INDIVIDUAL PRICE-QUALITY PATH (TRANSPOWER)

REASONS PAPER

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COMMERCE COMMISSION

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TABLE OF ABBREVIATIONS

Abbreviation	Definition
Act	Commerce Act 1986
Administrative settlement	Deed of settlement between the Commission and Transpower dated 24 June 2008 and the associated Commerce Act (Transpower Thresholds) Notice 2008
Capex	Capital expenditure
Code	Electricity Industry Participation Code
EGRs	Electricity Governance Rules
Electricity Industry Act	Electricity Industry Act 2010
EV account	Economic value account
GAAP	Generally accepted accounting practice, as defined in section 3 of the Financial Reporting Act 1993
HVAC	High voltage alternating current
HVDC	High voltage direct current
IMDP	Input Methodologies Discussion Paper 2009
MAR	Maximum allowable revenue
Opex	Operating expenditure
RAB	Regulatory asset base
RCP	Regulatory control period
SOSPA	System operator service provider agreement
TPM	Transmission pricing methodology
TAMRP	Tax-adjusted market risk premium
WACC	Weighted average cost of capital

EXECUTIVE SUMMARY

Purpose

X1 Under Part 4 of the Commerce Act 1986 (the Act), on 23 August 2010 the Governor-General (on the Minister of Commerce's recommendation) made an Order in Council declaring that the electricity lines services supplied by Transpower New Zealand Limited (Transpower) are subject to individual price-quality regulation on and from 1 April 2011.[1]

X2 This Reasons Paper records the Commerce Commission's (Commission's) decisions and reasons on the price-quality paths applying to Transpower under individual price-quality regulation.

Purpose of the regulation

X3 Transpower is currently regulated under Part 4 of the Act by way of an administrative settlement with the Commission entered into on 13 May 2008.[2] The administrative settlement is superceded by the individual price-quality regulation with effect from 1 April 2011.

X4 The overall purpose statement for Part 4 is contained in s 52A of the Act. There is no express purpose statement in relation to individual price-quality regulation in Part 4. Section 53ZC in subpart 7, however, requires the Commission to apply relevant input methodologies when setting an individual price-quality path. This effectively refers the Commission back to the purpose statement in s 52A, an important guide in determining appropriate input methodologies, and to s 52R, which sets out the purpose of input methodologies.

X5 As noted in the Input Methodologies (Transpower) Reasons Paper, the Commission's interpretation of the Part 4 purpose is that the overall purpose is to:

a. promote the long-term benefit of consumers in markets where there is little or no competition and little or no likelihood of a substantial increase in competition; and

b. be achieved by promoting outcomes consistent with outcomes produced in workably competitive markets such that ss 52A(1)(a)-(d) occur.[3]

X6 The Commission has sought to identify the relevant outcomes produced in workably competitive markets, and has sought to design an individual price-quality path that will promote such outcomes in respect of the regulated services that Transpower supplies.[4] The regulatory mechanisms described in this Paper, together as a package,

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1 The Commerce (Part 4 Regulation – Transpower) Order 2010. See Order in Council: http://www.legislation.govt.nz/regulation/public/2010/0268/6.0/whole.html

2 New Zealand Gazette, Commerce Act (Transpower Thresholds) Notice 2008, 26 June 2008, Issue 106.

3 Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, section 2.3.

4 The Commission has discussed the concept of workable competition in further detail in its Input Methodologies (Electricity Distribution) Reasons Paper, 22 December 2010, Chapter 2.

promote over the long-term, the overall objectives of the Act as set out in s 52A(1)(a) to (d).

X7 The regulatory framework described in the Commission's decisions below promotes the long-term benefit of consumers by providing:

a. incentives to invest, by allowing Transpower to fully recover and earn an appropriate return on its investments, and by providing a penalty/reward framework around quality standards;

b. incentives for Transpower to become more efficient in its operating expenditure, as well as incentives to make efficiency improvements to outperform its targets for quality performance, and in the longer term, in its capital expenditures;

c. requirements for Transpower to share efficiency gains with consumers, such as through the ‘incremental rolling incentive scheme’ for operating expenditure; and

d. limits on the profits that can be made by Transpower in any given regulatory period.

Form of control

X8 The individual price-quality regulation that will apply to Transpower from 1 April 2011 is not dissimilar to that provided under the administrative settlement.[5] Transpower will remain subject to a cap on annual revenue, although now each annual revenue cap will be set at the start of each regulatory period (except the Remainder Period of the first regulatory control period (RCP1), which will be set during the Transition Year). In this manner, revenues for a five-year period will be set prior to the regulatory period to which they will apply.[6]

X9 Transpower will remain subject to reviews of its operating expenditure and capital expenditure plans and reviews of its performance against quality standards. Transpower will also retain a similar economic value (EV) framework that has the effect of returning or recovering economic gains and losses to or from customers in Transpower’s pricing.

X10 The revenue cap is an ex-ante forecast of Transpower’s revenue needs, for each year of the regulatory period, with which its pricing must comply. This is called the ‘forecast maximum allowable revenue’ (forecast MAR).

X11 At the end of each year, a MAR is calculated (as opposed to the forecast MAR). The MAR is essentially the same form of calculation as the forecast MAR, but has various elements of the calculation replaced with actual historical data. For example, forecasts of capital expenditure will be replaced by actual capital expenditure.

5 Note that individual price-quality regulation for a different supplier of regulated services may be different to that being applied to Transpower.

6 Note that the initial control period has been set at four years, comprising a one year and three year path.

X12 A 'wash-up' will be undertaken each year, which will calculate the difference between the MAR (not the forecast MAR) and 'actual revenue' received. Adjustments will also be made to account for Transpower's performance in relation to various incentive mechanisms being applied.[7] The end result of the wash-up is an economic gain or loss. This gain or loss is to be transferred to the HVAC and HVDC EV accounts.

X13 The forecast MAR will be updated for later years (MAR updates) to zero out the net EV account balance. As Transpower's revenues are to be subject to the forecast MAR, this effectively returns to or recovers from customers any economic gain or loss made by Transpower.

X14 The capital expenditure approach used to set the initial approvals of capital expenditure for RCP1 will change for approvals after 1 November 2011. A capital expenditure input methodology will be developed in 2011 in accordance with section 54S of the Act, and it will apply from 1 November 2011.

X15 Transpower will also be subject to quality standards, with targets, caps and collars being applied. An incentive mechanism will apply from 2015/16, which will place a portion of Transpower's revenue at risk.

X16 The key aspects of the individual price-quality framework that will apply to Transpower include the following:

a. the length of RCP1 will be four years from 1 April 2011 to 31 March 2015, with the first year of the four years (the Transition Year) using a number of transitional mechanisms;

b. the Remainder Period forecast MAR will be set by 30 November 2011. This will be calculated using a building blocks approach as specified in the Commission's s 52P determination;[8]

c. each subsequent RCP will be five years;

d. the input methodologies, as specified in the Commission's Commerce Act (Transpower Input Methodologies) Determination 2010, apply;

e. Transpower will be subject to a forecast MAR for each year commencing 1 April of each RCP. These will be calculated using a building blocks approach as specified in the Commission's s 52P determination;[8]

f. capital projects will be divided into Minor and Major capital expenditure categories;

g. the Commission will undertake full ex-ante reviews of Transpower's proposed level of operating expenditure and Minor capital expenditure prior to the start of each RCP.[9] The purpose of the reviews is to approve a level of expenditure

7 It should be noted that the incentive mechanism relating to quality standards will not be applied until RCP2.

8 Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, 22 December 2010.

9 The Commission's approach to reviewing capital expenditure may change once the capital expenditure input methodology is developed in 2011.

for each year of the regulatory period which the Commission considers to be reasonable and efficient. The level approved will be included in calculating Transpower's forecast MAR, and against which compliance will be assessed;

h. the Commission will undertake individual ex-ante reviews of Transpower's grid upgrade proposals (Major capital expenditure);

i. Transpower will provide the Commission with its calculations of its forecast MAR for each year of the RCP, which must be supported with an independent assurance opinion that verifies Transpower's calculations are accurate and correctly apply the Commission's determination;

j. the opening EV account balances carried forward from 30 June 2011 (the net balance, as at 30 June 2010, was $18.7 million) must be returned to or recovered from customers, as applicable, so that the opening balance of each customer EV account is reduced to zero by the end of the second RCP (RCP2);

k. the MAR wash-up will calculate the difference between the MAR (not the forecast MAR) and actual revenue received. The economic gain or loss will be transferred to the high voltage alternating current (HVAC) and high voltage direct current (HVDC) EV accounts;

l. differences between forecast and actual capital expenditure will be taken into account during each annual MAR wash-up;

m. all annual adjustments made to an EV account as a result of wash-ups must be returned to or recovered from customers by amending the next available forecast MAR. The objective is that the all EV account balances are reduced as close to zero as practicable each year;

n. quality performance targets applying to RCP1 will be set for Transpower. These will be based on the following three measures:

   i. loss of supply event frequency, measured by the number of events over 0.05 system minutes, and the number of events over 1.0 system minutes;

   ii. HVAC transmission circuit availability; and

   iii. total impact of interruptions, measured in system minutes;

o. Transpower will be subject to a penalty/reward scheme that applies to the quality standards set by the Commission beginning in RCP2;

p. all assets may be included in the regulatory asset base once commissioned. However, those that do not receive appropriate regulatory approval must be accompanied by an EV adjustment that offsets the revenue impact of the asset over the life of the asset;

q. revenue and costs associated with System Operator services must be excluded from the individual price-quality path;

r. annual updates of the forecast MAR will take into account the revenue impact of additional Major capital expenditure approved by the Commission after the forecast MAR for a year has been set. The revenue impact will take into account the effects of the additional Major capital expenditure on depreciation, on the capital charge and on tax.[10] The update will not include any consequential effects on operating expenditure or Minor capital expenditure;

s. the updates of forecast MARs in RCP1 will cover Years 3 and 4 of RCP1;

t. the updates of forecast MARs in RCP2 will cover Years 2 through 5 of RCP2; and

u. any revenue effects of such approved Major capital expenditure that cannot be taken into account through an update of a forecast MAR, due to the timing of calculations relative to the timing of approval and commissioning of the project, may also be taken into the MAR wash-ups for relevant years.

Operating expenditure

X17 Operating expenditure allowances will be determined prior to the relevant RCP for each year of that RCP, except in RCP1, where separate operating expenditure allowances will be set for the Transition Year and the years in the Remainder Period.

X18 The operating expenditure allowance that was applied by the Commission when setting the Transition Year forecast MAR was $234.02 million. For the purposes of the Transition Year wash-up, the amount of $248.5 million (excluding, in each case, pass-through costs and recoverable costs) will be used. This change reflects an update to the treatment of operating leases in the input methodology determination since the Transition Year operating expenditure allowance was set.

X19 The ‘incremental rolling incentive scheme’ for operating expenditure does not apply to the Transition Year, but will apply to the Remainder Period and RCP2.

X20 Future operating expenditure allowances will be determined after the Commission has assessed the forecast operating expenditure proposed by Transpower, and will also exclude pass-through costs and recoverable costs. The operating expenditure allowed over each RCP will consist of separate operating expenditure allowances for each year of each RCP.

X21 Wash-ups will not be applied to operating expenditure. No adjustments will be made in respect of the difference between the operating expenditure allowance approved by the Commission for any year and actual operating expenditure.

Capital expenditure

X22 A capital expenditure input methodology will be developed during 2011 and will apply from 1 November 2011. The individual price-quality determination and any affected input methodologies may be amended, as necessary, to reflect the capital expenditure input methodology.

X23 The level of approved Minor capital expenditure for the Transition Year (2011/12), inclusive of Business Support capital expenditure, that was applied by the Commission when setting the Transition Year forecast MAR was $225.6 million.

[10] References to the capital charge in this Paper are to the capital charge calculation in Schedules D and E of the s52P determination. The calculation excludes depreciation, which is a separate building block in the forecast MAR and MAR calculations.

For the purposes of the Transition Year MAR wash-up, $208.6 million will be used. This change reflects an update to the treatment of operating leases in the input methodology determination, made subsequent to the Transition Year Minor capital expenditure allowance being set.

X24 The category of Minor capital expenditure will comprise replacement, refurbishment and enhancement (RRE), Information Systems and Technology (IST) projects and Business Support capital expenditure, as follows:

a. replacement and refurbishment capital (with no limit on the size of any project);

b. IST capital (with no limit on the size of any project);

c. in the Transition Year, capital expenditure where the value of an individual enhancement project is less than $1.5 million, or less than $5.0 million for a programme;

d. in the Remainder Period, capital expenditure where the value of enhancement projects or programmes is less than $5.0 million; and

e. Business Support capital expenditure (with no limit on the size of any project).

X25 Full substitution within the Minor capital expenditure project category will be allowed, including between years within a given RCP. This provides flexibility to Transpower, within the level of capital expenditure approved, to fully manage and prioritise its capital spend during each RCP.

X26 Major capital expenditure projects will be subject to individual approval. No provision is made to allow substitution between Major capital expenditure projects.

X27 Major capital expenditure projects were reviewed by the Electricity Commission prior to 1 November 2010. Requests for approval after that date are subject to review by the Commerce Commission. If Major capital expenditure projects are approved prior to a forecast MAR determination, these will be included in the forecast MAR calculation. If Major projects receive regulatory approval after the forecast MAR determination, the approved capital expenditure will be taken into the next update of the forecast MAR if they are forecast to be commissioned during the RCP, and may be included in annual MAR wash-ups if commissioned during the RCP.

Input methodologies that apply

X28 The following is a brief summary of key points of the input methodologies that apply to the supply of electricity transmission services by Transpower under the individual price-quality path determination made by the Commission:

a. the specification of price input methodology, which requires that a total revenue cap is to be specified under the individual price-quality determination, with the cap being net of pass-through costs and recoverable costs. Pass-through costs and recoverable costs will be excluded from each operating expenditure allowance, and include:

i. Pass through costs - being rates on system fixed assets and Electricity Industry Act 2010 and Commerce Act levies; and

ii. Recoverable costs - being instantaneous reserve availability charges, transmission alternatives operating expenditure, and costs resulting from the ‘incremental rolling incentive scheme’ for operating expenditure;

b. the cost allocation input methodology, which requires Transpower to allocate costs to system operator activities and to other activities to the extent that those activities are undertaken to supply electricity transmission services;

c. the asset valuation input methodology, which specifies that Transpower's initial RAB value under the individual price-quality determination is Transpower's closing RAB value as determined under the settlement, including any capital additions as permitted under the settlement, as well as any residual value of the five pseudo assets approved under the settlement. Any assets that were excluded under the settlement are excluded from the RAB and no indexation will apply to the RAB. Capitalised operating lease assets are also excluded from the initial RAB value;

d. the cost of capital input methodology, which specifies a WACC for Transpower for each year of RCP1; and

e. the treatment of taxation input methodology, which requires Transpower to apply the 'tax payable' approach in calculating its tax obligations.

X29 Provision has been made under the input methodology determination to allow the individual price-quality path to be reconsidered in certain situations, including the revenue impact of additional Major capital expenditure approvals, EV adjustments, and events that have a material impact on Transpower such as catastrophic events, material error, and changes to legislative or regulatory requirements.

X30 A more detailed summary of the applicable input methodologies, as well as references to each input methodology and to the input methodology determination is included in Chapter 2 of this Paper.

Compliance framework

X31 The Commission’s decision implements a compliance framework that provides flexibility for Transpower to manage its business across each year of the regulatory period. In this manner, actual costs, capital expenditure, and revenues in any given year, can be different to that specified in the Commission’s forecast MAR determination without causing Transpower to ‘breach’ its requirements. However, Transpower will only remain compliant with the individual price-quality path over time if it calculates ex-post economic gains or losses against the MAR at year end in accordance with the s 52P determination, makes an equivalent net adjustment to the HVAC and HVDC EV accounts to offset this gain or loss, and then applies the net EV account balance in calculating the forecast MAR for the later pricing year.

X32 Transpower must publish and provide the Commission with a written statement (annual compliance monitoring statement) that sets out the details of its calculation of its ex-post economic gain or loss for each completed year of that RCP. The annual compliance monitoring statement must also include details regarding performance against its quality standards, and any associated adjustments made to revenue (by way of EV account adjustments or forecast MAR updates). The annual compliance monitoring statement will include an independent assurance opinion from an auditor.

X33 While Transpower is not constrained in its ability to undertake annual capital expenditure in any given year (i.e. to the pre-approved annual level), for the purpose of compliance at the end of each RCP, the sum of its Minor capital expenditure over the entire RCP may not exceed the sum of the annual approvals. Unapproved over-expenditure for the RCP as a whole must be excluded from the calculation of the ex-post economic gain or loss in the final year of the RCP.

X34 If Transpower's annual compliance monitoring statement identifies that Transpower has commissioned Minor capital expenditure in excess of the ex-ante approved level, the Commission will not accept applications for ex-post approval for the amount of that capital expenditure until the last annual compliance monitoring statement for that RCP. In the case of spend in excess of approved levels, or not fully complying with Transpower’s approval processes, Transpower will make a separate EV account entry to fully offset the revenue impact of the value of the excess expenditure over the life of those assets.

X35 Likewise, unapproved over-expenditure on a Major capital expenditure project must also be excluded from each annual calculation of ex-post economic gain or loss. Transpower will make a separate EV account entry to fully offset the revenue impact of the value of the excess expenditure over the life of the project assets.

