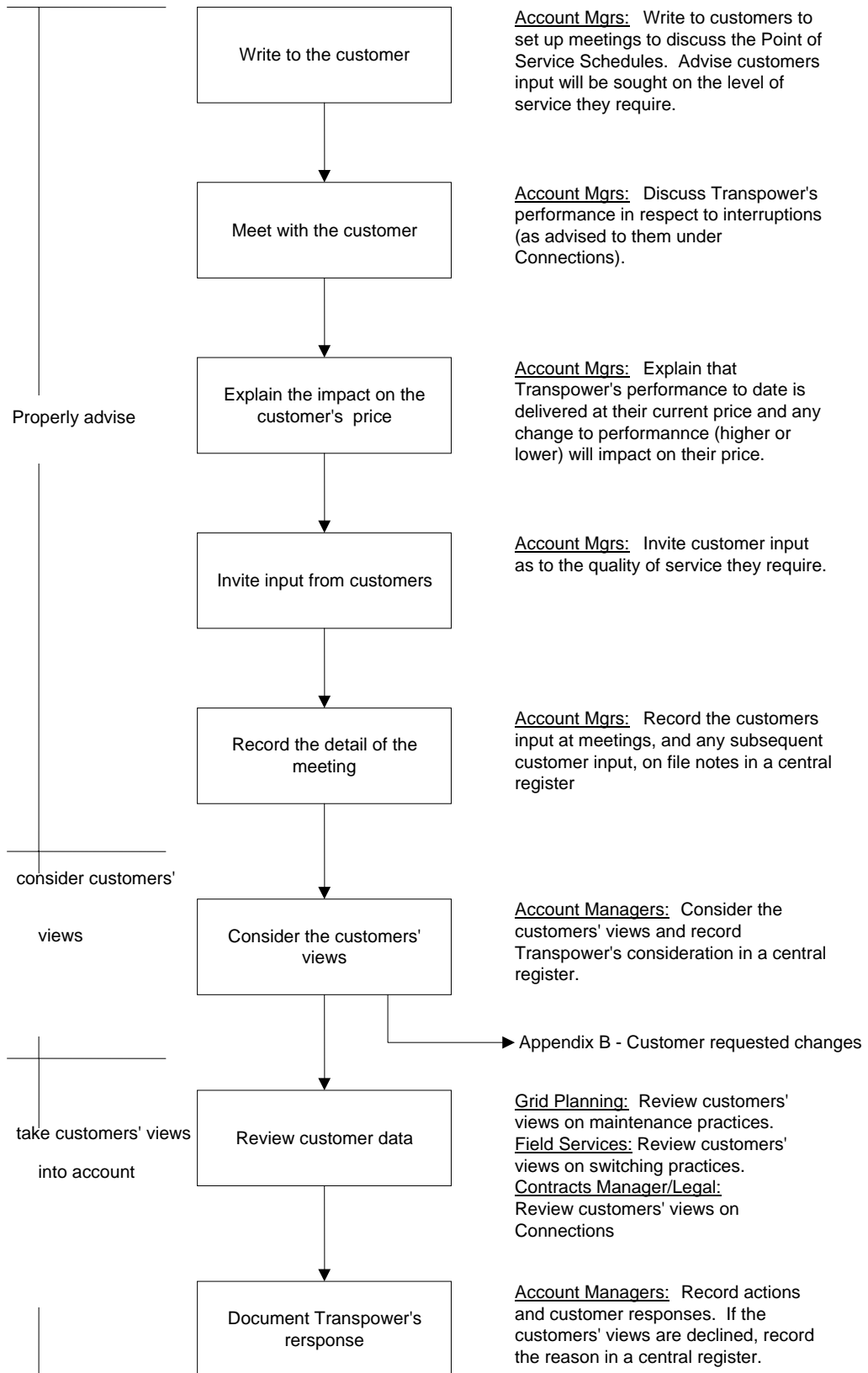
10. REGISTER

Records will be filed as followed:

