



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 set out in Schedule 12.4 of the Electricity Industry Participation Code 2010 ("TPM"). We have been engaged to perform a reasonable assurance engagement on the calculation of the Transmission charges for the 2016/17 pricing year (covering the period from 1 April 2016 to 31 March 2017) in accordance with the Transmission Pricing Methodology.

Management Responsibilities

Management is responsible for the calculation of Transmission Charges in accordance with the Transmission Pricing Methodology (Schedule 12.4 within 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.

Auditors' Responsibilities

Our responsibility is to obtain reasonable assurance on whether the calculation of 2016/17 Transmission Charges have been performed consistently with the Transmission Pricing Methodology (Schedule 12.4 within the Electricity Industry Participation Code 2010).

We conducted our independent assurance engagement in accordance with International Standards on Assurance Engagements (NZ) 3000 'Assurance Engagements other than audits or reviews of historical financial information' and Standards on Assurance Engagements 3100 'Compliance Engagements'. Those standards require that we comply with ethical requirements and plan and perform our procedures to obtain reasonable assurance about whether, in all material respects, the calculation of the Transmission Charges has been performed in accordance with the Methodologies set out in Schedule 12.4 of the Electricity Industry Participation Code 2010.

Relationship and Interests

In addition to our role as assurance service providers, we have also provided other consulting services, other assurance services, taxation and professional advisory services. These services do not impair our independence.

Restriction on Distribution or Use

Our assurance report is intended for the benefit of those to whom it is addressed and their reporting to the Electricity Authority. It should not be used for any other purposes other than for which it was prepared. The assurance engagement was not planned or conducted in contemplation of reliance by any third party or with respect to any specific transaction. Therefore, items of possible interest to a third party were not specifically addressed and matters may exist that would be assessed differently by a third party, possibly in connection with the specific transaction.

This report is provided solely for Transpower New Zealand Limited for the purpose of the Transmission Charge setting process for the 2015/16 pricing year.

Inherent limitations

Our procedures included examining, on a test basis, evidence supporting the calculation of 2016/17 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:

- Recalculating connection charges, interconnection charges and HVDC charges in accordance with the TPM
- 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.

Basis of Conclusion

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 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.

Conclusion

In our opinion, subject to the matters noted in the Basis of Conclusion, the transmission prices set by Transpower for the 2016/17 pricing year (refer Appendix A) have been calculated consistently, in all material respects, with the Transmission Pricing Methodology included in Schedule 12.4 of the Electricity Industry Participation Code 2010.

A handwritten signature in blue ink, appearing to read 'PricewaterhouseCoopers', written over a horizontal line.

18 November 2015

PricewaterhouseCoopers

Date

Wellington

Appendix A – Transmission Prices - Key rates and inputs* for 2016/17 pricing year

Input / Parameter	2016 / 17
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Capacity Levels (MW) – as at 31 August 2015	
Historical Anytime Maximum Injection (HAMI)	3,223
Total Regional Coincident peak Demand (RCPD)	5,775

Recovery Rates		
WACC	Pre-tax (%)	8.94
	Post-tax (%)	6.44
Asset Return Rate (%)		7.97
	RAVconn (\$)	590,384,409
	Dconn (\$)	29,409,313
	RCconn (\$)	1,031,180,533
Interconnection Rate (\$/kW)		114.64
HVDC Rate (\$/KW)		47.24
Maintenance Return Rates	Substations (%)	1.87
	220 kV tower lines (\$/km)	5,242
	All other tower lines (\$/km)	5,326
	Pole lines (\$/km)	4,301
Injection Overhead Rate (%)		5.03
Operating Recovery Rate (\$/switch)		1,107
Revenue Requirement (\$'ooo)		
<i>Electricity Industry Participation Code</i>		
HVAC		790,656
HVDC		152,285
Total EIPC Revenue Requirement		942,941
<i>Notionally Embedded Agreements</i>		3,286

* Based on the customer pricing calculation run as per Zemindar Grid Scenario 11209

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 2015 and the 2016/17 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 2014	Operating and maintenance costs associated with specific assets.
Meter Data Repository (MDR) system	AMI, AMD, HAMI, 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.