SECTION 1: FRAMEWORK

CHAPTER 1: INTRODUCTION

1.1 Purpose and Scope of this Paper

1.1.1 The purpose of this reasons paper (Paper) is to set out the Commission's decisions and reasons on matters that are relevant to the regulation of Transpower under the individual price-quality path determination.

1.1.2 This Paper is primarily focused on non-input methodology-related matters. However, it also sets out a high level summary of each input methodology that applies to Transpower. More detailed discussion on those input methodologies is contained in the Input Methodologies (Transpower) Reasons Paper.

1.1.3 Statutory references in this Paper are to the Commerce Act 1986 (the Act) unless otherwise specified.

1.2 Background

Scope of services

1.2.1 Transpower owns New Zealand's high voltage electricity transmission system (i.e. 'the national grid'). Transpower transmits electricity from generators to substations where it is supplied to local electricity distribution businesses or large industrial consumers.

1.2.2 Apart from the transmission of electricity throughout the national grid, Transpower manages the operation of the national grid as the System Operator and has a number of subsidiaries providing services, being Energy Market Services Limited, d-cypha Trade and Risk Reinsurance Limited. Transpower provides the system operator services under the System Operator Service Provider Agreement (SOSPA) between Transpower and the Electricity Authority.[11]

1.2.3 These activities give rise to the sharing of operating costs (e.g. expenses related to head office functions) and assets between those activities, and therefore to common costs, or 'shared costs'. Treatment of such costs is addressed in the Input Methodologies (Transpower) Reasons Paper (Chapter 3).

1.2.4 The Electricity Industry Act 2010 (the Electricity Industry Act) clarifies that system operator services are included as part of the conveyance of electricity by line and hence are regulated services.[12]

1.2.5 However, where the Electricity Authority and Transpower have an agreed contract for system operator services, the Commission considers that the revenue and costs

[11] System operator service provider agreement between the Electricity Authority (pursuant to s 134(1)(e) of the Electricity Industry Act 2010) and Transpower New Zealand Limited, 12 August 2009.

[12] Electricity Industry Act 2010, s150(1).

associated with that contract should be excluded from any individual price-quality path.

Regulation under Part 4

1.2.6 On 13 May 2008, the Commission accepted an administrative settlement from Transpower in respect of breaches of the thresholds under Part 4A of the Act. Although Part 4A has now been repealed, under Part 4 of the Act Transpower continues to be subject to this administrative settlement until it expires, i.e. until the Commission has assessed Transpower's compliance with the settlement for the 30 June 2011 financial year.

1.2.7 Under Part 4 of the Act, the Commission is required to:

a. recommend to the Minister of Commerce that an Order in Council be made under s 52N declaring that Transpower is subject to either default/customised or individual price-quality regulation following the expiry of the administrative settlement; and

b. determine a price-quality path for Transpower, of the type specified in the Order in Council, as soon as practicable after the Order in Council is made.

1.2.8 Following consultation with interested parties on the type of price-quality regulation that should apply to Transpower, on 13 April 2010 the Commission recommended to the Minister of Commerce that Transpower be subject to individual price-quality regulation under Part 4 of the Act.[13] The Commission recommended that price be specified in terms of a revenue cap determined using a full building blocks approach.

1.2.9 Following acceptance of the Commission's recommendation by the Minister, the Governor General made an Order in Council specifying that Transpower be subject to individual price-quality regulation on 23 August 2010.

Timing and implementation of individual price-quality regulation

1.2.10 In order to give effect to the Commission's individual price-quality determination, Transpower needs sufficient time between when the determination is made and when it can practically announce its prices, these being subject to the Commission's revenue determination. Practically speaking this poses implementation issues for the 2011/12 prices, as under the individual price-quality path using a full building blocks approach, the Commission would normally expect to undertake a full ex-ante review of both operating expenditure and capital expenditure proposed by Transpower, before setting the revenue cap under the individual price-quality path.

1.2.11 Normally this review would examine Transpower's capital expenditure and operational expenditure plans for the full length of an RCP, and the Commission would provide its determination by a date that still allowed Transpower sufficient time to develop and announce its prices for the next pricing year.

[13] Commerce Commission, *Recommendation to the Minister regarding the type of regulation to apply to Transpower*, 13 April 2010.

1.2.12 The time constraints that arise from the lead time necessary for price-setting led the Commission to separate RCP1 into a Transition Year, ending on 31 March 2012, and a Remainder Period, being the three years from 1 April 2012 to 31 March 2015.

1.2.13 For the Transition Year, the levels of operating expenditure and capital expenditure used in setting Transpower's approved forecast MAR were approved using an approach different to that for the Remainder Period. For the operating expenditure allowance, the Commission escalated the operating expenditure provision under the settlement, and made a number of other adjustments, rather than undertaking a full review. This is set out in more detail in Chapter 4.

1.2.14 For the Transition Year capital expenditure, the Commission adopted a similar approach to that used under the settlement agreement for annual approvals of proposed capital expenditure. This is set out in more detail in Chapter 5. This approach was set out in the Commission's Process and Recommendation Discussion Paper, [14] its Emerging Views Paper, [15] and its Draft Reasons Paper,[16] and received general support.

1.2.15 For the Remainder Period the Commission intends to undertake a full ex-ante review of Transpower's operating expenditure and capital expenditure. This review will begin in February 2011.

1.2.16 In its August 2010 Revised Process Paper, the Commission sought feedback on a draft decision to align the publication dates of the input methodologies and individual price-quality path papers that relate to Transpower. In taking this approach, the Commission noted it would need to provide a reduced notice period to that indicated in the Act.[17]

1.2.17 Under s 53M(7) a s 52P determination does not apply to a supplier until the date specified in the determination, which must be a date at least four months after a summary of the determination is published in the Gazette. That section applies to an individual price-quality determination pursuant to s 53ZC(2)(a).

1.2.18 The Revised Process Paper consulted on reducing the notice period from four months to three months. The Commission's view was to publish the individual price-quality path determination summary in the Gazette in December 2010. This was generally supported by submitters.

1.2.19 The input methodologies applying to Transpower, however, will now be published in the New Zealand Gazette in January 2011. As a result, while the individual price-quality determination will be available on the Commission's website in December 2010, the determination summary will be published in the Gazette in January 2011. The Commission is, therefore, reducing the notice period to two months under

14 Commerce Commission, *Transpower Process and Recommendation Discussion Paper*, June 2009, paragraph X9.

15 Transpower Workshop, 2/3 March 2010, Appendix B (Emerging Views Paper, 17 February 2010).

16 Commerce Commission, *Individual price-quality path (Transpower) Reasons Paper*, 25 June 2010.

17 Commerce Commission, *Revised process Paper for the Individual price-quality regulation of Transpower*, 26 August 2010, p.2.

s 53ZC(2). The Commission is of the view that this decision has no practical or detrimental implications on any party as the forecast MAR has been set, and prices have already been announced for the 2011/12 pricing year.

1.2.20 The Commission's decisions and the reasons set out in this Paper do not predetermine decisions on matters relating to subsequent RCPs. The Commission will consult on the individual price-quality path to apply to Transpower for RCP2. A number of assumptions about future RCPs are necessary to enable setting of the individual price-quality path for RCP1. These are necessary to enable calculations to be made for RCP1 on matters such as, for example, the spreading of the opening EV account balances to the forecast MAR.

Statutory Framework

1.2.21 The overall purpose statement for Part 4 is contained in s 52A of the Act (Part 4 Purpose). There is no express purpose statement in relation to individual price-quality regulation. There is only one section in subpart 7, being s 53ZC. That section requires the Commission to apply relevant input methodologies when setting an individual price-quality path. This effectively refers the Commission back to the purpose statement in s 52A, which is an important guide in determining appropriate input methodologies, as well as to s 52R which sets out the purpose of input methodologies.

1.2.22 A discussion of the Part 4 Purpose in the context of regulating electricity lines services (including Transpower) is set out in Chapter 2 of the EDB/GPB Reasons Paper.[18] In addition, Chapter 2 of the Input Methodologies (Transpower) Reasons Paper sets out some of the factors specific to Transpower that do not apply in the case of EDBs.

1.2.23 That EDB/GPB Reasons Paper explains that the central purpose is to promote the long-term benefit of consumers in markets where there is little or no competition and little or no likelihood of a substantial increase in competition.[19] This central purpose is to be achieved by promoting outcomes consistent with those produced in workably competitive markets such that the regulatory objectives set out in paragraphs (a) to (d) of s 52A(1) are achieved.

1.2.24 The regulatory mechanisms described in this Paper, together as a package, promote over the long-term, the overall objectives of the Act as set out in s 52A(1)(a)-(d). In particular, the individual price-quality path, described in the Commission's decisions below, promotes the long-term benefit of consumers by providing:

a. incentives to invest, by allowing Transpower to fully recover and earn an appropriate return on its investments, consistent with s 52A(1)(a), and by providing a penalty/reward framework around quality standards consistent with s 52A(1)(b);

[18] Commerce Commission, *Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper*, 22 December 2010, Chapter 2.

[19] 'Competition' in the Act, including Part 4, means 'workable or effective competition' (s 3(1))—hereafter 'workable competition'.

b. incentives for Transpower to become more efficient in its operating expenditure, as well as incentives to make efficiency improvements to outperform its targets for quality performance, and in the longer term, in its capital expenditures, consistent with s 52A(1)(b);

c. requirements for Transpower to share efficiency gains with consumers, such as through the 'incremental rolling incentive scheme' for operating expenditure, consistent with s 52A(1)(c); and

d. limits on the economic gains that can be made by Transpower in any given regulatory period, consistent with s 52A(1)(d).

1.2.25 It is relevant to note that the step change in Transpower's investment needs, the proposed improvements to Transpower's forecasting systems, the transition from the administrative settlement, and the recent legislative changes, are all factors that in the short- to medium-term will likely constrain the Commission's ability to design regulatory mechanisms that include the best possible incentives and processes for promoting performance by Transpower that achieves the central purpose of Part 4 and the regulatory objectives in s 52A(1)(a)-(d).

1.2.26 While it is not always apparent in isolation, how each individual component of the individual price-quality path gives effect to the central purpose, it should be noted that when combined, each component collectively contributes to a package that promotes the objectives of the Act. Each component has been designed in a manner that carefully balances the incentive provided, taking into account the package as a whole. It is when considered in combination with each other, and with other requirements such as the input methodology (IM) determinations and information disclosure regulation, that it can be seen that the components that determine the individual price-quality path will provide strong incentives for Transpower, to act in a manner consistent with the Part 4 Purpose.

1.2.27 The Commission has a wide discretion with respect to the manner in which it may determine an individual price-quality path for Transpower. Under s 53ZC(1), the Commission may determine the path using any process, and in any way, it thinks fit, provided it uses applicable input methodologies and the relevant price-quality provisions of the Act in s 53M.

1.2.28 The purpose of input methodologies, as set out in s 52R, is to promote certainty in relation to the rules, requirements and processes applying to regulation or proposed regulation. The Commission's view is that each of the input methodologies set out in s 52T(1)(a) are relevant to Transpower, and will assist in promoting certainty regarding the regulation of Transpower. Input methodologies are discussed in more detail in Chapter 2.

1.2.29 The Commission intends that any implementation changes to the individual price-quality path determination that are necessary, such as setting a new price-quality path for the next RCP, or updating/reconsidering Transpower's forecast MAR during an RCP, will likely be done by amending the s 52P determination under s 52Q of the Act.

1.2.30 For the purpose of this Paper, reference to the s 52P determination is to the determination published today, that sets the overall regulatory framework and sets the first individual price-quality path.[20] Reference to subsequent MAR determinations refers to decisions that will be made by the Commission regarding the price-quality path to apply to Transpower for a given RCP, given effect via an amendment under s 52Q of the Act.

Recent amendments to the statutory framework

1.2.31 Section 52T(1)(b) of the Act provides that the Commission is not required to set pricing methodologies in relation to particular goods or services where these are subject to regulation by an industry-specific regulator (such as the Electricity Authority). For this reason, and to avoid any duplication with pricing methodologies set by the Electricity Authority, the Commission's determinations with respect to Transpower do not address matters relating to pricing methodologies.

1.2.32 The Act now includes s 54S, which requires the Commission to determine an input methodology specifying an approval process for capital expenditure by 1 November 2011, or an extended time of up to three months as approved by the Minister.[21]

1.2.33 As the time available to determine and implement this input methodology prior to the price-setting process for 2012/13 is insufficient, the Commission will not determine the input methodology as part of the Commission's initial s 52P determination. The Commission is, however, likely to amend the s 52P determination to take account of the new capital expenditure input methodology once that methodology is determined.

1.2.34 Another impact of the Electricity Industry Act is to alter the restrictions on the Commission in respect of setting quality measures applying to Transpower. The requirement for the Commission to 'give effect to' the quality standards set by the Electricity Commission has been replaced by a requirement that quality standards set in a s 52P determination must be based on, and be consistent with the standards that are set by the Electricity Authority (refer to s 54V(6)). This is discussed in more detail in Chapter 6.

1.2.35 A more in-depth description and explanation of the regulatory framework that applies to Transpower has been provided in Chapter 2 of the Input Methodologies (Transpower) Reasons Paper 2010. This includes the applicable framework for input methodologies, information disclosure, and individual price-quality regulation, as well as consideration of the Electricity Industry Act.

Information disclosure

1.2.36 Section 53A of the Act provides that the purpose of information disclosure regulation is:

> to ensure that sufficient information is readily available to interested persons to assess whether the purpose of [Part 4] is being met.

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[20] Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010*, 22 December 2010.

[21] Commerce Act 1986, s 54S, as introduced by s 155 of the Electricity Industry Act 2010, with effect from 1 November 2010.

1.2.37 Under s 54I(1), a s 52P determination which specifies how information disclosure regulation applies to Transpower under Part 4 must be made as soon as practicable after 1 April 2009. The Commission intends to set new information disclosure requirements as soon as practicable now that the applicable input methodologies have been determined. Until that time, s 54W provides that the current information disclosure requirements for Transpower (as set out in the Electricity (Information Disclosure) Requirements 2004) continue to apply.

Individual price-quality path determination

1.2.38 The s 52P individual price-quality path determination, together with the input methodologies determination, sets out the approach to determining the individual price-quality path for Transpower for the regulatory period commencing 1 April 2011. This Paper provides the decisions and reasons relating to the s 52P determination.

SECTION 2: DECISIONS AND REASONS

CHAPTER 2: INPUT METHODOLOGIES THAT APPLY

The Commission's decision, as set out in Part 3 of the Input Methodologies (Transpower) Reasons Paper, is that the following input methodologies will apply to Transpower:

a. Cost allocation;

b. Asset valuation;

c. Treatment of taxation;

d. Cost of Capital; and

e. Rules and Processes, which includes the Commission’s approach to:

   i. the specification and definition of prices, including identifying any costs that can be passed through to prices;

   ii. identifying circumstances in which the individual price-quality path may be reconsidered within a regulatory period; and

   iii. how an ‘incremental rolling incentive scheme’ will operate for Transpower.

2.1 Chapter Introduction

2.1.1 This Chapter provides a brief summary of the decisions which have been set out in more detail in the Commission’s Input Methodologies (Transpower) Reasons Paper. This Chapter does not provide an exhaustive coverage of those decisions, nor does it provide reasons for those decisions. These have been provided in full in the Input Methodologies (Transpower) Reasons Paper, and are repeated here for the reader’s convenience. This Chapter also does not cover any process or decision on other non-input methodology matters.

2.2 Cost Allocation

Decision

2.2.1 The Commission’s detailed decisions on matters relating to cost allocation are provided in Chapter 3 of the Commission’s Input Methodologies (Transpower) Reasons Paper. A summary of those decisions includes the following:

a. Transpower is not required to adjust the total costs associated with supplying electricity transmission services to take into account any costs that might be common to regulated and unregulated services;

b. operating costs or asset values allocated to activities undertaken by Transpower to supply electricity transmission services other than system operator services, must be net of costs or asset values implicitly or explicitly recoverable by Transpower in respect of any agreement between it and the Electricity Authority in respect of the system operator services;

c. fixed assets used solely for the purposes of supplying system operator services are to be excluded from Transpower's RAB;

d. any costs recovered through an agreement for system operator services are to be excluded from any operating expenditure or capital expenditure forecasts used to determine Transpower's individual price-quality path;

e. fixed assets associated with new investment contracts (NICs) are to be excluded from Transpower's RAB;

f. any capital expenditure included in NICs is to be excluded from any capital expenditure forecasts used to determine Transpower's individual price-quality path; and

g. Transpower should continue to include all operating costs associated with NICs within its total operating costs associated with providing regulated services.

Reasons

2.2.2 The Commission's reasons for its approach to cost allocation are provided in Chapter 3 of the Input Methodologies (Transpower) Reasons Paper.