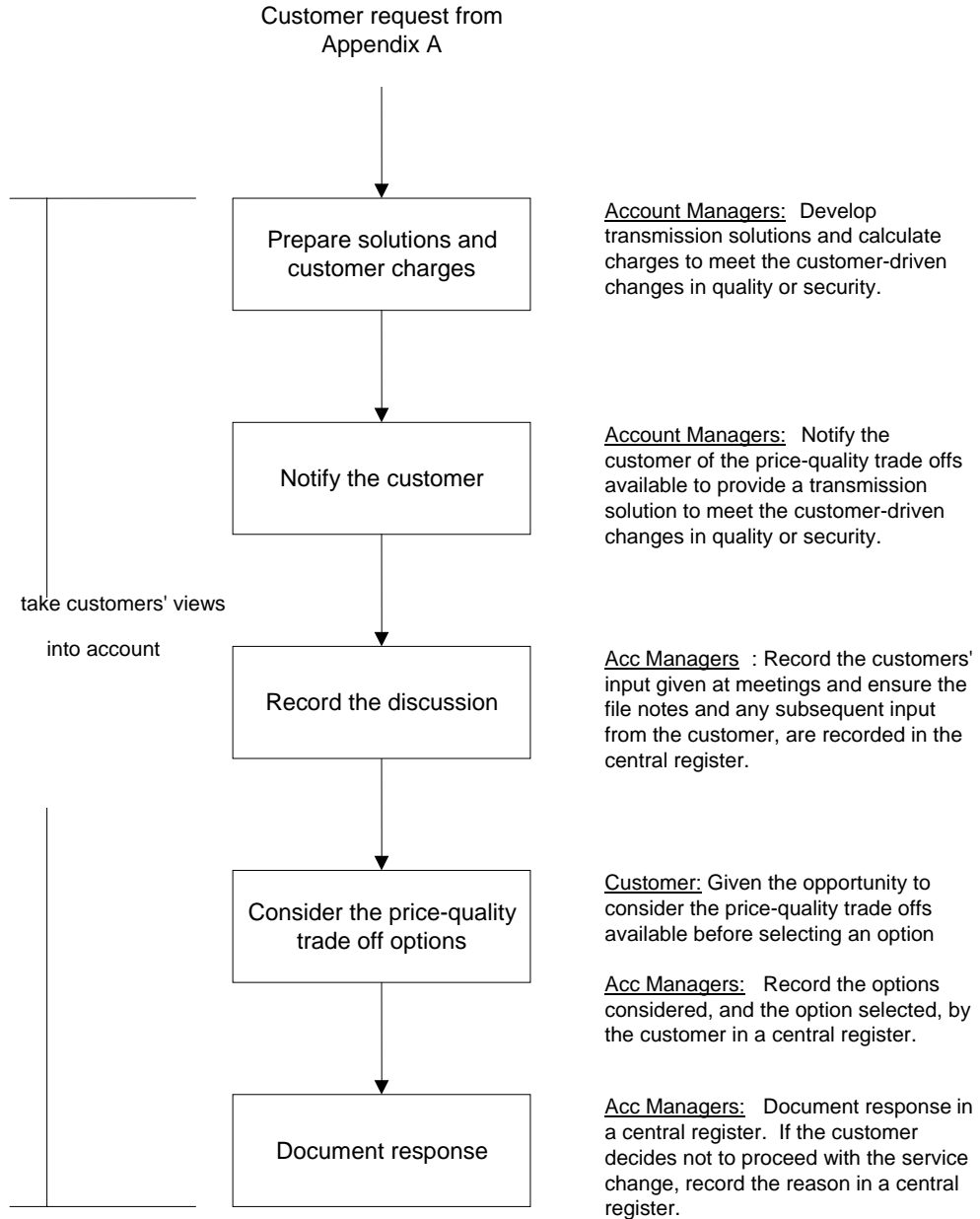
- a. Customer Meetings: Account Managers will record the customers' input and Transpower's views and actions on the form in Appendix D and file this on the customer file;
- b. Customer Input: Subsequent customer input and Transpower's views and actions are to be filed on the customer file; and

- c. Customer Stream requested Capital Works: All correspondence is to be filed on a project file.

