Independent Assurance Practitioner's report

To: The Directors of Transpower New Zealand Limited

Introduction

We have completed the assurance engagement in respect of the compliance of Transpower New Zealand Limited ("Transpower") with the Transmission Pricing Methodology ("TPM") set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 for the 2017/18 pricing year (covering the period from 1 April 2017 to 31 March 2018).

Management Responsibilities

Management is responsible on behalf of Transpower for compliance with the TPM as set out in Schedule 12.4 of the Electricity Industry Participation Code 2010. This responsibility includes the maintenance and integrity of underlying records, models and application systems supporting the calculation of transmission charges.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of Professional and Ethical Standard 1 (Revised) issued by the New Zealand Auditing and Assurance Standards Board, which is founded on the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies Professional and Ethical Standard 3 (Amended) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Assurance Practitioner's Responsibilities

Our responsibility is to express an opinion on whether Transpower has complied, in all material respects, with the TPM as set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 for the 2017/18 pricing year and report our opinion to you.

Our engagement has been conducted in accordance with International Standard on Assurance Engagements (New Zealand) 3000 "*Assurance Engagements Other than Audits or Reviews of Historical Financial Information*" (ISAE (NZ) 3000) and Standard on Assurance Engagements 3100 "*Compliance Engagement*" (SAE 3100), to obtain reasonable assurance that Transpower has complied with the TPM as set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 for the 2017/18 pricing year.

Our procedures included examining, on a test basis, evidence supporting the calculation of 2017/18 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:

- Recalculation of connection charge rates, interconnection charge rates and high-voltage direct current ("HVDC") charge rates in accordance with the TPM (refer appendix A).
- Obtaining 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 extracted required data from the application systems and business records listed in Appendix B. We did not perform any procedures to validate the accuracy and completeness of the data within the application systems or supporting information technology general controls to assess the reliability of the information obtained from them and accordingly our assurance conclusion does not extend to the completeness and accuracy of the underlying inputs.

Use of Report
This report has been prepared for Transpower and is provided solely to assist you in establishing that compliance requirements have been met. Our report should not be used for any other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility for any reliance on this report to anyone other than Transpower, or for any purpose other than that for which it was prepared.

Inherent limitations
Because of the inherent limitations of our evidence gathering procedures, it is possible that fraud, error or non-compliance may occur and not be detected. As the procedures performed for this engagement were undertaken on a test basis, our assurance engagement cannot be relied on to detect all instances where Transpower may have not complied with the TPM as set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 for the 2017/18 pricing year. The opinion expressed in this report has been formed on the above basis.

We are independent of Transpower. Our firm carries out other services for Transpower in the areas of consulting services, other assurance services, taxation and professional advisory services. The provision of these other services has not impaired our independence.

Transmission Pricing Exemptions
In applying the TPM, it is necessary to apply certain assumptions and adjustments to inputs from underlying application systems. The TPM allows for some exceptions to the application of the transmission charge. These exceptions are described in paragraphs 26 and 34 to 42 of Schedule 12.4 of the TPM and relate to areas such as adjustments to capacity volumes, Transmission Alternatives, Prudent Discount Policies and overrides to the connection charge for other assets which are not subject to the TPM.

In these circumstances, customer specific transmission charges reflect the terms of specific customer contracts and the application of discretion allowed to Transpower under the TPM.

Our opinion relates to the calculation of prices set under the TPM. We do not provide an opinion as to whether charges have been completely and correctly calculated and applied for assets or customers that are not subject to the TPM.

Opinion
In our opinion, Transpower has complied, in all material respects, with the Transmission Pricing Methodology as set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 for the 2017/18 pricing year.

PricewaterhouseCoopers

8 November 2016

PricewaterhouseCoopers
Wellington

Date

Appendix A

Transmission Prices - Key rates and inputs for 2017/18 pricing year*

Input / Parameter		2017 / 18
Capacity Levels – as at 31 August 2016		
Historical Anytime Maximum Injection (HAMI) (MW)		3,221
South Island Mean Injection (SIMI) (GWh)		17,900
Total Regional Coincident Peak Demand (RCPD) (MW)		5,768
Recovery Rates		
WACC	Pre-tax (%)	8.94
	Post-tax (%)	6.44
Asset Return Rate (%)		8.26
	RAVconn ($)	598,373,217
	Dconn ($)	29,591,564
	RCconn ($)	1,005,964,568
Injection Overhead Rate (%)		4.69
Maintenance Return Rates	Substations (%)	1.83
	220 kV tower lines ($/km)	5,225
	All other tower lines ($/km)	4,980
	Pole lines ($/km)	3,683
Operating Recovery Rate ($/switch)		1,207
Interconnection Rate ($/kW)		123.98
HVDC Rate	HAMI Rate ($/kW)	34.75
	SIMI Rate ($/MWh)	2.08
Revenue Requirement		
Electricity Industry Participation Code		
HVAC ($m)		842.12
HVDC ($m)		149.24
Total EIPC Revenue Requirement ($m)		991.36
Notionally Embedded Agreements ($m)		3.3

* Based on the customer pricing calculation run as per Zemindar Grid Scenario 12869

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Appendix B

Application systems relied on

We extracted the required data from the application systems listed below. We did not perform any procedures to validate the accuracy and completeness of the data within the application systems listed or supporting Information Technology General Controls to assess the reliability of the information obtained from them, except for limited procedures over access and change management of the Grid Configuration Register (Zemindar).

Source	Nature of Input
Audited Statutory Financial Statements and Economic Value Statements for the year ending 30 June 2016 and the 2017/18 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).
Maximo Maintenance Management System (MMS) as at 30 June 2016	Operating and maintenance costs associated with specific assets.
Meter Data Repository (MDR) system	AMI, AMD, HAMI, SIMI, RCPD and Exceptional Operating Circumstances (EOC) information.
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 / off take.
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.
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.