2.3 Asset Valuation

Decision

2.3.1 The Commission's detailed decisions on matters relating to asset valuation are provided in Chapter 4 of the Commission's Input Methodologies (Transpower) Reasons Paper. A summary of the Commission's decisions for establishing the initial RAB value for Transpower, and rolling the RAB forward, includes the following:

a. the initial value of the RAB is the RAB determined under the settlement agreement as at 30 June 2011;

b. the initial value of the RAB includes the remaining value of the HVAC lines pseudo asset, established by the settlement agreement, as at 30 June 2011;

c. the following assets are excluded from the RAB:

   i. any assets not used to provide electricity transmission services;

   ii. any asset that is part of a works under construction;

   iii. working capital;

   iv. easement land, that is land acquired for the purpose of creating an easement, and with the intention of on-selling the land;

   v. assets provided under NICs; and

   vi. assets associated with delivering an agreement between Transpower and the Electricity Authority in respect of the provision of the system operator services;

d. Transpower may include in its RAB value finance leases, and intangible assets that are identifiable and not monetary, consistent with GAAP. Transpower must establish the value of permitted intangible assets added to the RAB value after 30 June 2011 using the cost model of recognition under GAAP;[22]

e. Transpower may not include operating leases in its RAB value; and

f. the RAB must be rolled forward for Commission-approved capital additions at depreciated historic cost (DHC). No indexation is to be applied in rolling forward the RAB.

Reasons

2.3.2 The Commission's reasons for its approach to asset valuation are provided in Chapter 4 of the Input Methodologies (Transpower) Reasons Paper.

2.4 Treatment of Taxation

Decision

2.4.1 The Commission's decision is that Transpower's tax obligations will be estimated using a 'tax payable' approach, and that:

a. the cost allocation input methodology is to be applied, and tax legislation is to be applied (to the extent practicable and subject to other relevant provisions in the input methodologies), to calculate the regulatory taxable income;

b. tax deductible debt interest should be calculated using a notional leverage that is consistent with the cost of capital input methodology;

c. tax losses in Transpower's wider tax group should be ignored when estimating tax costs, and any tax losses generated in the supply of regulated services should be notionally carried forward to the following disclosure year;

d. the regulatory tax asset value of assets acquired from a supplier of another type of regulated service should remain unchanged in the event of an acquisition of assets used to supply services under Part 4; and

e. the initial regulatory tax asset value should be the lesser of that recognised by the Inland Revenue Department for the relevant assets or share of assets used to supply electricity transmission services, and the initial RAB value.

Reasons

2.4.2 The Commission's reasons for its approach to tax are provided in Chapter 5 of the Input Methodologies (Transpower) Reasons Paper.

22 See accounting standard NZ IAS 38, paragraph 24.

2.5 Cost of Capital

Decision

2.5.1 The cost of capital as set out in the input methodology comprises two parts.

2.5.2 The first and most significant component is the weighted average cost of capital (WACC).

2.5.3 The Commission's decision is that it will estimate the cost of equity using the simplified Brennan-Lally version of the Capital Asset Pricing Model (CAPM). Seven parameters are required to estimate the cost of capital. These include:

a. Leverage: the Commission considers that a leverage of 44% (i.e. 44% of debt capital to debt and equity capital) is appropriate for calculating the cost of capital to apply to Transpower;

b. Risk-free rate: Annually for Transpower, the Commission will estimate a five-year risk-free rate using the observed market yield to maturity of vanilla New Zealand government NZ$ denominated nominal bonds with a term to maturity of five years;

c. Debt premium: Annually for Transpower, the Commission will estimate the debt premium as the difference between the risk free rate and the yield on publicly traded corporate bonds for EDBs and GPBs with a BBB+ S&P long-term credit rating and a term to maturity which matches the regulatory period (five years);

d. Debt issuance costs: Debt issuance costs are 35 basis points (0.35%) p.a;

e. Tax-adjusted market risk premium (TAMRP): The TAMRP is 7.5% until 30 June 2011 and 7% thereafter. The TAMRP is expressed as a five-year composite rate (to match the term of the regulatory period), hence the TAMRP estimated for the five year period which commences on 1 July 2010 is 7.1% and for the five year period which commences on 1 July 2011 is 7%.

f. Betas: The Commission will use an asset beta for Transpower of 0.34. Combining this estimate with a notional leverage of 44% equates to an equity beta of 0.61; and

g. Tax rates: The WACC requires two tax rates, the corporate tax rate and the investor tax rate. The corporate tax rate is 30% up until the end of the 2011 tax year, and 28% thereafter. The investor tax rate is the maximum prescribed investor tax rate under the PIE tax regime, which is 30% until 30 September 2010 and 28% thereafter. Changes in the tax rates will flow through to future post-tax WACC estimates automatically.

2.5.4 The second component, of the cost of capital is the Term Credit Spread Differential (TCSD) which is treated as a separate component because it will apply to qualifying firms only. Although it is conceptually a component of the cost of capital, for the purposes of this input methodology it is treated as an adjustment to cash flows.

2.5.5 The TCSD is calculated for qualifying suppliers, including Transpower where it has issued longer-term debt, reflecting additional costs associated with holding a longer-term debt portfolio. The TCSD is used to adjust cash flows in information disclosure and individual price-quality regulation and is applied to allowable revenue calculations in the individual price-quality path. Qualifying suppliers have a weighted average tenor debt portfolio exceeding the regulatory period (five years).

2.5.6 The Commission will publish annually for Transpower:

a. a mid-point estimate of the five year vanilla and post-tax WACC, as well as 25th and 75th percentile estimates of vanilla and post-tax WACC, to apply under information disclosure regulation; and

b. an estimate of five year vanilla WACC at the 75th percentile to apply in setting the individual price-quality path for Transpower.

2.5.7 To incentivise investment in regulated services (given the possibility of error in estimating the WACC) the 75th percentile estimate of the vanilla WACC will be applied under the individual price-quality path.

Reasons

2.5.8 The Commission's reasons for its approach to estimating the cost of capital are provided in Chapter 6 of the Input Methodologies (Transpower) Reasons Paper.

2.6 Rules and Processes

Specification of Price

2.6.1 Price for Transpower is specified by a total revenue cap, net of pass-through costs and recoverable costs. The initial list of pass-through costs includes local authority rates and regulatory levies. New levies can be pass-through costs, subject to the criteria in the input methodology being satisfied. Recoverable costs include instantaneous reserves availability charges (with some exclusions), the costs of developing and funding transmission alternatives under some conditions, and the net incremental carry forward amount under the 'incremental rolling incentive scheme'.

Circumstances in which price-quality paths may be reconsidered

2.6.2 Transpower's individual price-quality path may be reconsidered if one of the following events has occurred:

a. a catastrophic event, for which the costs of rectifying the effect of the event is material; or

b. a material error is discovered in the determination; or

c. Transpower has provided false or misleading information, which the Commission has relied upon in making its determination; or

d. a change in a legislative or regulatory requirement that has a material effect on costs.

2.6.3 Transpower's individual price-quality path will be reconsidered annually to take account of:

a. the revenue impact of Major capital expenditure approved by the Commission; and

b. an EV adjustment;

Incremental Rolling Incentive Scheme

2.6.4 The Commission will implement an ‘incremental rolling incentive scheme’ to apply to Transpower’s individual price-quality path during the Remainder Period. The efficiency gain or loss for a particular year will be calculated as the difference between actual and forecast controllable operating expenditure for the current year, minus the difference in the preceding year, the result of which provides the incremental gain or loss for that year.

2.6.5 While both incremental gains and losses will be carried forward to the subsequent five years, only positive net balances of such gains and losses in years in the next regulatory period will be treated as recoverable costs (i.e. only net rewards will be recognised). The length of time Transpower is allowed to retain the efficiency gain is five years. The ‘incremental rolling incentive scheme’ does not apply to the Transition Year.

Reasons

2.6.6 The Commission’s reasons, in respect of rules and processes, are provided in Chapter 7 of the Input Methodologies (Transpower) Reasons Paper.

CHAPTER 3: FORM OF CONTROL

In summary, the Commission's decisions on the form of control include:

a. the length of the first regulatory period (RCP1) is four years, beginning on 1 April 2011 and ending on 31 March 2015. Subsequent regulatory periods will be five years;

b. the individual price path that applies to Transpower is set on a forecast basis; for each pricing year, the aggregate of the forecast revenues that Transpower uses for the purpose of setting charges under the transmission pricing methodology (TPM), excluding pass-through costs and recoverable costs, must not exceed the forecast MAR;

c. the Commission's decision is that a single forecast MAR will be set for each year of an RCP;

d. at the time it announces its prices, Transpower must provide evidence regarding whether or not the revenue assumption (excluding the recovery of pass-through costs and recoverable costs) used to determine prices under the TPM is equal to or lower than the forecast MAR set by the Commission for each pricing year in the regulatory period;

e. the forecast MAR for the Transition Year is $644 million;

f. the forecast MARs for the Remainder Period will be set by the Commission by 30 November 2011;

g. forecast MARs will be based on inputs that are forecast for Transpower's financial year commencing 1 July, but will be applied in setting the forecast MAR for Transpower's pricing year commencing on the prior 1 April;

h. all other aspects of the individual price-quality path (such as setting operating allowances and approving commissioned capital expenditure, as well as quality measures) will be applied on a financial year basis;

i. Transpower will be required to calculate a forecast MAR for each year of each RCP, in advance of the RCP using approved processes and specifications, and provide an independent assurance report on the processes and calculations used;

j. each forecast MAR for the Remainder Period, and for RCP2, must be calculated in accordance with the Commission's specified building blocks and must correctly apply the applicable input methodologies;

k. the Commission will specify the amounts for operating expenditure and capital expenditure;

l. Transpower is required to provide the forecast MAR calculations to the Commission by the Friday of the third complete week of October in the year prior to the first year of the RCP:

    i. for each year in the Remainder Period of RCP1, by 21 October 2011; and

    ii. for each year in RCP2, by 24 October 2014;

m. the forecast MAR must not include pass-through costs or recoverable costs;

n. Pass-through costs and recoverable costs will be added to the forecast MAR in setting Transpower's revenue requirement for the purposes of its pricing;

o. Transpower will be required to disclose its costs, adjustments and charges separately for both the HVAC and the HVDC customers through its annual compliance monitoring statement;

p. updates to the forecast MAR will be calculated annually to take into account the incremental impacts of Major capital expenditure additions (as approved by the Commission subsequent to the forecast MAR being set) on the capital charge, on depreciation and on taxation for the remaining years of the RCP, and an EV adjustment sufficient to zero out the value of the earlier MAR wash-ups;

q. updates of the forecast MAR will not include any adjustment to, or relating to the operating expenditure allowance or Minor capital expenditure allowance set at the commencement of the RCP (or in the case of RCP1, the allowances set during the RCP for the Remainder Period);

r. wash-ups will occur annually;

s. Transpower will be required to calculate a year end MAR by applying the Commission's specified building blocks. The building block components that will be subject to a full annual wash-up include pre-approved Minor capital expenditure, approved and commissioned Major capital expenditure, asset sales, asset stranding, and events that cause the price-quality path to be reconsidered, tax, depreciation, and cost changes consequential on the capital expenditure building block amounts;

t. ex-post economic gains or losses for each year of the RCP will be calculated on the basis of comparing actual revenues with the MAR; the resulting ex-post economic gain or loss for that year must be applied as adjustments to the EV accounts;

u. each annual MAR calculation is to be provided in Transpower's annual compliance monitoring statement, together with certification by at least two Transpower directors, and must include an independent assurance opinion from an auditor on the process and calculations used;

v. the approach under the administrative settlement of using separate EV accounts for HVAC and HVDC customers will be continued;

w. the opening EV account balances at 1 July 2011 under Transpower's individual price-quality path will comprise of the closing EV account balances at 30 June 2011 under the administrative settlement;

x. in the Transition Year, there will be a calculation of the ex-post economic gain or loss for the final year of the administrative settlement (i.e. for the year ending 30 June 2011). This will apply the terms of the administrative settlement, and the resulting adjustments will be made to the opening EV account balances at 1 July 2011 under the individual price-quality path;

y. the balances of the EV accounts will accrue interest at a rate equivalent to Transpower's cost of capital as specified by the Commission in the Cost of Capital input methodology;

z. the opening EV account balances from 1 July 2011, calculated as at 30 June 2012, and excluding the EV adjustment made in the Transition Year forecast MAR, plus interest calculated to the end of RCP2, are to be apportioned equally to the forecast MARs over each of the remaining years of RCP1 and over RCP2;

aa. the portions of the EV account balances arising from ex-post economic gains or losses or other adjustments in an RCP are to be applied in the calculation of the forecast MAR (or update of the forecast MAR) applying in the pricing year next commencing after the time of calculation;

bb. the amount of each EV account balance that is apportioned to each MAR must be grossed-up to include the relevant tax amount;

cc. Transpower must, on an annual basis, publish and provide to the Commission by the Friday of the third complete week of October, a written annual compliance monitoring statement that provides information in response to the price and quality requirements set out in the individual price-quality path determination;

dd. operating expenditure must be calculated in accordance with Chapter 4; and

ee. capital expenditure must be calculated in accordance with Chapter 5.

3.1 Introduction

Scope of Decision

3.1.1 This Chapter sets out the Commission’s decisions on all matters relating to Transpower’s individual price-quality path, except for those matters relating to:

a. input methodologies, as described in Chapter 2;

b. operating expenditure, as described in Chapter 4;

c. capital expenditure, as described in Chapter 5; and

d. quality standards, as described in Chapter 6.

3.1.2 The Commission has sought to identify the relevant outcomes produced in workably competitive markets, and has sought to design a form of control that will promote such outcomes in respect of the regulated services that Transpower supplies.[23] The form of control described in this Paper promotes, over the long term, the overall objectives of the Act as set out in s 52A(1)(a)-(d). This Chapter identifies how the Commission's decisions are consistent with these objectives.

[23] See paragraph 1.2.24.

3.1.3 This chapter explains that the price path is set by the Commission prior to the start of each regulatory period. This is an ex-ante forecast of Transpower's revenue needs, for each year of the regulatory period, to which its pricing must comply. This is called the 'forecast MAR' (see section 3.4).

3.1.4 The forecast MAR will be determined using a building blocks approach. Chapter 2 of the EDB/GPB Reasons Paper highlights that this approach for determining maximum revenues, which is also applied for EDBs under a customised price-quality path (CPP), allows regulated suppliers to recover their efficiently incurred costs. Doing so, promotes investment, consistent with s 52A(1)(a), while ensuring that suppliers are limited in their ability to extract excessive profits, consistent with s 52A(1)(d).[24]

3.1.5 At the end of each year, a MAR is calculated (as opposed to the forecast MAR). The MAR is essentially the same as the forecast MAR, but has various elements of the forecast MAR replaced with actual historical data, for example, actual capital expenditure (refer section 3.9.2).

3.1.6 A wash-up will be undertaken each year. Each year the difference between the MAR (not the forecast MAR) and 'actual revenue' gathered is calculated. The end result of this wash-up is an economic gain or loss. This gain or loss is to be transferred to the EV accounts (refer section 3.9.3).

3.1.7 The forecast MAR for later years that was previously set is then updated (MAR updates) to zero out the EV balance. As Transpower's revenues for each year are subject to the forecast MAR, this effectively returns to or recovers from customers any economic gain or loss made by Transpower in previous years (refer section 3.8).

3.1.8 This chapter first sets out necessary context by providing decisions on matters such as the length of the regulatory control period and Transpower's pricing/financial year difference. The chapter concludes by explaining the compliance framework that will apply to Transpower (section 3.11).

3.2 Length of the Regulatory Control Period

Decision

3.2.1 The Commission's decision is that the length of the first regulatory period (RCP1) is four years, beginning on 1 April 2011 and ending on 31 March 2015. Subsequent regulatory periods will be five years.

Reasons

3.2.2 The Act (ss 53M(4) and (5)) requires that under individual price-quality regulation, the regulatory control period must be five years unless the Commission considers

[24] The building blocks approach to price-quality regulation is discussed in the Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, 22 December 2010, Chapter 2. See also paragraph 3.1.4 above.

that a shorter period (of not less than four years) would better meet the purposes of Part 4.

3.2.3 The Commission considers that, in general, a longer regulatory period (i.e. five years) is more consistent with the Part 4 Purpose Statement than the alternative of four years, as it provides greater certainty for Transpower and its consumers and, therefore, helps to promote the long-term benefit of consumers. However, given the uncertainty associated with Transpower's forecast capital expenditure and operating expenditure in the first regulatory period, the Commission considers it appropriate to set the initial regulatory period at four years.

3.2.4 The four year period of RCP1 includes the initial Transition Year, during which Transpower's capital expenditure and operating expenditure proposals for the remaining three years of the regulatory period (Remainder Period) will be prepared and reviewed, and allowances will be set by the Commission to be incorporated into the applicable forecast MARs.

3.2.5 This approach is consistent with the Commission's preliminary views published in June 2009,[25] and the Draft Reasons Paper published in June 2010.[26] It was supported by submitters.[27,28,29]

3.3 Pricing Year and Financial Year Differences

Decision

3.3.1 Forecast MARs will be based on inputs that are forecast for Transpower's financial year commencing 1 July, but will be applied in setting the forecast MAR for the pricing year commencing on the prior 1 April.

3.3.2 Ex-post economic gains or losses must be calculated for the annual wash-up of the MAR at the end of each financial year. For this purpose, revenue received in the pricing year commencing on the 1 April immediately prior to the 1 July start of a financial year is deemed to have been received in that financial year.

3.3.3 All other aspects of performance under the individual price-quality path (such as setting operating allowances and approving commissioned capital expenditure, as

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[25] Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009; Commerce Commission, *Transpower Process and Recommendation Discussion Paper*, 19 June 2009.