A CUSTOMER CONSULTATIONS ON REQUIRED SERVICE CAPABILITY



B CUSTOMER CONSULTATIONS ON PRICE-QUALITY TRADE OFFS



C CAPITAL WORKS PROCESS

Useful Definitions:

RACI

Responsible The role that does the step

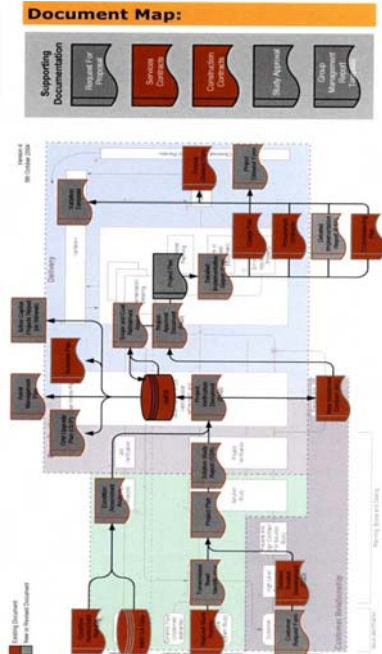
Accountable The role that ensures resources are available for the step - "where the buck stops"

Consult Those roles consulted to enable the step to be completed

Inform Those roles informed of outcomes after the step is completed

Other Terminology

AWP	Asset Works Plan
CWP	Capital Works Process
DIR	Detailed Implementation Report
EC	Electricity Commission
FMIS	Financial Management Information System
GIT	Grid Investment Test
GUP	Grid Upgrade Plan
MMS	Maintenance Management System
PAD	Project Approval Document
PDB	Projects Database
PROMS	Plant Request Outage Management System
PVD	Project Verification Document
SA	Study Approval
SCR	Scope and Cost Refinement Report
SPD	System Project Overview
SSR	Solution Study Report



National Grid
Capital Works Summary Guide

TRANSPOWER

The Capital Works Process details the way Transpower's National Grid Group plans, designs and delivers capital expenditure projects.

This summary guide includes:

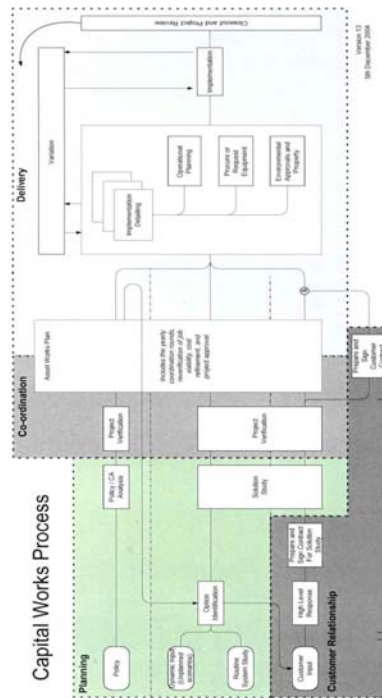
- Key principles governing the Capital Works Process
- How to use the Capital Works Process Guide (on the intranet)
- The Capital Works Process diagram
- The Capital Works document map
- Useful definitions
- Where to find more information

For more info refer to the Capital Works intranet site under: **Business Groups/ National Grid/ Capital Works** or contact one of the capital works project team members (details on the intranet).

Key Principles:

To enable a robust Capital Works Process and successfully manage future upgrade and new build projects through:

- Clear articulation of all responsibilities, accountabilities, requirements for consulting and informing
- Coordination of a consistent approach to ensure Transpower's commercial objectives and regulatory obligations are met
- Involvement of the right people at the right time in the process
- The formation of project teams for jobs requiring high degree of coordination and integrated decision-making
- Embedding project learnings in the organisation through formalised feedback loops
- Ensuring the level of analysis undertaken is fit for purpose
- Recognising and capturing "high value - intellectual property" work
- Coordination and Optimisation - looking across years, sites and capex/opex to enable efficiencies
- Requirement for project verification prior to projects entering the Asset Works Plan
- Greater certainty and accuracy (cost, process and time requirements) for projects in the Asset Works Plan tagged to start within a 3 year timeframe
- Provision of supporting documentation and systems and templates to provide guidance and support the process
- Use of project controls and measures (cost, quality and time).



