TRANSPOWER

Keeping the energy flowing

Transpower House
96 The Terrace
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 7100
www.transpower.co.nz

19 November 2009

David Caygill
Chair
Electricity Commission
P.O Box 10041
WELLINGTON

Dear David

VERIFICATION OF TRANSPOWER'S TRANSMISSION PRICES

This statement is provided to you as the body responsible for ensuring consistency with the Transmission Pricing Methodology and is given pursuant to rule 9.2.2 of the Electricity Governance Rules 2003.

To the best of the Directors knowledge and belief the Director's are satisfied that:

a) The transmission prices are consistent with the Transmission Pricing Methodology

b) The processes for ensuring consistency and calculation are robust; and

c) The design and implementation, and reporting of the outcome, of the internal audit, are in accordance with best practice.

Yours sincerely

Director

19 / 11 /2009

Director

19 / 11 /2009

PRICEWATERHOUSECOOPERS

PricewaterhouseCoopers

113-119 The Terrace
PO Box 243
Wellington
New Zealand
Telephone +64 4 462 7000
Facsimile +64 4 462 7001

INDEPENDENT ASSURANCE REPORT

To: The Directors of Transpower New Zealand Limited

Introduction

Transpower is required to calculate and publish Transmission Charges for each pricing year in accordance with the Transmission Pricing Methodology. We have been engaged to perform a reasonable assurance engagement on the calculation of the Transmission charges for the 2010/11 pricing year (covering the period from 1 April 2010 to 31 March 2011).

Directors' Responsibilities

The Directors are solely responsible for the calculation of Transmission Charges in accordance with the Transmission Pricing Methodology. This responsibility includes the maintenance and integrity of underlying records, models and application systems supporting the calculation of Transmission Charges.

Auditors' Responsibilities

Our responsibilities are to:

- Express an opinion on whether the calculation of 2010/11 Transmission Charges have been calculated consistent with the Transmission Pricing Methodology dated 25 October 2007 (the 'TPM') such that any errors or inconsistencies are unlikely to have a material impact on the prices
- Express an opinion on whether supporting processes adopted by Transpower, with respect to these calculations, are robust.

Basis of Opinion

Our approach is in accordance with the International Standard on Assurance Engagements (ISAE) 3000 *'Assurance Engagements other than audits of reviews of historical financial information'*, developed by the International Federation of Accountants. We planned and carried out our work to obtain reasonable, rather than absolute, assurance that the Transmission Charges have been calculated in accordance with the Transmission Pricing Methodology.

A reasonable assurance engagement involves performing procedures to obtain sufficient appropriate evidence as to whether the subject matter is prepared in accordance with the criteria. The procedures selected depend on the practitioner's judgement including the assessment of the risks of material non-compliance of the subject matter with the criteria.

This report is provided solely for Transpower New Zealand Limited for the purpose of the Transmission Charge setting process for the 2010/11 pricing year.

Our procedures included examining, on a test basis, evidence supporting the calculation of 2010/11 Transmission Charges as advised to customers, examination of internally and externally generated documents and records, interviewing selected personnel and such other procedures as we considered necessary in the circumstances.

Our specific procedures have included:

- Reviewing the processes implemented by management to calculate Transmission Charges and ensure the consistency and robustness of this process. Specifically that appropriate management controls are in place over:
  - the appropriateness of inputs into the calculation process including the material completeness, accuracy and validity of these inputs
  - the integrity of underlying systems and models used to determine customer specific Transmission Charges including changes made to reflect the requirements of the TPM
- Recalculating connection charges, interconnection charges and HVDC charges in accordance with the TPM
- Identifying underlying inputs into these charges and reconciling these inputs to underlying application systems and business records of Transpower
- Verifying, on a sample basis, the classification of connection and interconnection assets
- Recalculating, on a sample basis, individual customer Transmission Charges based on the customer specific asset allocation recorded by Transpower.

In performing the above procedures, we have placed reliance on the underlying application systems and business records maintained by Transpower. These include:

Source	Nature of Input
Audited Statutory Financial Statements for the year ending 30 June 2009 and the 2010/11 Revenue Requirement	Assets, liabilities, revenue and expenditure including HVAC and HVDC components.
Financial Management System (FMIS)	Fixed asset replacement costs, types and characteristics (e.g. line lengths).
Maintenance Management System (MMS) as at 30 June 2009	Operating and maintenance costs associated with specific assets.
Customer Billing System (MDR)	AMI, AMD, HAMI and RCPD quantity information.
Contract Management Information System (CMIS)	Details of customer specific contracts including New Investment Agreements, Notional Embedding Agreements, Input Connection Contracts and Agreements to Alter Grid Assets.
Asset Capability Information System (ACI)	Lines, circuits and span information.
Forecasting model (TM1)	Fixed assets, asset categories, capital expenditure, asset disposals and depreciation calculations.
Grid Configuration Register (Zemindar)	Grid and asset / switch configuration information including the allocation of specific assets to locations, between customers and classification of assets as connection / interconnection, injection / offtake.