[26] Commerce Commission, *Individual Price - Quality Path (Transpower) Draft Reasons Paper*, 28 June 2010, p.18.

[27] Major Electricity Users' Group, *Submission on Input Methodologies Discussion Paper*, 31 July 2009, page 5, paragraph 18(g).

[28] Transpower, *Submission on Input Methodologies Discussion Paper*, August 2009, Q.217, p.37; Transpower, *Key Points Summary Part 1- Submission to the Commerce Commission on: Input Methodologies Transpower (excluding Chapter 6 - Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers*, 9 August 2010, p.40.

[29] Major Electricity Users' Group, *Submission on Transpower Individual Price-Quality Path Draft Reasons paper*, 9 August 2010, appendix, p.1.

well as evaluation under quality measures) will be calculated and applied on a financial year basis.

Reasons

3.3.4 As Transpower's regulatory accounts are aligned with its financial year (both beginning on 1 July each year), the regulatory framework takes into account the fact that Transpower's pricing year starts on 1 April (set in this manner to align with the pricing years of electricity distribution businesses).

3.3.5 The approach set out above provides a more cost effective approach than requiring Transpower to report against and have audited two sets of accounts. This is consistent with the approach taken under the settlement.

3.4 Individual Price Path that Applies

Decisions

3.4.1 The individual price path that applies to Transpower is set on a forecast basis. For each pricing year, the aggregate of the forecast revenues that Transpower uses for the purpose of setting charges under the TPM, excluding pass-through costs and recoverable costs, must not exceed the forecast MAR.

3.4.2 The forecast MAR for the Transition Year is $644 million.

3.4.3 The forecast MARs for the Remainder Period will be set by the Commission by 30 November 2011.

3.4.4 At the time it announces its prices each year, Transpower will be required to provide the Commission with evidence in the form of a directors' certificate that Transpower has met the requirements of the price path for that pricing year.

Reasons

3.4.5 The Commission has concluded that compliance with the individual price path is best demonstrated by Transpower evidencing that the revenue assumption (exclusive of pass-through costs and recoverable costs) used to determine prices under the TPM[30] is equal to or less than the forecast MAR set by the Commission for each pricing year in the regulatory period.

3.4.6 The alternative, of developing a measure of compliance based on the year-end MAR wash-up necessarily involves a form of ex-post measurement, which is more complex and does not provide such a timely indication of compliance with the individual price path.

3.4.7 The Commission's decision to base compliance on the application of a forecast MAR (or an update of a forecast MAR) set by the Commission, and to compare this against

[30] The TPM is contained in the Code (Electricity Authority, *Electricity Industry Participation Code 2010*, Clause 12.84 and Schedule 12.4).

the revenues set for the TPM, will simplify compliance for both Transpower and the Commission.

3.4.8 Under this approach the Commission will know prior to each pricing year (or at any stage during a pricing year), when Transpower either sets or resets its prices in accordance with the TPM, whether Transpower has complied with the individual price path for that pricing year.

3.4.9 Non-adherence to the requirements of the Commission's determination, for example the information requirements in Part 5, will result in a breach of the determination. Incorrect MAR wash-ups, EV adjustments and revenue adjustments due to quality performance will not cause Transpower to breach the price path in Part 3 until the results of the respective calculations are applied to later forecast MARs.[31]

3.5 Process for Setting the Forecast MAR

Decisions

3.5.1 The Commission will require Transpower to calculate a forecast MAR for each year of each RCP, in advance of the RCP, with the exception of the forecast MAR calculations for the Remainder Period, which are to be calculated during the Transition Year.

3.5.2 Each forecast MAR for the Remainder Period and for RCP2 will be required to be calculated in accordance with the Commission's specified building blocks and must correctly apply the applicable input methodologies.

3.5.3 The Commission will issue Transpower a notice under s 53ZD for each forecast MAR, which will specify the calculations and information requirements with which Transpower must comply. It will specify the approved amounts for operating expenditure and capital expenditure (determined in accordance with the process set out in this Paper), and require the application of the requirements specified by the Commission's s 52P individual price-quality path determination.

3.5.4 Transpower will be required to provide to the Commission its calculated forecast MARs for each year of an RCP, by the Friday of the third complete week of October in the year prior to the first year of the RCP.

3.5.5 In the case of RCP1, forecast MARs for all years in the Remainder Period will be required to be provided to the Commission by 21 October 2011.

3.5.6 Each notice issued under s 53ZD for the forecast MARs will require certification from at least two of Transpower's directors that the forecast MAR calculations comply with the Commission's requirements. The calculations must also be supported by an independent assurance opinion from an auditor, confirming that the formula, calculations, inputs and process followed by Transpower in calculating each

[31] For further explanation of the compliance framework for the individual price path and the implications of a breach of the path, refer to 3.11.1 of this Paper.

forecast MAR accurately applies the specified requirements of the Commission's s 52P determination, and s 53ZD notice, as applicable.

3.5.7 The Commission will make its decision on a forecast MAR or forecast MAR update, as applicable, by not later than 30 November of the year prior to the pricing year in which a forecast MAR (or update of a forecast MAR) is to be applied.[32]

Reasons

3.5.8 The Commission considers that requiring Transpower to provide the Commission with its calculations of the forecast MARs (or updates of forecast MARs) by the third Friday in October allows sufficient time for the Commission to set or update the forecast MAR before Transpower must announces prices for the following pricing year.

3.5.9 In accordance with the process set out in the Commission's Revised Process Paper,[33] the Commission issued a notice to Transpower under s 53ZD on 28 September 2010, setting out its decision on how Transpower's Transition Year forecast MAR was to be calculated. The notice required Transpower to calculate the forecast MAR for the Transition Year (and that year alone) by applying the calculation methodology specified under the settlement agreement. It also required the application of certain adjustments including four specific inputs from the individual price-quality path (being Minor capital expenditure, the operating expenditure allowance, Cost of Capital and the tax rate).

3.5.10 The Commission considers that a requirement to provide forecast MAR calculations by the Friday of the third complete week of October in the year prior to the first year of the RCP is appropriate. This allows sufficient time for the Commission to review Transpower's calculations and determine and set the forecast MAR for the next pricing year. This also provides sufficient time for Transpower to implement changes to its forecasts if required by the Commission.

3.5.11 For RCP1 the forecast MAR needs to be set for the Remainder period. Applying the approach outlined above means that Transpower will need to provide its forecast MAR calculations to the Commission by 21 October 2011.

3.5.12 If the same approach is applied in RCP2, the forecast MAR for all years in RCP2 will need to be provided to the Commission by 24 October 2014.

32 For more detail on the process for updates of forecast MARs, refer to section 3.8 of this Paper.

33 Commerce Commission, *Revised Process Paper for the individual Price-Quality Regulation of Transpower*, 26 August 2010, p.3.

3.5.13 To ensure the processes for calculating the forecast MAR remain sufficiently robust and transparent, the Commission will require that:

a. Transpower's model for calculating its forecast MAR and any material variations thereof be approved by the Commission; and

b. the independent assurance opinion on the forecast MAR be provided to the Commission in a form that confirms the integrity of the calculations used in the forecast MAR.

3.5.14 The independent assurance opinion will sign off that the forecast MAR calculations are in accordance with the applicable determination or notice issued by the Commission that applies to that forecast MAR. In this way, the Commission will receive direct certification from Transpower (through the directors' certificate) and an independent assurance that Transpower's model continues to be compliant with the Commission's calculation requirements.

3.5.15 The process for setting the forecast MAR does not include consultation on the calculated forecast MAR. This is because the calculation of the forecast MAR is considered to be the application of specified inputs and formulae. As such, the Commission intends consulting only on the key inputs to the determination, i.e.

a. levels of the operating expenditure allowance and the Minor capital expenditure to be provided for in calculating the forecast MAR; and

b. the case for each proposed Major capital expenditure project.

3.5.16 To assist with transparency of information, the Commission will publish a summary of the forecast MAR calculations on its website at the time it makes its forecast MAR determination.

3.5.17 The Commission set out in a notice under section 53ZD of the Act a requirement for Transpower to calculate a forecast MAR for the Transition Year by applying the terms of the administrative settlement, adjusted for the (then) draft input methodologies that the Commission considered would have a material effect on the amount of the forecast MAR. Transpower then carried out the calculation of the forecast MAR using a modified version of its existing revenue forecasting model.

3.5.18 The revenue forecasting model will need to be modified to fully reflect the Commission's individual price-quality and input methodology determinations. It will then be used to carry out the forecast MAR calculations for the years in the Remainder Period (2012/13 through 2014/15).

3.5.19 Transpower's published financial statements are required to be audited under section 15 of the Public Audit Act 2001. However, audits do not generally provide assurance on the appropriateness of assumptions used in prospective information, so the value of Transpower's external audit to the forecast MAR calculation is likely to be restricted to an assessment of the way that Transpower's accounting systems categorise transactions that will form an input to the forecast MAR calculations.

3.5.20 Director certification is a cost-effective alternative means of receiving verification of information. It provides comfort that the review of the relevant information has been undertaken by the people who have the overview and control of Transpower's operations.

3.5.21 Although in practice it is likely that a chain of certification would apply within Transpower up to Transpower's Board level, Transpower's directors are ultimately responsible for the calculated forecast MAR. For the Commission's purposes it is sufficient that the directors certify the forecast MAR calculation.

3.5.22 The Commission has therefore concluded that it requires certification of the forecast MARs by two directors of Transpower, and that Transpower will obtain an independent assurance opinion on the forecast MAR and the calculation processes used in arriving at the forecast MAR.

3.5.23 The Commission’s final determination of each forecast MAR will be published on the Commission’s website. This will provide sufficient transparency of the process and calculations as requested by interested parties.[34]

3.5.24 The Commission notes Transpower’s submission that it requires the Commission’s forecast MAR determination by the third week of November.[35] This is to provide Transpower sufficient time to calculate its prices, complete the auditing of the price calculations and secure Board approval of its prices based on the forecast MAR determination. The Commission will make its determination by making an amendment to the individual price-quality path determination under s 52Q(4), but notes there is no statutory deadline for this. The Commission notes Transpower’s timing requirements and will work with Transpower to ensure the determination is made as quickly as is practical.

3.6 Calculating the Forecast MAR

Decisions

3.6.1 The Commission’s decision is that Transpower will be required to provide building block calculations of its forecast MAR for each year of an RCP on the basis of:

a. a separate operating expenditure allowance set by the Commission for each year of the RCP;

b. an ex-ante calculation of return on and of capital on the forecast opening RAB for the year for which the forecast MAR is being set;

c. an ex-ante calculation of return on and of capital relating to the Minor capital expenditure allowance set by the Commission for each year of the RCP;

[34] Major Electricity Users’ Group, *Submission on Transpower Individual Price-Quality Path Draft Reasons paper*, 9 August 2010, appendix, page 1.

[35] Transpower, *Key Points Summary Part 1- Submission to the Commerce Commission on: Input Methodologies Transpower (excluding Chapter 6 - Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers*, 9 August 2010, p.42.

d. an ex-ante calculation of return on and of capital relating to approved Major capital expenditure projects that are expected to be commissioned during the RCP, taking into account the timing of commissioning;

e. EV account adjustments to account for the reduction of the EV account balances to zero over time, as specified by the Commission; and

f. the relevant input methodologies as set by the Commission.

3.6.2 The calculated forecast MAR will not include pass-through costs or recoverable costs. Transpower will separately estimate these on an annual basis, with these cost estimates being added by Transpower to its forecast MAR when Transpower sets its revenue requirements for the purposes of its pricing.

3.6.3 The building blocks formula for the forecast MAR is provided in the Individual Price-Quality Path (Transpower) Determination, Schedule D.[36]

Reasons

3.6.4 The building blocks approach to determining the forecast MAR ensures that Transpower will receive an appropriate return on its prudent investments in accordance with the relevant input methodologies and the individual price-quality path, thereby promoting investment while limiting excessive profits, consistent with s 52A(1)(a) and (d).[37]

3.6.5 The approach involves determining the forecast maximum revenue that would allow Transpower to recover the ‘building block’ cost components it faces. The forecast MAR for Transpower can therefore be represented as follows:

Regulatory Asset Base × Regulated Rate of Return

+ Depreciation

+ Operating Expenditure (excluding pass-through costs and recoverable costs)

+ Tax payable

± EV account adjustments (including revenue adjustments based on quality performance and an appropriate tax gross up)

= Building blocks forecast MAR

3.6.6 Each building block cost component is intended to reflect realistically achievable efficiencies for the particular component in question during the regulatory period (e.g. operating expenditure), consistent with s 52A(1)(b).

3.6.7 The building blocks approach was initially discussed in detail in the Commission's Process and Recommendation Discussion Paper[38] and in the Commission's Input

[36] Commerce Commission, *Individual Price-Quality Path (Transpower) Determination*, 22 December 2010, Schedule D.

[37] The building blocks approach to price-quality regulation is discussed in the Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper, 22 December 2010, Chapter 2.

[38] Commerce Commission, *Transpower Process and Recommendation Discussion Paper,* 19 June 2009, p.35.

Methodologies Discussion Paper.[39] Submissions were considered and the Commission made its recommendation to the Minister in April 2010.[40] The Commission further consulted on the revenue cap and building blocks approach in the Draft Reasons Papers in June 2010.[41] [42] The Commission considers that the approach will provide an appropriate level of annual revenue, based on detailed reviews of Transpower's proposed level of operating expenditure and capital expenditure, and taking into consideration the Commission's decision on input methodologies.

3.7 Single Forecast MAR to Apply

Decision

3.7.1 The Commission's decision is that a single forecast MAR will be set for each year of each RCP.

3.7.2 Transpower will be required to disclose its costs, adjustments and charges separately for both the HVAC and the HVDC customers through its annual compliance monitoring statement.

Reasons

3.7.3 Submissions to the Commission suggested that Transpower should be subject to separate forecast MARs for HVAC and HVDC services. Meridian suggested that Transpower should be constrained in its ability to increase prices and operating costs, as well as being constrained in its ability to cross-subsidise between the two classes of assets at its discretion.[43]

3.7.4 Meridian[44] and Contact Energy[45] submitted that the Commission should set separate HVAC and HVDC forecast MARs or, at a minimum, set separate HVAC and HVDC operating expenditure allowances for each forecast MAR.

3.7.5 The Commission considered whether Transpower should be subject to separate HVAC and HVDC forecast MARs. The key rationale and advantages of such an approach appear to be to constrain price increases and prevent inappropriate allocation of operating costs between HVAC and HVDC customers.

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39 Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009, p.485.

40 Commerce Commission, *Recommendation to the Minister of Commerce regarding the type of regulation to apply to Transpower*, 13 April 2010, paragraph X2.

41 Commerce Commission, *Individual Price-Quality Path (Transpower) Draft Reasons Paper,* June 2010, p.21.

42 Commerce Commission, *Input Methodologies (Transpower) Draft Reasons Paper*, June 2010, p.85.

43 Meridian Energy Limited, *Submission to the Commerce Commission on its draft decision not to declare control of Transpower*, 9 November 2007, p.4.

44 Meridian Energy Limited, *Meridian Energy's submission on Transpower's input methodologies determinations and draft reasons paper*, 9 August 2010, p.22.

45 Contact Energy Limited, *Submission on draft determination and input methodologies for Part 4 regulation of Transpower*, 9 August 2010, p.6.

3.7.6 In forming its view, the Commission considered the changes imposed under the Electricity Industry Act. This amended the Commerce Act with effect from 1 November 2010. The amendments remove the requirement for the Commission to set pricing methodologies where these are set by an industry-specific regulator (such as the Electricity Authority). It also provides that it is the role of the Electricity Authority to set pricing methodologies for Transpower.[46]

3.7.7 Under the Act, pricing methodologies are defined as including methodologies for setting different prices (which is defined as including revenues) for different customer groups.[47] The Commission is of the view that setting of separate HVAC and HVDC forecast MARs (or separate HVAC and HVDC operating expenditure allowances) has an effect similar to setting pricing methodologies for Transpower.

3.7.8 The Commission considers that its decision not to set separate forecast MARs for HVAC and HVDC customers is the most consistent with the changes under the Electricity Industry Act.

3.7.9 The Commission notes that under the Electricity Industry Act, the Electricity Authority is responsible for making and administering the Electricity Industry Participation Code (the Code). The Code contains the TPM, which specifies how Transpower is to set prices. The current TPM provides that it is the responsibility of Transpower's Board to set the AC revenue and HVDC revenue for the purposes of the TPM. As the TPM is expressed as being subject to Part 4 of the Commerce Act, the Commission considers it appropriate for it to require, under individual price-quality regulation, that Transpower's revenue requirements as set under the TPM must, in aggregate, comply with Part 4. This translates to a requirement under the price path for the aggregate of the revenue requirements, excluding pass-through costs and recoverable costs, not to exceed the forecast MAR that is set by the Commission.

3.7.10 Meridian submitted that if the Commission did not agree with setting of separate HVAC and HVDC forecast MARs, that at least the Commission should set separate operating expenditure allowances.[48] [49] However, the Commission regards the setting of separate operating expenditure allowances to be inconsistent with the decision to set a single forecast MAR for each pricing year. For this reason, as set out in Chapter 4, a single operating expenditure allowance will apply for each pricing year.