How to Use the Process Guide:

The Capital Works Process Guide is provided via XSOL, a business process documentation tool.

The output is published to the intranet so everyone can have access to the process.

- The process guide is interactive, and allows you to navigate through the process by clicking on the hyperlinks or one of the graphical icons as shown below.

- Clicking on the icons will take you directly to the section that details this activity or process step.
- Descriptions, RACI, input/output requirements, supporting documentation, and rules are detailed for each of the activities.
- All documents (such as PAD and SSR) are linked directly from the activities.
- Roles are also listed, and are cross-referenced back to the process step where the role has either an "Accountable" or "Responsible" interest.

More information available on the intranet

Refer to the Capital Works intranet site under Business Groups/National Grid for:

- the detailed Capital Works Process Guide
- an online feedback form to you to submit comments/recommendations on the process
- a document register listing all relevant documents, redundant documents, and document owners
- links to the document map & templates
- a complete RACI chart for all activities
- who to contact for further queries

D CUSTOMER COMMUNICATION QUALITY THRESHOLD - RECORD SHEET

Customer:		File	
Account Exec:		Meeting Date:	
Customer Views (Meeting Notes)			
<p>Sample ((Master Form on Sales drive))</p>			
Initial Comments (Account Exec)			
Action Assigned To ¹ :		Date:	CRS Task:
		Reply Req'd By:	Reply Rec'd:
Action Taken/To be Taken ²			

E CONTROLLED DOCUMENT FEEDBACK FORM

If you would like to submit any feedback or suggestions to Transpower to improve this document, there are two ways you can do this. You can either complete the form below and fax it to: IT&T Information Services, Transpower NZ Ltd, on 04-494 6738; or you can submit a form online - just look for the Controlled Document Feedback Form on the Contractors/Consultants section on our website at www.transpower.co.nz

Content change request		No:
Date:	Initiator's name/title:	
Company:	Phone: Fax:	
	Email:	
Controlled document number:	TP.	
Controlled document title:		
Affected section or clause number(s):		
Present clause:		
Proposed change:		
Reason for change:		
If you are including supporting information or attachments, please list here, e.g. photos:		

Schedule 11

Extract from Transpower's Website (text version)

Quality Thresholds

[Introduction](#) || [The Obligation to Properly Advise Customers of Price-Quality Trade Offs](#) || [General](#) || [Further Information](#)

INTRODUCTION

This site summarises Transpower's present practices in relation to the customer communication quality threshold set out in clause 6.1(c) of the Commerce Act (Electricity Thresholds) Notice 2006, as published by the Commerce Commission in the New Zealand Gazette on 23 June 2006 (the "Notice").

THE OBLIGATION TO PROPERLY ADVISE CUSTOMERS OF PRICE-QUALITY TRADE OFFS

The first limb of the customer communication quality threshold requires Transpower to properly advise its customers about the price-quality trade offs available to them in relation to Transpower's services.

The price-quality trade-offs available to Transpower's customers are those set out in its publications and contract documents.

Capital Works Process

The three streams of this process are summarised below:

- The **Policy and Network Development streams** seeks to ensure that the grid reliably, efficiently and economically maintains the service quality (and capacity) obligations of Transpower.
- The **Customer stream** seeks to meet customer-driven changes in quality or security (or capacity requirements for growth in demand) over and above that already included in the Service Integrity Provision Process.

Consequently, customers have available to them price-quality trade offs in respect of quality or security over and above that provided by the Policy and Network Development streams. Transpower will continue to work with the individual or a group of customers to develop solutions that best meets their needs. This enables customers to be advised of and evaluate the specific price-quality trade offs available to them.