Source	Nature of Input
Technical network diagrams	Network diagrams recording underlying substation and line configuration information and, for each substation, the specific assets located at this substation, together with specific Line and Circuit Information.
2009/10 Business Plan as approved by the Board and related EC approvals	Forecast capital movements and expenditure, operating leases.
Administrative Settlement agreed with the Commerce Commission	Weighted average cost of capital and operating expenses.

There are a number of areas where the specific requirements of the TPM cannot currently be met by Transpower's systems. As a result, Transpower has performed a number of alternate procedures which have enabled Transpower to calculate prices materially consistent with the TPM:

- The TPM requires that maintenance cost information is sourced from the Maintenance Management System (MMS). MMS is unable to provide maintenance cost information at a level of detail required by the TPM. Transpower have performed this analysis and allocated maintenance costs as part of the pricing process. PricewaterhouseCoopers has reviewed this process to confirm a reasonable and consistent allocation of maintenance costs has been made
- The FMIS system is the source application that maintains financial information relating to fixed assets. Asset information maintained within FMIS reflects asset balances as at 30 June 2009. As part of the pricing process, Transpower has identified and applied changes since 30 June 2009 to asset details used to determine transmission prices. PricewaterhouseCoopers has reviewed the process applied by Transpower to record asset additions and disposals from 30 June 2009 to confirm that such changes have been appropriately made.

In applying the Transmission Pricing Methodology, it is necessary to apply certain assumptions and adjustment to inputs from underlying application systems. We note that the TPM allows for some exceptions to the application of the Transmission Charge in a number of instances to reflect the specific requirements of customer contracts or state of assets in the field. These are:

- s4: exceptions to the application to the connection charge
- s7: adjustments to AMD, AMI, HAMI and RCPD and calculation of customer charges
- s8: charges for Transmission Alternatives
- s9: prudent discount policy
- Overrides to the connection charge for other assets which are not subject to the TPM, such as customer owned assets or asset which are not in service.

In these circumstances, customer specific Transmission Charges will reflect the terms of specific customer contracts (for example New Investment Contract, Input Connection Contract, Notional Embedding Agreement or Prudent Discount Agreements) the current state of the asset, or the application of discretion allowed to Transpower to alter AMI, AMD, HAMI and RCPD quantities.

We do not provide an opinion as to whether charges have individually been completely and correctly calculated and applied for assets or customers which are not subject to the standard TPM, or whether Transpower's discretion in altering AMI, AMD, HAMI and RCPD quantities is justified.

In our view a robust pricing process is one that is documented, repeatable and with appropriate controls to ensure the completeness, accuracy and validity of inputs, calculations and final transmission prices. Documentation provided by Transpower and reviewed by PwC includes:

- An overview of the pricing process, including key inputs, source of inputs, assumptions and adjustments made to determine these inputs with signoffs from key staff responsible for providing these inputs

- A summary of the key controls applied by management, with accompanying signoffs, to provide comfort over the integrity of inputs, supporting models and pricing calculations used to determine customer specific Transmission Charges.

Throughout the pricing process, specific opportunities to enhance control over this process were identified by both Transpower and PwC. These changes have been built into the pricing process for the current year.

Conclusion

We conclude that:

- Transmission prices set for the 2010/11 pricing year (refer Appendix A) are consistent with the TPM such that these charges have been calculated in all material respects consistent with the Transmission Pricing Methodology dated 25 October 2007 (the 'TPM')
- Overall, the process for ensuring consistency and calculation of these prices was robust.

We completed our work for the purposes of this report on 18 November 2009 and our opinion is expressed as at that date.

PricewaterhouseCoopers

18 November 2009

PricewaterhouseCoopers
Wellington

Date

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Appendix A – Key rates and inputs for the 2010/11 pricing year

Input / Parameter	2010 / 2011
Capacity Levels (MW) – as at 30 June	
Historical Anytime Maximum Injection (HAMI)	3,206
Total Regional Coincident peak Demand (RCPD)	5,980

		Recovery Rates
WACC	Pre-tax (%)	11.14
	Post-tax (%)	7.80
Asset Return Rate (%)		7.00
	RAVconn ($M)	498.28
	Dconn ($M)	27.74
	Rcconn ($M)	1,189.63
Interconnection Rate ($/kW)		69.12
HVDC Rate ($/KW)		26.46
Maintenance Return Rates	Substations (%)	2.17
	220 kV tower lines ($/km)	3,355
	All other tower lines ($/km)	3,427
	Pole lines ($/km)	3,199
Injection Overhead Rate (%)		2.53
Operating Recovery Rate ($/switch)		1,132