3.7.11 Transpower is required by the Code to calculate and apply the 'AC revenue' and the 'HVDC revenue' separately under the TPM. Therefore, for consistency and transparency under individual price-quality regulation Transpower will be required to disclose these revenues separately in its annual compliance monitoring statement, but for the purpose of compliance is only assessed against a single combined forecast MAR.

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46 Electricity Industry Act 2010, s 147, which amends section 52T(1)(b) of the Commerce Act.

47 Commerce Act 1986 (as amended), s 52C, definitions of 'pricing methodologies' and 'price'.

48 Meridian Energy Limited, *Submission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, p.10., paragraph 48.

49 NERA report to Meridian, *Treatment of Operating Costs*, 6 August 2010, p.10.

3.7.12 The Commission will also address concerns about the treatment of HVAC and HVDC customers by assessing and consulting on the reasonableness of the HVAC and HVDC costs, in aggregate, as part of its review of Transpower's operating expenditure proposals. The requirement of the determination to separately report the HVAC and HVDC economic gains or losses each year will also mean that Transpower will need to report the separate costs in its annual compliance monitoring statement. This will provide a further linkage between the aggregate of the AC revenue and HVDC revenue, as applied by Transpower under the TPM, and the forecast MAR.

3.7.13 This reporting approach will identify any movements in operating expenditure between the HVAC and HVDC operating expenditure categories, but will also allow Transpower the flexibility to reprioritise its operating expenditure during the RCP. In this manner, Transpower will be able to reflect movements in costs in the annual pricing of HVAC and HVDC services, while remaining constrained by the overall operating expenditure cap. Genesis Energy in its submission agreed with the Commission's assessment that this approach would provide an optimal balance between information disclosure and Transpower's ability to reallocate operational expenditure during a regulatory control period.[50] Meridian, however, disagreed with Genesis and argued that Transpower should not be able to choose how to allocate within a pool of operating expenditure.[51]

3.7.14 The Commission notes that the allocation of operating expenditure is a key concern for generators. Instantaneous reserve availability charges, being a significant component of operating expenditure and being one of generators' primary concerns, have been addressed in the Commission's consideration of 'recoverable costs' and will now be outside of the operating expenditure allowance. Based on past expenditure trends, this step should remove the most significant cause of variability in the allocation of operating expenditure.

3.7.15 Meridian's concern that prices may be increased at an inappropriate rate[52] is also addressed by the fact that the forecast MAR is based on approved building blocks. Prices will be set in aggregate based on approved capital expenditure and operating expenditure allowances. The Commission will consult on these matters, and all interested parties will be given an opportunity to submit their views on what an appropriate level for these may be. Operating expenditure is discussed further in Chapter 4.

3.7.16 Requiring Transpower to disclose its costs, adjustments and charges to both the HVAC and HVDC customers will provide transparency in relation to the way costs are allocated. This reflects the terminology used in the TPM, which requires Transpower to separately calculate its HVAC and HVDC revenue requirements.

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50 Genesis Energy, *Input Methodology and Individual Price-Quality Path for Transpower*, p.3., paragraph 2.

51 Meridian Energy Limited, *Cross* s*ubmission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, page 10.

52 Meridian Energy Limited, *Submission on Transpower's Input Methodologies determination and Draft Reasons Paper*, 9 August 2010, p.15.

3.7.17 The Commission considers that the allocation of costs is a matter best dealt with via the TPM. The Commission is mindful that the Electricity Authority is reviewing the current TPM, which includes a review of the options for the allocation methodology for transmission costs

3.7.18 The Electricity Industry Act has removed the requirement for the Commission to set pricing methodologies to apply to Transpower, and therefore, the Commission considers it appropriate that once it has set the forecast MAR to apply to Transpower, the TPM should be the mechanism to implement the apportionment of those revenues.

3.7.19 The Commission is also mindful that if the Electricity Authority was to revise the TPM to remove the distinction between HVAC and HVDC customers, the Commission may also review its disclosure requirements in this regard.

3.8 Updates of Forecast MARs

Decision

3.8.1 The Commission's decision is that updates to the forecast MAR must be calculated annually and applied to pricing years three and four for RCP1 and pricing years two to five of each later RCP (i.e, reconsiderations of the price path). This must be done at the time that Transpower carries out its annual MAR wash-up calculations in accordance with the individual price-quality path determination.

3.8.2 Transpower will be required under the individual price-quality path determination to provide the Commission with its calculation of each update of a forecast MAR (or forecast MARs, as applicable) by the Friday of the third complete week of October each year.

3.8.3 Each update of a forecast MAR will take into account:

a. the incremental impacts of Major capital expenditure additions (as approved by the Commission subsequent to the forecast MAR being set) on the capital charge, the depreciation and the taxation payable for the remaining years of the RCP; and

b. an EV adjustment sufficient to zero out the value of the earlier MAR wash-ups.

3.8.4 Updates of a forecast MAR will not include any adjustment to the operating expenditure allowance or Minor capital expenditure allowance set at the commencement of the RCP (or in the case of RCP1, the allowances set for the Remainder Period).

3.8.5 The incremental impact on the forecast MAR is to be disclosed and explained.

Reasons

3.8.6 In response to the Commission’s draft decision that only one forecast MAR update would apply per RCP (or two if Transpower applied for a second), Transpower submitted that updates should occur annually to account for major assets that are approved and commissioned during the RCP.[53]

3.8.7 Meridian submitted that it agreed with the Commission's draft decision and that it did not support more frequent updates. It noted that it is difficult to forecast its own prices when it is exposed to transmission cost uncertainty that flows from what it considers are unexpected MAR resets.[54] However, the Commission considers that as annual adjustments will be made, and EV account balances will be either spread evenly (in the case of the opening EV account balances) or applied annually (in the case of subsequent EV account balances), material price uncertainty should not arise specifically from this approach. This is because the magnitude of an annual adjustment, or the average of five years' adjustments, should essentially be similar.

3.8.8 The Commission has consciously sought to avoid the deferral of cashflows in the case of Transpower, due to the current intensive investment period (for example, by applying depreciated historic cost instead of indexed historic cost). Transpower's submission is correct in that the impact of not allowing annual updates to forecast MARs has the potential to defer cashflows for Transpower.[55]

3.8.9 While the Commission does not agree that this would have serious consequences on Transpower's credit rating,[56] the Commission has concluded that there is long term benefit in allowing the remaining forecast MARs in an RCP to be updated on an annual basis, including during RCP1.[57] In particular, the process of reviewing forecast MARs is intended to ensure Transpower receives an appropriate return on its investments, while ensuring that the capital and operating expenditure provided for in the MARs is at a prudent level. Therefore, the Commission considers that requiring annual updates of forecast MARs provides Transpower with an incentive to innovate and invest (s 52A(1)(a)), and improve efficiency (s 52A(1)(b)), all on a more timely basis. Given that any efficiency gains will be reflected in the future RAB being lower than it otherwise would be, these gains are shared over time with Transpower's customers (s 52A(1)(c)).

3.8.10 Annual updates to the remaining forecast MARs will therefore reflect Major capital expenditure approvals that have not previously been reflected in those forecast MARs. The updates will also reflect any changes to commissioning timing assumptions for Major capital expenditure approvals already incorporated in the forecast MAR.[58] Each update will be limited to the incremental impacts of Major

53 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, pp 43-44.

54 Meridian Energy Limited, *Submission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, p.3., paragraphs 14-16.

55 Conversely, although additional Major capital expenditure approvals and the accelerated commissioning of approved projects has the potential to defer cashflows in the absence of annual updates, the deferral of commissioning of approved projects would have the effect of creating cashflow benefits for Transpower.

56 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.44.

57 The specification of price input methodology provides for this as a reconsideration to the price path.

58 The updates of forecast MARs will have symmetrical effects in that deferral and acceleration of commissioning of approved Major capital expenditure projects will be required to be taken into account.

capital expenditure additions and commissioning on the capital charge,[59] on depreciation and on taxation for the remaining years of the RCP, as well as EV adjustments. The forecast MAR update will not include any adjustment to the Minor capital expenditure allowance or the operating expenditure allowance.

3.8.11 The EV adjustments included in the forecast MAR updates will zero out the value of earlier MAR wash-ups. The objective of this is to clear the EV account balances that accrue from a previous year at the first available update of a forecast MAR. In this manner, the EV balances should never accumulate to more than the value of one year's MAR wash-up.

3.8.12 The Commission will require Transpower to calculate updates of forecast MARs by the end of the third complete week of October each year, with an updated forecast MAR to be applied in the pricing year commencing in the following April. This provides sufficient time for the Commission to review and, if necessary, obtain an independent review of the calculations before approving the update to the forecast MAR.

3.8.13 This decision means that in RCP1 the first update of a forecast MAR will be in respect of any Major capital expenditure approvals that occur in the Transition Year (2011/12), but will be calculated after the Remainder Period forecast MARs have been set in November 2011. That first update will be applied to the Year 3 forecast MAR, being the forecast MAR for the second year of the Remainder Period, i.e. the pricing year commencing on 1 April 2013. There will, therefore, potentially be two updates of forecasts for RCP1 (being applied to Years 3 and 4 of RCP1).

3.8.14 On the basis that RCP2 is a five year period, there may be up to four updates of the forecast MARs in RCP2. These updates would cover Years 2 through 5 of RCP2 and would reflect any Major capital expenditure approvals after the forecast MARs for RCP2 are set in November 2014.

3.8.15 Adopting an approach that provides for annual updates of the forecast MARs allows Transpower an appropriate recovery of costs, yet minimises the risk to consumers of, for example, paying in advance for large capital expenditure that is uncertain in either its nature or its timing.

3.8.16 A forecast MAR update is not intended to be a full recalculation of a forecast MAR. It will be a calculation of the incremental revenue impact of the additional Major capital expenditure approved by the Commission during the RCP, including the consequential impacts on depreciation, on the capital charge, and on taxation.

3.8.17 As updates of forecast MARs will be calculated on a consistent basis with the original forecast calculations, and as they are not a full recalculation of the forecast, Transpower will present the updates as incremental forecast revenue adjustments.

59 The capital charge in the forecast MAR calculation is calculated according to the formula at Item C in the building blocks calculation in Schedule D of the Commerce Act (Transpower Individual Price-Quality Path) Determination 2010. The capital charge is expressed as the result of the 'Average RAB' multiplied by the 'WACC'.

The Commission considers that this will enable it to assess the proposed updates in an efficient manner.

3.8.18 The Commission will not require an independent assurance opinion on the updates of forecast MARs. The Commission will carry out its own review of Transpower's incremental calculations and will determine and set the forecast MAR adjustment for the following pricing year.

3.8.19 The Commission will give effect to any update of a forecast MAR by amending the s 52P determination under s 52Q of the Act.

3.9 Wash-Ups

Decisions

3.9.1 The Commission's decision is that in each RCP, a wash-up will occur annually.

3.9.2 Each wash-up will calculate a MAR on an ex-post basis for the relevant year. Transpower will be required to calculate the MAR by applying the Commission's specified building blocks. The following building block components will be subject to a full annual wash-up:

a. pre-approved Minor capital expenditure, with this pre-approved allowance being replaced by the lesser of the actual commissioned Minor capital expenditure (but not taking into account ex-post approvals) or the pre-approved allowance;

b. approved and commissioned Major capital expenditure, the forecast being replaced by the lesser of actual or approved expenditure (taking into account timing of commissioning, as well as approved additional expenditure);

c. tax changes, depreciation adjustments, and other cost changes resulting from the wash-ups of Minor and Major capital expenditure in a. and b. above; and

d. asset sales, asset stranding, and events that cause the price-quality path to be reconsidered.

3.9.3 Each wash-up will contribute to calculating the ex-post economic gain or loss for the year to which it applies. The ex-post economic gain or loss will be applied as adjustments to the EV accounts. This means that the wash-up amounts will eventually find their way into Transpower's revenue setting.[60]

3.9.4 For the avoidance of doubt, the Commission's decision is that in the Transition Year there will be a calculation of the ex-post economic gain or loss for the final year of the administrative settlement (i.e. for the year ending 30 June 2011). This will apply the terms of the administrative settlement, and the resulting adjustments will be made to the opening EV account balances at 1 July 2011 under the individual price-quality path.

[60] For more discussion on how the EV account balances affect Transpower's calculation of the forecast MAR for any pricing year, refer to section 3.10 of this Paper.

3.9.5 The MAR wash-up calculation is to be provided in Transpower's annual compliance monitoring statement, together with certification by at least two Transpower directors, and an independent assurance opinion from an auditor on the process and calculations used.

Reasons

3.9.6 A wash-up of the MAR is a year-end process whereby certain forecasts of future expenditure used in setting Transpower's forecast MAR and any forecast MAR updates are replaced with actual expenditure. The purpose of this is to recalculate a MAR on an ex-post basis for that past year, and assess performance of that past year against actual expenditure, rather than forecast expenditure.[61] Transpower's actual revenues are then assessed against this recalculated MAR, and any resultant ex-post economic gains or losses can then be identified. Transpower is then required take any gain or loss to its EV accounts.

3.9.7 Transpower prepares EV Statements each year under the administrative settlement, and has included these in its annual compliance statement. The EV Statements demonstrate the calculation of the ex-post economic gain or loss. They separately disclose the resulting HVAC and HVDC adjustments to the EV accounts.

3.9.8 The purpose of the wash-up process is to ensure that Transpower receives the correct return on its actual investment (rather than forecasts of investment), and to remove the forecasting risk relating to certain costs. Areas in which Transpower should not be exposed to the risk of costs over which it has limited or no control include, for example, approved recoverable costs,[62] pass-through costs, and other matters which are not included in the setting of the forecast MAR, such as asset sales and the stranding of assets.

3.9.9 In the case of asset sales and stranding of assets, the resulting gains and losses on sale or stranding will be included as part of the depreciation building block for the purposes of the wash-up.

3.9.10 Other costs, such as operating expenditure, are not included in the annual wash-ups of the forecast MAR. Such costs are not included because the Commission considers it more appropriate to expose Transpower to the risk, and reward, of managing these costs, rather than consumers. Incentive mechanisms are often provided for those elements of risk that a regulated business is able to manage, for example, the 'incremental rolling incentive scheme' that applies to Transpower's operating expenditure.

[61] For the avoidance of doubt, the calculation of the MAR for that particular year is solely for assessing whether any ex-post economic gains or losses have been made in that year. This recalculated MAR does not replace nor alter the Commission's forecast MAR determination for that or any other year of the RCP. However, when the Commission undertakes updates of forecast MARs, the results from any previous wash-ups which have resulted in adjustments to the EV account balances may contribute to an adjustment of the Commission's forecast MAR determination.

[62] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Section 7.4.

3.9.11 In deciding whether to apply a wash-up to Transpower's forecasts of capital expenditure, the Commission has considered the problems Transpower has faced in recent years with respect to forecasting and implementing its capital expenditure plans. The Commission considers these are unlikely to be resolved prior to the Remainder Period capital expenditure review, and therefore the Commission's decision for RCP1 is that consumers should not bear the risk of Transpower spending significantly less than forecast.

3.9.12 Transpower also supported a wash-up of capital expenditure to minimise its own risk in the case of under-forecasts. In its current form, providing the wash-up of Minor capital for RCP1 removes the risk of over-forecast inaccuracy, including the timing of commissioning, faced by customers and Transpower, and for the most part, by Transpower.[63] [64] Underestimating capital needs is partially addressed by the Commission's approach to allowing substitution of capital expenditure between years. This is discussed in Chapter 5. As noted in Chapter 1, however, the approach to capital expenditure is an interim approach, and the Commission will revisit whether or not wash-ups to capital expenditure should apply in later RCPs.

3.9.13 In RCP1, the first annual MAR wash-up will occur in the Transition Year (2011/12) and will address ex-post economic gains or losses for the final year of the administrative settlement. This will, amongst other things, compare actual commissioned capital expenditure against the capital expenditure allowances, with the difference used to calculate any ex-post economic gains or losses, according to the settlement terms. This may result in an adjustment being made to the EV account balances as at 30 June 2011, which will be taken into account when setting the forecast MARs for the Remainder Period.

3.9.14 In the event of any over-expenditure relative to the Minor capital expenditure allowance in RCP1, the Commission's decision is that such over-expenditure will not be included in any MAR wash-up (refer paragraph 5.9.2). The purpose of ex-post approval is to allow Transpower the recovery of and on certain necessary capital expenditure in subsequent RCPs (but not to provide recovery in the current RCP).[65]

3.9.15 The ex-ante approval of Major capital expenditure projects will specify approved cost and expected commissioning dates. In the case of projects which are approved prior to the setting of the Transition Year or Remainder Period forecast MAR, a return on and return of capital expenditure will be included in the forecast MAR based on the expected commissioning date. If, however, an approved project is not commissioned as forecast (i.e. either not at all, commissioned later or earlier than forecast, or at lower cost) the wash-up will ensure a return on capital and depreciation only from the date of commissioning on the lesser of approved or actual cost.

[63] Transpower, *Submission on the Draft Input Methodologies (Transpower) Determination and Draft Reasons Papers*, 9 August 2010, p. 21.

[64] Refer discussion on ex-post review in Section 5.9.

[65] See Section 3.11.4 for entering Minor capital expenditure in excess of the approved level into the RAB. Recovery will only begin from when the MAR is next set or updated, once entered into the RAB. Timing issues for such capital expenditure will not be included in any wash-up.