Contract Documents

The following Connections contract documents:

 [Connections Contract \(8942KB\)](#)

 [Posted Terms \(1966KB\)](#)

are structured to include the following:

- An obligation on Transpower to maintain the grid and design and construct any replacement grid assets, so as to meet the "Required Service Capability" in accordance with good industry practice. This is defined in terms of the lesser of:
 - the existing level of service; and
 - the level of service to meet the Security Guidelines for Transmission Planning.

In essence, this reflects in contractual terms, the outcome expected from Transpower's Service Integrity Provision Process; and

- When an asset necessary to meet the Required Services Capability needs to be replaced, Transpower must notify the customer of options for replacement (i.e. in essence, the trade offs available to the customer).

Copies of the Connections contract documents referred to above are available on request.

Transpower will continue to work with the customer under the Connections contract documents to develop solutions that best meets the customer's needs. This enables the customer to be advised of and evaluate the price-quality trade offs available to them.

The following new investment contract documents are structured so that the cost to Transpower of funding the assets to meet customer-driven changes in quality or security (or capacity requirements for growth in demand) over and above that provided by the Required Service Capability under the Connections contract documents (see below), are met by customers who seek changes in quality or security (or capacity). In other words, these new investment contract documents will provide for the price-quality trade off chosen by the customer or group of customers concerned.

 [New Investment Contract \(264KB\)](#)

 [Agreement for Alteration of Grid Assets \(183KB\)](#)

The second limb of the customer communication quality threshold requires Transpower to consult with its customers as to the quality of service they require, with reference to the prices for Transpower's transmission services.

The relevant Connections contract provisions and supplementary processes are set out below.

Connections

Transpower's Connections contract documents (the Connections Contract and Posted Terms) are structured so as to include the following:

- An obligation on Transpower to advise customers of the number of interruptions and duration of the interruptions in the previous year ending 30 June. In essence, this informs customers of the performance achieved under Transpower's Connections obligation to provide the Required Service Capability, in terms relevant to the performance quality threshold;
- An obligation to advise customers of the steps it intends to take or other options available to reduce unplanned interruptions; and
- An obligation on Transpower to, prior to 30 November of each year, to propose a new point of service schedule (identifying a forecast loading table and voltage table) for the next financial year, in relation to which either party may call a meeting to discuss the contents. Transpower has proposed to use this opportunity to consult with customers as to the quality of performance they require with reference to Transpower's prices for transmission services.

Processes

Consequently, Transpower Account Executives will:

- Discuss with customers Transpower's performance in respect of interruptions (as advised to them under Connections);
- Request input from each customer as to the quality of service they require;

with the objective of consulting with customers as to the quality of service may require, with

reference to the price of those services.

GENERAL

All of the above supplements the work of the Grid Investment team through regional forums, stakeholder liaison, the publication of Annual Planning Reports and the submission of major upgrades to the Electricity Commission.

Regional Forums and Stakeholder liaison

Over the last few years Transpower has held and been involved in Regional Forums and stakeholder liaison meetings. Examples include Bay of Plenty regional forum, Waikato regional forum, Options consultation and workshop for North Auckland and the HVDC Upgrade consultation.

In each case, Transpower has provided information and options to customers and stakeholders to help them make price-quality trade offs and investment decisions. Options being considered for transmission in the top of the South Island are in response to issues raised in Transpower's System Security Forecast.

Transpower intends to continue its involvement in regional forums and stakeholder liaison as appropriate opportunities arise.

Annual Planning Report and Asset Management Plan

Transpower has published its Annual Planning Report (APR) for the last two years (2006 and 2007). It is currently finalising the drafting of a new Asset Management Plan (AMP) - the previous one was published in 2005.

The purpose of publishing the APR and AMP is to provide customers and market participants with information on security issues likely to arise over the next decade to assist in developing their own asset management plans. The APR includes supply/demand trends for the next 10 years and provides information on the quality of supply to all regions to enable the market to make the appropriate response to maintain security and quality.