3.9.16 In contrast to the approach of not allowing wash-ups of additional Minor capital expenditure, the Commission considers it should allow a full wash-up of additional Major capital expenditure, if Transpower receives approval for that expenditure. The reason for the difference in approach is that Major projects are approved individually on an ex-ante basis, and cannot be substituted. With regard to Minor projects, Transpower is provided the flexibility to fully prioritise and substitute its capital expenditure programme between each year of the RCP. As explained in section 5.9.5, the Commission considers Transpower should fully manage Minor projects within its approved allowance.

3.9.17 This approach will help ensure that, for RCP1, customers pay for a project only once it is commissioned, and based on actual cost (capped at the approved expenditure level), reducing project risk for both Transpower and its customers.

3.9.18 In addition, it should also be noted that for the purposes of assets entering the RAB, as specified in the asset valuation input methodology, all assets (Major and Minor) will be recorded at cost. This includes capital spend over and above the level approved by the Commission. In the case of spend in excess of approved levels, as noted in paragraph 3.11.4 and 3.11.5 or not fully complying with Transpower's approval processes as noted in paragraph 5.6.9, Transpower will make a separate EV adjustment to fully offset the revenue impact of the value of those assets over the life of those assets.

3.9.19 Transpower's existing approach of calculating its annual wash-ups and EV adjustments separately to its revenue modeling system, will be continued. The Commission considers that this approach has worked satisfactorily in the past and is acceptable going forward.

3.9.20 The MAR wash-up calculations under this method will be required to apply the same approved building blocks as applied in determining the forecast MAR for the purposes of revenue-setting, but replacing the building block values with actual expenditure, where appropriate. Transpower will be required to make sufficient disclosure of information to enable interested parties to compare the forecast MAR calculation and the actual revenues for the year with the MAR wash-up as part of its annual compliance monitoring statement.

3.10 Economic Value Framework

Decisions

3.10.1 The current approach under the administrative settlement of using separate EV accounts for HVDC and HVAC customers, will be continued.

3.10.2 The closing EV account balances at 30 June 2011 under the administrative settlement will be the opening EV account balances under Transpower's individual price-quality path.

3.10.3 All economic gains or losses will be calculated annually, and will be transferred on an after-tax basis to the relevant EV account.

3.10.4 The balances of the EV accounts will accrue interest at a rate equivalent to Transpower's cost of capital as specified by the Commission in the Cost of Capital input methodology.

3.10.5 The estimated opening EV account balances, being the balances at 30 June 2011, plus forecast interest, were as a transitional measure required by the Commission to be apportioned to the Transition Year forecast MAR by applying the terms of the administrative settlement. The residual amount of the opening EV account balances, calculated as at 30 June 2012, plus interest to the end of RCP2, is to be apportioned equally to the forecast MARs over each of the remaining years of RCP1 and the five year period of RCP2.

3.10.6 The parts of EV account balances arising from ex-post economic gains or losses or other adjustments in an RCP are to be applied in the calculation of the forecast MAR (or update of the forecast MAR) applying in the pricing year next commencing after the time of calculation. This will generally leave not more than one years' gain or loss in the EV accounts at any time.

3.10.7 This means that, apart from any ex-post economic gain or loss for the last year of an RCP, the EV account balances arising in the RCP will be reduced as close to zero as possible by the end of the RCP.

3.10.8 The amount of each EV account balance that is apportioned to each MAR will be grossed-up to include the relevant tax amount.

Reasons

3.10.9 The purpose of the wash-up process on the forecast MAR is to ensure that Transpower receives an appropriate return on its actual investment, rather than a return on its forecasts of investment. The EV accounts then record the differences that arise from the wash-ups pending the return, or recovery, of these amounts in the setting of future forecast MARs.

3.10.10 The Commission considers that EV accounts continue to be an appropriate mechanism for recording wash-up balances. The EV account is the mechanism that ensures that, overall and over the long term, Transpower earns an appropriate return and the benefits of efficiency gains are quantified, accumulated and transparently passed back to consumers through Transpower's pricing. The EV account mechanism therefore promotes the regulatory objectives expressed in ss 52A(1)(c) and (d) of the Act.

3.10.11 Although incentives for efficiency, consistent with s 52A(1)(b), are provided by subjecting Transpower's internal processes for expenditure approval to scrutiny by the Commission, the Commission considers that stronger incentives can be introduced over time, by exposing Transpower to greater risks and rewards than currently provided by the EV account. Doing so recognises that the Part 4 Purpose is directed at the *long term* benefits of consumers, and enhancements can be introduced over time as better information becomes available, and as Transpower's ability to respond to incentive mechanisms in an individual price-quality path improves.

EV account opening balances

3.10.12 At the commencement of the administrative settlement agreement between the Commission and Transpower (on 1 July 2008), the net balance in the EV accounts was a $37.7 million net credit to customers. The balances in the EV accounts were a debit of $88.1 million and a credit of $125.8 million for HVDC and HVAC customers, respectively.

3.10.13 The net balance of the EV accounts, as at 30 June 2010, was a $18.7 million net EV account credit to customers. Based on the EV Statements included in Transpower's 2010 compliance statement under the administrative settlement,[66] this comprises:

- the HVAC customer credit balance of $127.9 million; and
- the HVDC customer debit balance of $109.2 million.

3.10.14 Meridian Energy concluded in its submission that a portion of the HVDC EV account balance, held by Transpower, likely represents over-recovery by Transpower, and therefore should not be carried over.[67] Meridian argued that the Commission has a duty to assess whether the carry-over of the full balance of the HVDC EV account would promote the purpose of Part 4. It suggested that alternative calculations of the EV account balances that used a different allocation of operating costs between the HVAC and HVDC customers would have reduced both the HVDC debit balance and the HVAC credit balance by $23.3 million.[68] However, it stressed that it was not alleging a breach of the settlement and was not proposing to re-litigate the decision to endorse the EV account balances that applied at the commencement of the settlement.[69]

3.10.15 Contact Energy submitted that the Commission can have no confidence that the existing EV account balances represent appropriate amounts to be recovered, and can only require recovery (and repayment) of appropriate balances.[70] It further submitted that under its calculation of an appropriate allocation of operating costs for 2009, the HVDC EV account balance would be $35 million lower than that stated by Transpower.[71]

3.10.16 In its cross submission, Transpower responded to the significant concerns of the HVDC customers regarding the veracity of the HVDC EV account balance. It also responded to comments on the method used to rebate over-expenditure of the operating expenditure allowance to the respective HVAC and HVDC customers, the misconception that EV adjustments are made to account for volume risk, and issues

66 Transpower, *Commerce Act (Transpower Thresholds) Notice 2008 Compliance Statement Assessment Date (30 June 2010)*, 23 September 2010

67 Meridian Energy, *Submission on Transpower's input methodologies determination and draft reasons paper*, 9 August 2010, p.3, paragraph 9.

68 ibid, p.18., paragraph 69.

69 ibid, p.9., paragraph 29.

70 Contact Energy, *Cross submission on draft determination and input methodologies for Part 4 regulation of Transpower*, 25 August 2010, p.11.

71 Contact Energy, *Submission on revised draft determination – input methodologies & individual price path updates for Part 4 regulation of Transpower*, November 2010, p.5.

of transparency of the EV account process. In addressing Meridian's claim that prior to the administrative settlement Transpower was an unconstrained monopoly, Transpower provided a brief explanation of the genesis of the EV accounts and their role in assuring that Transpower earned no more than its WACC.[72] [73]

3.10.17 Submitters did not suggest that Transpower had failed to comply with the terms of the administrative settlement. The settlement did not specify the method for allocating operating costs between the HVAC and HVDC customers, and the Commission notes that the approach used by Transpower has been consistently applied during the settlement.

3.10.18 The Commission's assessment of the adjustments made by Transpower since 1 July 2008 (during the term of the settlement) found Transpower to be compliant with its settlement obligations. The Commission's assessment is also confirmed by an independent opinion commissioned by Transpower from PricewaterhouseCoopers on the EV reporting framework and its application under the settlement. It notes that in 2007 Transpower had changed the allocation method for determining HVDC operating expenses to the avoidable cost allocation methodology (ACAM). This change to the cost allocation method was due to the previous allocation method being regarded as less well-defined and not fully identifying and allocating the directly attributable HVDC costs. The opinion concludes that in each year from 2006 to 2009, in all material respects the EV statements have been prepared on a basis consistent with Transpower's EV reporting policies and, since 2007, have been consistent with the settlement.[74]

3.10.19 As Transpower has complied with the terms of the settlement, the Commission does not consider it is appropriate to retrospectively adjust the current EV account balances. Any adjustments to the balances should only be prospective in nature. The balances at the end of the administrative settlement as at 30 June2011, including any ex-post economic gains or losses for the 2010/11 financial year, will therefore be carried forward to the start of RCP1.

3.10.20 The Commission has noted the particular concerns in the submissions regarding the impact of Transpower's instantaneous reserve availability charges on the allocation of the operating expenditure allowance under the administrative settlement, particularly in 2008 and 2009.[75] [76] However, in future the instantaneous reserve availability charges will not be included in the operating expenditure allowance for

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72 Transpower, *Cross submission on: Input Methodologies Transpower- Draft Reasons Paper, Individual Price-Quality Path Transpower - Draft Reasons Paper, Draft Commerce Act (Transpower Input Methodologies) Determination*, 25 August 2010.

73 Harding Katz, *Report prepared for Transpower New Zealand – Comments on submissions by CRA and NERA on EV balances*, August 2010

74 PricewaterhouseCoopers, *Transpower's Economic Value Reporting Framework*, 27 August 2010, p.6.

75 Meridian Energy, *Submission on Transpower's input methodologies determination and draft reasons paper*, 9 August 2010, p.14., Table 1.

76 Contact Energy, *Submission on revised draft determination – input methodologies & individual price path updates for Part 4 regulation of Transpower*, November 2010, p.24.

the purposes of the individual price-quality path.[77] The instantaneous reserve availability charges will be treated as a recoverable cost for the purposes of the input methodologies,[78] which will remove their influence on the allocation of other operating expenditure. This will mean that the operating expenditure allocation between the HVAC and HVDC customers should not have such a variable effect on the respective EV account balances under the individual price-quality path.

Approach to reducing the current EV balances to zero

3.10.21 The administrative settlement imposes constraints on how quickly a debit balance can be recovered by Transpower, being a maximum of 10% of forecast revenue. The EV account balances are accruing interest at the rate of the allowed WACC under the settlement (7.8%). Based on current balances and revenues, and assuming that existing constraints were retained, it could take Transpower approximately 20 years to recover the current HVDC balance, assuming that no further adjustments were made to that balance (although the Commission notes that Transpower's forecasts of future revenues include increases due to additional capital expenditure which would result in a faster reduction of the balances).

3.10.22 The Commission is of the view that this is not allocatively efficient, nor consistent with the objectives of ss 52A(1)(c) and (d) of the Act for an accumulated EV account balance to remain outstanding for an extended period and not be fully returned to or recovered from consumers. Allowing the balances of the EV accounts to remain for substantial lengths of time may give rise to a situation where, for example, new South Island entities seeking to inject electricity into the grid become exposed through Transpower's pricing to a portion of the HVDC EV account balance at the time of entry, despite the balance representing future revenues to be recovered due to historic under recovery from customers. It is therefore appropriate to maintain the EV account balances as near to zero as practicable.

3.10.23 Similarly, if the TPM was to be altered as a result of the current review by the Electricity Authority, the EV account balances may end up being allocated in a different manner and potentially to different customers than those that are currently exposed to the HVDC EV account balance. The Commission considers that this is not ideal, and to avoid this situation, it will require all EV account balances comprising Transpower's net EV account balance (currently a $18.7 million net credit balance for customers as at 30 June 2010) to be cleared through Transpower's setting of its revenue requirements as soon as possible, and that all EV account balances be maintained as close to zero as possible in future.

3.10.24 The Commission received submissions on the term over which the HVDC EV account balance should be recovered. Transpower supported reducing the HVDC balance over two regulatory periods (i.e., over RCP1 and RCP2).[79] Two of the

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77 Commerce Commission, *Commerce Act (Transpower Individual Price-Quality Path) Determination 2010, Part 2*, paragraph (b).

78 Commerce Commission, *Commerce Act (Transpower Input Methodologies) Determination 2010*, clause 3.1.3.

79 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.8., paragraph 37.

HVDC customers supported this as a minimum term.[80] [81] One HVDC customer considered that the spread of the HVDC balance over an effective period of nine years, combined with annual updates of the forecast MARs, would cause customers to face significant and volatile changes in annual charges.[82] Conversely, MEUG submitted that a term of two regulatory periods was too long, and that a two year term should be considered to clear the HVDC balance.[83] Orion submitted that the HVAC balance should be returned to customers over RCP1.[84]

3.10.25 Submissions received by the Commission, for the most part, sought that the HVAC and HVDC EV account balances be apportioned over the same timeframe. However, as noted above, there was a lack of agreement on what was considered to be an appropriate timeframe.

3.10.26 In setting the timeframe, the Commission has considered:

a. the potential for the decision on the apportionment of the EV account balances to work against other decisions of the Commission, such as the decision to use depreciated historic cost in RCP1 to front-load the depreciation of capital to assist Transpower in its period of high capital growth;

b. the interests of Transpower, which submitted the Commission should match the cash flows relating to returning the opening HVAC EV account balance and recovery of the opening HVDC EV account balance;[85]

c. the interests of HVDC customers in apportioning the current HVDC EV account balance over a sufficient period so as not to create pricing shocks;[86] and

d. the interests of HVAC customers in returning the current HVAC EV account balance over an appropriate period, such that there is a reasonable matching to customers who effectively contributed to the balances.[87]

3.10.27 The Commission considers that it should remove the existing constraint on how quickly Transpower may recover the HVDC EV account balance and require

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80 Meridian Energy, *Submission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, pp5-6, paragraphs 26-31.

81 Genesis Energy, *Input Methodology and Individual Price-Quality Path for Transpower*, p.3., paragraph 2.

82 Contact Energy, *Submission on revised draft determination – input methodologies & individual price path updates for Part 4 regulation of Transpower*, November 2010, p.5.

83 Major Electricity Users' Group, *Submission on Transpower Individual Price-Quality Path Draft Reason Paper*, 9 August 2010, appendix p.1.

84 Orion New Zealand Limited, *Submission on Individual Price-Quality Path (Transpower) Update Paper, 26 November 2010*, p.3., paragraph 8.

85 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.9., paragraph 37.

86 Meridian Energy, *Submission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, p.6., paragraph 31.

87 Major Electricity Users' Group, *Submission on Transpower Individual Price-Quality Path Draft Reasons Paper*, 9 August 2010, appendix p.1.

Transpower to reduce the account balance to zero over a similar timeframe to that which would have applied under the settlement. This translates to a requirement to reduce the opening HVDC EV account balance for RCP1, including interest, to zero by the end of RCP2 (i.e. 30 June 2020). The Commission estimated that this would require annual EV account adjustments to Transpower's HVDC revenue of approximately $13 million, which is higher than, but still comparable to, the level of EV adjustments that Transpower has calculated under the administrative settlement.

3.10.28 Taking all of the above factors into account, the Commission has concluded that the HVAC and HVDC EV account balances at any time should be spread over the same period, and that for the opening balance of the EV accounts, being the 30 June 2011 balances carried forward, the balances should be apportioned equally over each year up to the end of RCP2 (30 June 2020).

3.10.29 As a practical matter relating to the timing of the setting of the Transition Year forecast MAR, the apportionment for the Transition Year was necessarily based on the approach used under the administrative settlement. The residual amount of the opening EV account balances from 30 June 2011, as calculated at 30 June 2012 after taking into account the EV adjustment made in the forecast MAR for the Transition Year, will therefore be apportioned over the timeframe comprising the Remainder Period of RCP1 plus RCP2.

Treatment of the ongoing EV accounts

3.10.30 The Commission has concluded that to ensure the EV account balances remain at a minimal balance at any stage, each balance will be required to be returned to zero on an annual basis. This differs from what is currently provided for under the administrative settlement, which is that if the balance of a customer account is less than $20 million, Transpower may decide not to make an EV adjustment. This approach addresses Meridian's concern regarding the risk of price shocks due to reducing EV balances at the end of an RCP.[88] [89]

Tax gross-up of EV adjustments

3.10.31 Transpower submitted that any spreading of the EV account balances needs to take into account that the EV accounts are calculated and recorded as 'net of tax' balances, and must therefore also be adjusted to reflect a tax gross-up.[90] The Commission agrees that the allocation of the EV account balances in the setting of the forecast MARs should also take into account the tax effects, which results in the adjustments being grossed-up for the applicable corporate rate of income tax as specified in the input methodologies. However, the Commission further notes that for presentation purposes in the building blocks comprising the forecast MAR, that it is appropriate for the tax associated with the EV adjustments to be separately presented

[88] Meridian Energy, *Submission on Input Methodologies Transpower Draft Reasons Paper*, 9 August 2010, Page 4.

[89] Meridian Energy, *Submission on Input Methodologies Transpower Draft Reasons Paper*, 25 August 2010, p.7., paragraph 36.

[90] Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.47.

along with the applicable EV adjustments rather than as a component of the Tax building block.

3.11 Compliance Framework – Reporting Requirement

Decision

3.11.1 The Commission's decision is that Transpower will, on an annual basis, be required to publish and provide to the Commission by the Friday of the third complete week of October , a written annual compliance monitoring statement that provides information in response to the price and quality requirements set out in the individual price-quality path determination

3.11.2 Each annual compliance monitoring statement for an RCP will include an independent assurance opinion from an auditor and will disclose Transpower's performance, and provide evidence to this effect that fully supports and explains the disclosure, with regards to:

a. the total year end MAR wash-up for the year, calculated using actual costs where specified by the Commission and actual revenues;

b. its year end HVAC revenue and HVDC revenue, excluding pass-through costs and recoverable costs passed on to customers;

c. the update of the forecast MARs applying to the remaining years of the RCP, calculated in accordance with the Commission’s determination and disclosed on an incremental basis;

d. capital spend (commissioned) versus approved capital spend (commissioned) for the year, and an explanation of changes from forecast, as well as reforecast annual spends for the remainder of the RCP;

e. actual operating expenditure versus the approved operating expenditure allowance for the year, broken down by expenditure category, as well as reforecast annual spends for the remainder of the RCP;

f. quality performance, including:
   - performance against the specified performance measures;
   - the impact of quality performance on revenue (i.e. the amount of any positive or negative adjustments to future revenue);
   - an explanation of variances from initial forecasts; and
   - provisions of reforecast performance for the remainder of the RCP, and reasons for any variance between initial and reforecast performance;

g. ex-post economic gains or losses for the year, demonstrating the entries that have been made to the EV accounts;

h. recoverable costs, pass-through costs, and other costs and adjustments for the year, as well as reforecasts of these costs for the remainder of the RCP; and

i. all relevant performance data in (a), (b), (d), (e), and (g) above, as well as historical performance of the quality measures in (f) above, over the previous four years, thereby providing a rolling five years of performance for each annual compliance monitoring statement.[91]

3.11.3 If Transpower's annual compliance monitoring statement identifies that Transpower has commissioned Minor capital expenditure in excess of the ex-ante approved level, the Commission will only accept applications for ex-post approval for the amount of that capital expenditure when Transpower submits its last annual compliance monitoring statement for that RCP.

3.11.4 If Transpower's final annual compliance monitoring statement for a given RCP identifies that Transpower has undertaken and commissioned Minor capital expenditure in excess of the combined level approved for the RCP, or such capital expenditure has not completed Transpower's approval processes, then:

a. such expenditure will be included in Transpower's RAB, in accordance with the asset valuation input methodology; and

b. Transpower will calculate the revenue impact of that capital expenditure, over the life of those assets, and make an entry to the relevant EV account to fully offset this cost; and

c. Transpower will include in its annual compliance monitoring statement an independent assurance opinion that verifies Transpower's estimates are reasonable and its calculations are correct.

3.11.5 If an annual compliance monitoring statement for a given disclosure year of an RCP identifies that Transpower has undertaken and commissioned Major capital expenditure in excess of the level approved for that project, the adjustments in paragraph 3.11.4 must also be applied.

Disclosure of adjustments for Quality

3.11.6 Transpower's annual compliance monitoring statement will demonstrate each adjustment in respect of quality that must be made to the EV accounts. As the rewards/penalties for out-performing or under-performing with respect to the quality standards after RCP1 set by the Commission are made through an adjustment to the relevant EV account on an annual basis, these will, therefore, accrue interest at a rate equivalent to the cost of capital applied to Transpower.

Demonstrating adjustments for pass-through and recoverable costs

3.11.7 Any under or over recoveries of pass-through costs or recoverable costs will be demonstrated in Transpower's annual compliance monitoring statement, and will be added to or deducted from (as applicable) the forecast MAR for the year that next commences after the time of calculating the over or under recoveries.

[91] As noted in paragraph 3.11.1, the final compliance monitoring statement will be assessed following the close of the RCP. The assessment will take place prior to setting prices for Year 2 of the following RCP (i.e. between July and November of Year 1 of each RCP) with any adjustments made at the first forecast MAR update.

Reasons

3.11.8 Transpower's level of compliance will be assessed on an annual basis. Transpower is primarily subject to process-based requirements, and if Transpower makes appropriate calculations and adjustments in response to its annual performance, it will not breach its forecast MAR nor the quality standards set.

3.11.9 The Commission's decision implements a compliance framework that provides flexibility for Transpower to better manage its business across each year of an RCP. Actual costs, capital expenditure, and revenues in any given year can be different to that specified in the Commission's forecast MAR determination without causing Transpower to 'breach' its requirements. This, however, will only remain the case if Transpower calculates the ex-post economic gain or loss against the forecast MAR set in accordance with the s 52P determination and any approved updates of forecast MARs, and if Transpower then makes an equal adjustment through EV account entries.

3.11.10 This approach also applies to other aspects of compliance. For example, pre-approved levels will be specified for capital expenditure, these being used in the calculation of Transpower's MAR. However, Transpower, will have the ability to increase or decrease its level of capital expenditure on an annual basis. These movements in annual spend will affect its performance against the MAR, and the associated EV adjustments made each year will vary accordingly. This approach takes into account Transpower's actual expenditure and the timing of that expenditure on an annual basis, and ensures that Transpower will not make inappropriate gains or losses.

3.11.11 While Transpower will not be constrained in its ability to undertake annual Minor capital expenditure in any given year to the pre-approved annual level, for the purpose of compliance, the sum of its expenditure over the RCP may not exceed the sum of the annual approvals (unless ex-post approval is provided). Unapproved over expenditure must therefore be excluded from the calculation of the ex-post economic gain or loss.

3.11.12 With respect to revenues, under this approach all economic gains or losses in one year will be offset against those in other years. Accordingly, higher revenue in one year will offset lower revenue in another. Similarly, consistently high or consistently low revenues will result in consistently high or low EV adjustments. In this manner, the results remain neutral. However, for matters such as performance against capital spend for Minor capital expenditure, it will not be until the final year of the RCP that overall performance against the pre-approved level of Minor capital expenditure for that RCP can be determined.

3.11.13 Although Transpower's level of compliance with its approved level of Minor capital expenditure can only be assessed at the completion of the last year of each RCP, the Commission considers the disclosure of this and other information regarding Transpower's performance in each financial year is necessary. This disclosure serves various purposes, including, but not limited to:

a. creating a public record of actual performance, this being useful to interested parties;

b. informing the Commission of Transpower's quality performance and any associated adjustment to future revenue (by way of EV adjustment); and

c. providing necessary information for the Commission to assess Transpower's compliance with its forecast MAR, capital expenditure, the annual MAR wash-up and associated EV adjustments, and the annual update of forecast MARs.

3.11.14 As was required under Part 4A, the Commission considers it important that Transpower support its annual compliance monitoring statement by provision of an independent assurance report.

3.11.15 While the Commission does not consider it should set separate HVAC and HVDC revenue requirements, the Commission does consider that Transpower should demonstrate the appropriate allocation of costs and adjustments to each. In this manner, for the purpose of compliance, Transpower will include in its annual compliance monitoring statement details of its performance against both the HVAC and HVDC revenue requirements, including the EV adjustments to the appropriate EV accounts, but Transpower will only be assessed against its combined MAR.

3.11.16 While the Commission's intention is to move to a regime where capital expenditure is not subject to a wash-up, the Commission's decision is that when calculating the ex-post economic gains or losses for RCP1, Transpower's annual compliance monitoring statement will demonstrate the full wash-up of both Minor and Major capital expenditure categories. The Commission's intention, at this stage, is not to use any ex-post wash-ups in RCP2. However the Commission will consider this further when developing its capital expenditure input methodology.

Disclosure of adjustments for Quality

3.11.17 With respect to performance against the quality standards, as with the above, better or worse performance does not result in a breach of Transpower's obligations. As long as Transpower makes appropriate adjustments to its EV accounts, thereby accounting for the financial penalty or reward on an annual basis, it will be considered to have complied with the quality standards. Transpower will therefore demonstrate in its annual compliance monitoring statement that it has made the appropriate adjustments, resulting from its quality performance, to the relevant EV accounts. This is to ensure each adjustment is made on an annual basis, and to ensure each adjustment is made in a transparent and appropriate manner.[92]

Demonstrating adjustments for pass-through and recoverable costs

3.11.18 Although pass-through costs and recoverable costs are forecast and set by Transpower outside the forecast MAR, the Commission considers that transparency of these costs is important. Transpower will be required to demonstrate annual charges and any adjustments. Adjustments for over, or under-accruals of these costs in Transpower's pricing will not be made to the EV accounts, but rather, directly to the next available pricing year's charges. Due to the timing for the setting of forecasts of pass-through costs and recoverable costs relative to Transpower's setting

[92] Refer to Chapter 6 for further details on quality performance requirements.

of its pricing, this necessarily means a one year lag each time Transpower returns or recovers the adjustment amounts through its pricing.

3.11.19 The treatment of pass-through costs and recoverable costs is set out in detail in Section 7.4 of the Input Methodologies (Transpower) Reasons Paper.

CHAPTER 4: OPERATING EXPENDITURE

The Commission has decided that:

a. operating expenditure allowances will be determined prior to the regulatory period for each year of the regulatory period;

b. the operating expenditure allowance to apply to the Transition Year is $234.02 million;

c. with regard to the MAR wash-up for the Transition Year (2011/12):

   i. an operating expenditure allowance of $248.5 million applies (excluding pass-through costs and recoverable costs); and

   ii. the ‘incremental rolling incentive scheme’ for operating expenditure does not apply;

d. for the Remainder Period, and for later regulatory periods:

   i. the operating expenditure allowance will be determined after the Commission has assessed the forecast operating expenditure proposed by Transpower, and will exclude pass-through costs and recoverable costs;

   ii. the operating expenditure allowance will consist of separate allowances for each year of the regulatory period;

   iii. the ‘incremental rolling incentive scheme’ for operating expenditure will apply; and

   iv. the review of operating expenditure for the Remainder Period will be undertaken during the first half of 2011; and

e. no wash-ups will apply to operating expenditure.

4.1 Introduction

Scope of Decisions

4.1.1 This Chapter defines operating expenditure and explains how the Commission's decisions with regard to the operating expenditure allowance mechanism promote outcomes that are consistent with those found in workably competitive markets such that, over the long-term, the regulatory objectives set out in s 52A(1)(a)-(d) of the Act are met.

4.1.2 The Chapter also sets out the Commission’s decisions on the operating expenditure framework that will be applied to Transpower. This includes;

a. the operating expenditure allowance applying to the Transition Year,

b. the setting of the operating expenditure allowances for the Remainder Period, and

c. the intended timing for the operating expenditure provisions in future RCPs.

4.1.3 This Chapter does not cover the 'incremental rolling incentive scheme', as specified in the input methodologies, other than to set out when the mechanism applies. Details of the rolling incentive scheme are set out in the Input Methodologies (Transpower) Reasons Paper.[93] Neither does it cover decisions on pass-through costs and recoverable costs, other than to set out when these apply (as discussed in Section 2.6.1). These decisions are also discussed in further detail in the Input Methodologies (Transpower) Reasons Paper.[94]

4.2 Operating expenditure definition

Decision

4.2.1 The Commission's decision is that operating expenditure means expenditure incurred by Transpower in the provision of electricity transmission services that is not capital expenditure (as that term is defined in Chapter 5), and:

a. includes departmental costs, investigations, communications and control, IST operations, transmission and substation maintenance, operating lease costs, insurance premiums, black start costs and the cost of over-frequency arming, net instantaneous reserve event charges (as defined in the Code), and ancillary services costs not classified as recoverable costs; and

b. excludes depreciation, finance lease costs, tax payable, revaluations, pass-through costs, recoverable costs, any operating costs associated with transmission alternative services that have been approved by the Electricity Authority (or any other regulatory body), operating expenditure that is the result of an insurance event and has been (or is expected to be) recovered by insurance income, and costs associated with unregulated businesses and expenses related to the system operator function.

Reasons

4.2.2 The Commission's preliminary view, as set out for consultation in the Input Methodologies Discussion Paper was that the definition of operating expenditure would be based on the definition included in the administrative settlement.[95] The Commission sought feedback on this preliminary view, including asking submitters which costs they considered should be included or excluded from Transpower's operating expenditure allowance.

4.2.3 Transpower agreed generally with the Commission's proposed definition of operating expenditure, but suggested that for clarity the Commission should confirm that instantaneous reserve event charges be explicitly noted as a component of

[93] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 7.
[94] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 7.
[95] Commerce Commission, *Input Methodologies Discussion Paper*, 19 June 2009, paragraph 12.265.

operating expenditure, consistent with the treatment used under the administrative settlement.[96]

4.2.4 The Commission will include within each operating expenditure allowance a provision for instantaneous reserve event charges (refer paragraph 4.4.5 for reasons). Including event charges as a component of the capped operating expenditure allowance ensures that appropriate incentives exist to minimise the number of events caused by Transpower. This differentiates the event charges from the instantaneous reserve availability charges which are now treated as recoverable costs and are not included in the operating expenditure allowance. The reasoning for this is set out in the Input Methodologies (Transpower) Reasons Paper.[97]

4.2.5 Transpower also submitted that the Commission should clarify that operating lease assets can be included in the RAB.[98] Under the administrative settlement Transpower applied an approach of capitalising operating lease assets as well as finance lease assets.[99] Under individual price-quality regulation, however, the Commission has concluded that operating lease costs should be a component of the operating expenditure allowance rather than capitalised to the RAB. This is consistent with the Commission's decision on intangible assets as set out in the Input Methodologies (Transpower) Reasons Paper.[100]

4.2.6 This change in treatment for operating leases requires the capitalisation treatment previously adopted under the administrative settlement to be unwound by adjusting the opening RAB for the individual price-quality path. This approach is in line with Transpower's submission aimed at aligning the treatment of costs in the forecast MAR calculations and the MAR wash-up calculations as closely as possible with GAAP.[101]

4.2.7 Transpower also submitted that operating costs should include insurance premiums, black start costs and the cost of over-frequency arming.[102] The Commission agrees with this position and has updated the definition of operating expenditure to include expenditure that is incurred by Transpower in the provision of electricity transmission services and that is not capital expenditure. These costs have been included in the operating expenditure definition.

[96] Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.52.

[97] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 7.

[98] Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.21.

[99] Transpower, *Operating lease assets*, email from Mr John Coulter, 20 September 2010

[100] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 4.

[101] Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, pp 10-11.

[102] Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, August 2010, p.51.

4.3 Transition Year Operating Expenditure Allowance

Decision

4.3.1 The operating expenditure allowance used in calculating the forecast MAR for the Transition Year was $234.02 million. This amount excludes pass-through costs, recoverable costs and operating lease costs.

Reasons

4.3.2 The Commission needed to set an operating expenditure allowance for the Transition Year forecast MAR in advance of the Commission's determination on the individual price-quality path. Due to time constraints, the Commission was unable to undertake operating expenditure and capital expenditure reviews covering the entire regulatory period before making the individual price-quality path determination.[103] For this reason, the Commission's draft reasons paper set out the view that it would be appropriate to undertake separate reviews and set separate operating expenditure allowances for the Transition Year and for the years in the Remainder Period.[104]

4.3.3 On the basis of the best available information at the time, in November 2010 the Commission announced that an operating expenditure allowance for the purposes of the forecast MAR of $234.02 million would be adopted in the individual price-quality path determination. This amount was an estimate pending finalisation of the determinations on the individual price-quality path and the input methodologies, and was based on the operating expenditure allowance that was set for earlier years under the terms of the settlement agreement. As such, the 2010/11 operating expenditure allowance was initially escalated to the 2011/12 year at CPI and was adjusted for amendments to pass-through costs.

4.3.4 Transpower also presented a proposal seeking an increase in the 2011/12 operating expenditure allowance for a significantly increased level of maintenance expenditure. Transpower's position was that the settlement agreement operating expenditure allowance escalated at CPI for another year would not be adequate to undertake the necessary maintenance.[105]

4.3.5 Transpower has explained the drivers for increased maintenance expenditure as resulting from:

[103] The timing issues as they relate to operating expenditure specifically were set out in the Commission's June 2010 Draft Reasons Paper as well as its 26 August 2010 Revised Process Paper. General support was received from submitters for the approach proposed.

[104] Commission, *Individual Price-Quality Path (Transpower) Draft Reasons Paper*, 28 June 2010, p.37, clause 4.3.2.

[105] This is consistent with Transpower 's earlier submission (Transpower, *Submission to the Commerce Commission on Transpower process and recommendation discussion paper, Input Methodologies Discussion Paper*, August 2009, p.29, question 183) and discussion at the Electricity Transmission Workshop (Commerce Commission, *Input Methodologies Transmission Workshop*, 2 March 2010, p.26-32.) where Transpower agreed with basing the price-quality path for the Transition Year on the settlement agreement, but noted a need to update the operating expenditure allowance.

a. increased scope of work on aging assets (in particular the replacement of components of transmission line conductors and towers);

b. accumulation of work from previous years that cannot be delayed further without significant risk;

c. increased complexity of undertaking work (tree regulations, RMA requirements, and so on);

d. limited availability of skilled labour and increased input costs;[106] and

e. growth in the number of substation assets to be maintained.