The AMP and the APR are intended to provide a common base of information for all asset owners to consider in their investment decisions. Customer consultation has included regional forums, and stakeholder liaison and dialogue resulting from offers to meet with customers to discuss issues raised in the publications. Additional information (e.g. costs) would be required to enable customers to make price-quality trade offs.

Further Information

If you require any further information concerning Transpower's present practices in relation to the customer communication quality threshold set out in clause 6.1(c) of the Notice, please use the following link to contact your Account Executive.

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Schedule 12



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www.pwc.com/nz
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AUDITORS' REPORT ON THRESHOLD COMPLIANCE STATEMENT

To the readers of the threshold compliance statement of Transpower New Zealand Limited for the assessment period ended on 30 June 2007

We have examined the attached statement, which is a threshold compliance statement in respect of the price path threshold and the quality threshold prepared by Transpower New Zealand Limited for assessment as at 30 June 2007 and dated 16 August 2007 for the purposes of information requirements set out in clause 7 of the Commerce Act (Transpower Thresholds) Notice 2006 ("the Notice"). In this report the attached statement is called "the threshold compliance statement".

Directors' Responsibilities

Directors of Transpower New Zealand Limited are responsible for the certification of the threshold compliance statement in accordance with the Notice.

Auditors' Responsibilities

It is our responsibility to express an independent opinion (in the form prescribed in the Notice) on the threshold compliance statement and report our opinion to you.

We conducted our audit in accordance with the Auditing Standards issued by the Institute of Chartered Accountants of New Zealand.

Basis of opinion – Price Path Threshold; Quality Threshold: Number of Unplanned Interruptions and Customer Interruptions for the Assessment Period ended 30 June 2007; and Quality Threshold: Customer Communication

Our audit included examination, on a test basis, of evidence relevant to the amounts and disclosures contained on pages 4 to 67 and pages 72 to 92 of the threshold compliance statement and which relate to:

- the price path threshold set out in clause 5 of the Notice;
- the number of unplanned interruptions and customer interruptions for the assessment period ended on 30 June 2007 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice; and
- the customer communication part of the quality threshold set out in clause 6(1)(c) of the Notice.

It also included an assessment of the significant estimates and judgements, if any, made by Transpower New Zealand Limited in the preparation of the threshold compliance statement and assessment of whether the basis of preparation has been adequately disclosed.

We planned and performed our audit of the threshold compliance statement so as to obtain all the information and explanation which we considered necessary, including for the purpose of obtaining sufficient evidence to give reasonable assurance that the threshold compliance statement is free from material misstatements (whether caused by fraud or error). In forming our opinion we also evaluated the overall adequacy of the presentation of information in the threshold compliance statement.

Basis of Opinion – Quality Threshold: Number of Unplanned Interruptions and Customer Interruptions for the Years Ended 30 June 1999, 2000, 2001, 2002 and 2003

In relation to the number of unplanned interruptions and customer interruptions for the years ended 30 June 1999, 2000, 2001, 2002 and 2003, which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice, we have undertaken procedures to provide reasonable assurance that:

- the amounts and disclosures in the threshold compliance statement relating to those performance measures have been correctly taken from the information disclosed by Transpower New Zealand Limited in accordance with the Electricity (Information Disclosure) Regulations 1999; and
- those performance measures have been calculated based on the source data provided to us. We have not performed audit procedures on the source data.

Relationship and Interests

We have no relationship with or interests in Transpower New Zealand Limited other than in our capacities as auditors of the threshold compliance statement, as advisors in the areas of taxation compliance and in the provision of other assurance, taxation and professional advisory services. We are not aware of any relationships between our firm and Transpower New Zealand Limited that, in our professional judgment, may reasonably be thought to impair our independence.

Fundamental Uncertainty

In forming our unqualified opinion, we have considered the adequacy of the disclosures made in the attached threshold compliance statement concerning the basis of calculation of the notional revenue. As disclosed in paragraph 41, the notional revenue for the 1 April 2007 pricing year is based on three months (April 2007 to June 2007) of actual invoiced charges and nine months (July 2007 to March 2007) of revenue estimated as follows:

- Electricity Commission levies were applied to last year's quantities adjusted for growth of 2 percent
- Council rates were based on the previous year's rates with a CPI adjustment;
- All other components of notional revenue were assumed to remain constant at the same level as June 2007.

Variances between future actual revenues and those estimated may affect whether Transpower New Zealand Limited is in breach of the price path threshold, and will affect the extent of such breach (if any).

Opinions

We have obtained all the information and explanations we have required.

Price Path Threshold

In our opinion, having made all reasonable enquiry, to the best of our knowledge the amounts or details set out in the threshold compliance statement relating to the price path threshold set out in clause 5 of the Notice and related information have been prepared in accordance with the Notice, and give a true and fair view of the performance of Transpower New Zealand Limited against that threshold for the assessment period ended on 30 June 2007.

Quality Threshold: Number of Unplanned Interruptions and Customer Interruptions

In our opinion, having made all reasonable enquiry, to the best of our knowledge:

- the number of unplanned interruptions and customer interruptions for the assessment period ended on 30 June 2007 which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice and related information have been calculated or prepared in accordance with the Notice and in accordance with Transpower New Zealand Limited's policies and procedures for recording the number of unplanned interruptions and customer interruptions as disclosed in the threshold compliance statement, and fairly represent the performance of Transpower New Zealand Limited for the assessment period ended on 30 June 2007;
- the number of unplanned interruptions and customer interruptions for the years ended 30 June 1999, 2000, 2001, 2002 and 2003, which are relevant to those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice, have been correctly taken from the information disclosed by Transpower New Zealand Limited in accordance with the Electricity (Information Disclosure) Regulations 1999. Those performance measures have been properly calculated based on the unaudited source data provided to us by Transpower New Zealand Limited;
- the number of unplanned interruptions and customer interruptions for the assessment period ended 30 June 2007, together with the number of unplanned interruptions and customer interruptions for the years ended 30 June 1999, 2000, 2001, 2002 and 2003 give a true and fair view of the performance of Transpower New Zealand Limited against those parts of the quality threshold that are set out in clauses 6(1)(a) and 6(1)(b) of the Notice for the assessment period ended on 30 June 2007.

Quality Threshold: Customer Communication

In our opinion, having made all reasonable enquiry, to the best of our knowledge the information set out in the threshold compliance statement relating to that part of the quality threshold that is set out in clause 6(1)(c) of the Notice has been prepared in accordance with the Notice, and gives a true and fair view of the performance of Transpower New Zealand Limited against that part of the quality threshold for the assessment period ended on 30 June 2007.

Our audit was completed on 16 August 2007 and our unqualified opinion is expressed as at that date.

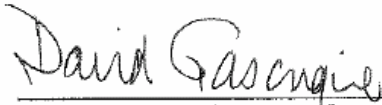


PricewaterhouseCoopers
Wellington
16 August 2007

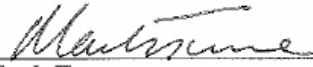
Schedule 13

Directors' Certification of Threshold Compliance Statement

We, David Rendel Kingston Gascoigne and Mark Tume, being directors of Transpower New Zealand Limited ("Transpower") certify that, having made all reasonable enquiry, to the best of our knowledge and belief, the attached threshold compliance statement of Transpower New Zealand Limited and related information, prepared for the purposes of the Commerce Act (Transpower Thresholds) Notice 2006 complies with the requirements of that notice except in respect of clauses 5(1)(a), 5(1)(b), 6(1)(a) and 6(1)(b).



David Rendel Kingston Gascoigne
Director



Mark Tume
Director

Date: 16 August 2007

Schedule 14

Customer Charges at each Connection Point

1. Schedule 14 contains details of the connection, EV adjustment, interconnection and HVDC charges at each point of connection for each customer. This information has been provided to the Commerce Commission in the "Commission Only" version of the Compliance Statement. Transpower has requested that this information be excluded from the "Public" version of the Compliance Statement on the basis that such information is commercially sensitive.