4.3.6 Transpower submitted that the primary area of increased cost is in transmission line project work (as opposed to routine work). Table 4.1 shows Transpower's expenditure allowances (maintenance, non-maintenance, and total operating expenditure) escalated at CPI-0 against actual and forecast expenditure for both the administrative settlement period and the Transition Year (2011/12).[107] The figure shown for the Transition Year is the figure obtained by deducting Transpower's under-expenditure during the administrative settlement on the non-maintenance components of the operating expenditure allowance from Transpower's proposed allowance.

106 Transpower has provided information showing that the hourly contract labour rates it pays have, on average, increased at a rate higher than the CPI increase provided under the settlement. Increases in lines maintenance contractor rates increased approximately 20% over the period 2006-10, while station maintenance rates increased by 7-10% over the same period. Transpower notes that 85-90% of maintenance costs are labour-related. Drivers of increased labour rates include increased leave entitlements, Kiwisaver contributions, and increased training requirements for safety and quality.

107 Note that the operating expenditure allowance as a whole is escalated at CPI-0; the escalation in the maintenance and non-maintenance components at CPI is for information purposes only.

Table 4.1 Actual and forecast total operating expenditure and maintenance components[108]

Item	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12
Maintenance - threshold component (at CPI)	*82*	*85*	*87*	*89*	*91*	*93*
Maintenance - actual/forecast	86	89	99	102	113	117
Non-maintenance operating expenditure - threshold component	*116*	*121*	*123*	*125*	*129*	*132*
Non-maintenance - actual/forecast	100	111	119	109	117	117
Total operating expenditure - threshold (at CPI)	*198*	*206*	*210*	*214*	*220*	*225*
Total operating expenditure - actual/forecast	186	200	218	211	230	234
Shortfall (under-spend) relative to threshold	(12)	(6)	8	(3)	10	9

4.3.7 The numbers in Table 4.1 expressed in percentage terms show that:

a. maintenance costs over the four years of the administrative settlement (to date) have increased by 18.6%, relative to a CPI increase of 11%;

b. non-maintenance costs over the same period have increased by 9%; and

c. if instantaneous reserve costs were excluded, Transpower would have under-spent its threshold in three out of the four years during the administrative settlement, providing a net gain to its shareholder. However, once reserves costs are taken into consideration (not shown), the net impact is a loss to Transpower's shareholder.

4.3.8 In addressing the level of increased maintenance, Transpower has expressed confidence in its capability to undertake this additional expenditure.[109] In terms of non-maintenance expenditure, it has noted that it expects IT operation costs, particularly in the telecommunications area, to continue to increase at a rate greater than CPI, but it believes that, overall, it can constrain non-maintenance expenditure to within a CPI increase.

4.3.9 Genesis Energy submitted that there could be a case for penalising Transpower for the extra remedial expenditure needed because of the deteriorated condition of the

[108] Sourced from Transpower Board paper, 22 April 2010. Updated from presentation at Transpower workshop to include actual expenditure for the current year, and incorporate latest CPI forecasts.

[109] Transpower Workshop Transcript, 2 March 2010, p.26, lines 12-20.

assets (in order to provide incentives to minimise asset life cycle costs). Genesis accepted, however, that separating costs out in this way may not be possible and it may be preferable simply to allow Transpower full recovery of its forecast additional expenditure.[110]

4.3.10 While the Commission has not undertaken a full review of the reasonableness of the planned maintenance cost increase or Transpower's capability to carry out the works the Commission notes that:

a. the increase appears consistent with information provided by Transpower on increased input (labour) costs over the period. This data showed increases in line and station maintenance contract rates over the period 2006-2010 of 20% and 7-10%, respectively, relative to CPI increase of 11%; and

b. there is a need for increased maintenance expenditure to deal with the backlog of work and to operate and maintain an increasing volume of aging assets.

4.3.11 Taking these factors into consideration, and in light of the relatively small proposed increase, the Commission's decision is to accept Transpower's proposed increase in the operating expenditure allowance for the Transition Year by the amount of the proposed maintenance cost increase.

4.4 Transition Year MAR wash-up

Decision

4.4.1 The level of operating expenditure that will apply to the Transition Year wash-up is $248.5 million.

4.4.2 The Transition Year MAR wash-up operating expenditure comprises:

a. base operating expenditure under the administrative settlement escalated annually at CPI-0 ($225.1 million);

b. an additional allowance of $8.9 million, for Transpower's proposed increase in maintenance expenditure for the 2011/12 year;

c. a reduction of $0.8 million to exclude the provision in the base operating expenditure for Commerce Act levies, which have been defined as pass-through costs;

d. an allowance of $14.5 million for operating lease costs; and

e. an allowance of $0.8 million for instantaneous reserve event charges.

Reasons

Commerce Act levies

4.4.3 A reduction in the level of approved operating expenditure for the Transition Year wash-up is required from that used in calculating the forecast MAR to correct for the previous inclusion of these levies in the operating expenditure allowance. The

110 Genesis Energy, *Post-Workshop Submission (Transpower Regulation Workshop)*, 24 March 2010.

Specification of Price input methodology sets out that Commerce Act levies payable under s 53ZE of the Act are now allowed as a pass-through cost.[111] Such costs, under the administrative settlement, were previously included in the operating expenditure allowance and had not been removed when setting the allowance for the forecast MAR. Accordingly, the operating expenditure allowance for the wash-up will be reduced by $0.8 million for Commerce Act levies.[112]

Operating leases

4.4.4 An increase in the Transition Year operating expenditure allowance is required to include a $14.5 million provision for operating lease costs. This is consistent with the Commission's decision to treat operating lease costs as operating expenditure in accordance with GAAP, and the impact of this change is offset by a reduction in the Minor capital expenditure for the Transition Year. These changes in approach were not applied at the time the operating expenditure allowance for the Transition Year forecast MAR was set. For this reason, when the Transition Year MAR wash-up is undertaken, a change to increase the level of the operating expenditure allowance will be made.

Instantaneous reserve event charges

4.4.5 Transpower submitted that the operating expenditure allowance for the Transition Year should include an allowance for instantaneous reserve event charges. It noted that the new definition of 'causer' incorporated in the initial Code, increases the likelihood that Transpower as grid owner will be deemed to be the causer of an event.[113] As a result, Transpower faces an increased potential exposure to event charges relative to its position under the EGRs. Transpower provided details of the event charges that applied under the previous EGRs (approximately $893,750 in 2009/10) and proposed that the provision be set at $800,000 for the Transition Year.[114]

4.4.6 Contact Energy in its cross-submission, however, did not agree that Transpower should be provided with an allowance for event charges in its operating expenditure.[115] It reiterated this in its submission on the November 2010 draft determination where it stated that consumers should not be faced with 'any event costs associated with events that are caused by Transpower'.[116] However, Contact Energy did not submit any new evidence or rationale for this position.

4.4.7 The Commission considers that a number of outages are likely to occur for which Transpower should reasonably be able to recover the costs. However, at the same

111 Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 7.

112 This comprises a $0.7 m provision made for the 2006/07 year, escalated at CPI for the period of the settlement agreement.

113 Electricity Industry Participation Code clause 8.61.

114 Transpower, *Part 1 - Submission to the Commerce Commission on: Input methodologies Transpower and Individual price-quality path Transpower Draft Reasons Paper*, August 2010, p.52.

115 Contact Energy, *Cross submission on draft determination and input methodologies for Part 4 regulation of Transpower*, 25 August 2010, p.11.

116 Contact Energy, *Submission on revised draft determination - input methodologies and individual price-quality path updates for Part 4 regulation of Transpower*, November 2010, p.7.

time, Transpower should face incentives to, where possible, avoid being the causer of outages. The Commission recognises that under the Code, relative to the EGRs, Transpower may more often be determined to be the causer of an event where third party effects contribute.

4.4.8 The Commission reviewed Transpower’s estimate of instantaneous reserve event charges for the Transition Year and concluded that an allowance of $800,000 for such charges should be included in the operating expenditure allowance. Costs in excess of this amount, if Transpower overall exceeds its operating expenditure allowance, will be borne by Transpower. Including event charges as a component of the capped operating expenditure allowance in this way ensures that appropriate incentives exist for Transpower to minimise the number of events it causes.

4.4.9 For completeness, the Commission notes that rebates paid for under-frequency events, in accordance with clause 8.65 of the Code, must be netted off against instantaneous reserve availability charges (rather than against event charges) and are part of the calculation of recoverable costs under the input methodologies determination.

4.4.10 An increase to the operating expenditure allowance that was set for the Transition Year forecast MAR is therefore required to reflect the Commission’s decision to include a $0.8 million provision for instantaneous reserve event charges.

Summary of wash-up operating expenditure allowance to apply

4.4.11 In summary, for the MAR wash-up operating expenditure allowance the Commission has:

a. accepted Transpower's proposed $8.9 million increase in its operating expenditure allowance for the Transition Year to allow for additional maintenance expenditure;

b. adjusted the existing provision in the operating expenditure allowance under the administrative settlement for Commerce Act levies, and

c. included a provision for operating lease costs and a provision for instantaneous reserve event charges.

4.4.12 Under this approach, the total operating expenditure allowance for the Transition Year MAR wash-up is $248.5 million, as follows:

Table 4.2 Calculation of Transition Year MAR wash-up operating expenditure allowance

	$ million	
2006/07 operating expenditure allowance	$ 198.1	
CPI adjustment 2006/07-2011/12		13.6%
2011/12 operating expenditure allowance (based on administrative settlement)	$ 225.1	
plus		
Increased maintenance allowance	$ 8.9	
subtotal	**$ 234.0**	
(less) Provision for Commerce Act levies	$ (0.8)	
plus Provision for Operating Lease Costs	$ 14.5	
plus Provision for IR Event Charges	$ 0.8	
Transition Year operating expenditure allowance for MAR wash-up	**$ 248.5**	

4.5 Remainder Period Operating Expenditure Allowance

Decision

4.5.1 The Commission's decision is that annual operating expenditure allowances, beginning with the Remainder Period (2012/13 to 2014/15), will:

a. be determined by the Commission after an ex-ante assessment of operating expenditure forecasts for the RCP submitted by Transpower;

b. reflect what the Commission considers to be a reasonable and efficient level of operating expenditure for Transpower;

c. be set in a manner to provide Transpower with incentives to improve efficiency and identify and realise appropriate cost savings;

d. consist of separate allowances set by the Commission for each year of the regulatory period;

e. take into consideration Transpower's performance in previous regulatory periods, the operating expenditure allowance set for the Transition Year MAR wash-up, and Transpower's annual forecasts of reasonable and appropriate operating expenditure for the Remainder Period; and

f. exclude pass-through costs and recoverable costs.

4.5.2 Incentives for Transpower to seek additional efficiency gains (relative to the operating expenditure allowance) will be provided through the combined application of an operating expenditure allowance for each year of the regulatory period and the implementation of an 'incremental rolling incentive scheme' from the Remainder

Period. The carry forward period for any annual incremental change amount under the 'incremental rolling incentive scheme' is five years.

4.5.3 The Commission's decision is that there will be no ex-post wash-up of operating expenditure, and that the operating expenditure review for the Remainder Period will be undertaken during the first half of 2011, with consultation expected in mid 2011.

Reasons

4.5.4 The approach set out above accords with the Commission's emerging view published in February 2010. This was discussed at the electricity transmission workshop in March 2010. The approach, together with a proposed scope for the ex-ante review, was generally supported by participants at the workshop.[117] In developing the approach to operating expenditure, the Commission has taken into consideration the regulatory objectives in s 52A(1)[118] and the regulatory treatment of operating expenditure in overseas jurisdictions.

4.6 Operating Expenditure Incentives

Decisions

4.6.1 Actual operating expenditure will not replace the Commission-approved level of the operating expenditure allowance in any annual MAR wash-ups or any updates of forecast MARs.

4.6.2 The 'incremental rolling incentive scheme' for operating expenditure does not apply to the Transition Year, with any under-spend or over-spend relative to the operating expenditure allowance for that year to being to a benefit or a cost to Transpower's shareholder.

4.6.3 The 'incremental rolling incentive scheme' for operating expenditure will apply to the Remainder Period.

Reasons

4.6.4 The Commission considers that, by setting a limit on the operating expenditure that Transpower can reasonably recover, it will require Transpower to become more efficient over time and will also constrain Transpower's ability to extract excessive profits. This will promote outcomes consistent with those found in workably competitive markets which, in turn, will promote the objectives set out in s 52A(b) and (d).

4.6.5 As a transitional measure, the Commission considers that the 'incremental rolling incentive scheme' should not apply to the Transition Year. The scheme will apply to the Remainder Period.

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[117] Commerce Commission, *Input Methodologies Electricity Transmission Workshop - Transcripts*, 2 March 2010, pp 26-32.

[118] In particular, with reference to the objectives of innovation (s 52A(1)(a)), improved efficiency (s 52A(1)(b)) and sharing of efficiency gains (s 52A(1)(c)).

4.6.6 The incentives provided by the rolling incentive scheme should encourage Transpower to make efficiency savings. This should reveal, over time, a more efficient level of costs, with savings being shared with consumers at each reset of the individual price-quality path.

4.6.7 Transpower supports the overall approach to the rolling incentive mechanism (i.e. operating expenditure cap, the 'incremental rolling incentive scheme', and the five year carry forward).[119] MEUG noted that it should be part of Transpower's normal business practice to seek efficiency gains and, accordingly, any incentive mechanism should only reward superior performance.[120] In other words, MEUG considers that the operating expenditure allowance should be set at a level that represents efficient expenditure only, taking account of efficiency gains that Transpower would reasonably be expected to achieve. Gains in excess of this efficient level would be subject to the 'incremental rolling incentive scheme'. The Commission supports this position and it considers that this is reflected in its decision. For more discussion on the 'incremental rolling incentive scheme' for operating expenditure, refer to the Input Methodologies (Transpower) Reasons Paper.[121]

[119] Transpower, *Submission on Individual Price-Quality Path Transpower – Draft Reasons Paper,* August 2010, p.54.

[120] Commerce Commission, *Electricity Transmission Workshop Transcript*, 2 March 2010, p.30, line 10 to p.32, line 7.

[121] Commerce Commission, *Input Methodologies (Transpower) Reasons Paper*, 22 December 2010, Chapter 7.

CHAPTER 5: CAPITAL EXPENDITURE

Decisions include:

a. capital projects will be divided into Minor and Major categories;

b. RCP1 will include separate ex-ante capital expenditure allowances for Major and Minor capital projects in both the Transition Year and Remainder Period;

c. the level of approved Minor capital expenditure for the Transition Year for the purposes of the wash-up of the MAR is set at $208.6 million;

d. the category of Minor capital expenditure will comprise Replacement, Refurbishment and Enhancement, IST projects and Business Support capital expenditure, as follows;

    i. replacement and refurbishment capital (with no limit on the size of any project);

    ii. IST capital expenditure (with no limit on the size of any project);

    iii. in the Transition Year if the value of an individual enhancement project is less than $1.5 million, or less than $5.0 million for a programme;

    iv. in the Remainder Period, if the value of enhancement projects or programmes are less than $5.0 million; and

    v. Business Support capital expenditure (with no limit on the size of any project);

e. full substitution within the Minor project category will be allowed, including between years within a given RCP;

f. Major capital expenditure projects will be subject to individual approval. Such projects:

    i. were reviewed by the Electricity Commission prior to 1 November 2010, and are now reviewed by the Commerce Commission;

    ii. may be submitted for approval during the RCP;

    iii. if approved prior to the relevant forecast MAR determination, will be included in the forecast MAR; and

    iv. if not approved prior to the relevant forecast MAR determination, will be included at the next MAR updates.

g. annual wash-ups will apply to both Major and Minor capital expenditure for each year of RCP1. Approved capital expenditure allowances will be replaced with actual capital expenditure, for the purpose of calculating ex-post economic gains or losses;

h. all capital expenditure will enter the RAB at cost; and

i. a capital expenditure input methodology will be developed during 2011 to apply from 1 November 2011. As such, the individual price-quality determination and any affected input methodologies may subsequently be amended, as necessary, to reflect the capital expenditure input methodology.

5.1 Introduction

5.1.1 This Chapter sets out the Commission's decisions on the approach to approving Transpower's capital expenditure allowance for RCP1. It also sets out how the Commission's decisions promote outcomes that are consistent with the purpose of Part 4 of the Act.

5.1.2 The overall approach to Minor capital expenditure is discussed in Section 5.2. Section 5.3 describes the classification of Minor and Major capital expenditure.

5.1.3 As discussed in Chapter 1 (paragraph 1.2.12), the four-year RCP1 will effectively be implemented as two separate periods: a Transition Year (one Year 2011/12) and a 'Remainder Period' (three years 2012/13 to 2014/15 inclusive). Section 5.4 sets out the Commission's decision on the Transition Year capital expenditure. Following this, Section 5.6 sets out the process and approach for establishing the Minor capital expenditure allowances for the Remainder Period.

5.1.4 Prior to 1 November 2010, individual Major capital expenditure projects were assessed and approved by the Electricity Commission. From 1 November 2010, this responsibility was transferred to the Commerce Commission.

5.1.5 The Electricity Industry Act requires the Commission to determine the capital expenditure input methodology by 1 November 2011.[122] It should be noted that the Act provides that the Minister may, on written request of the Commission under s 54S, extend the deadline once by a period of up to three months.

5.1.6 This Chapter only addresses the approach to determining the capital expenditure allowances for RCP1. While the capital expenditure input methodology will come into force during RCP1, this will occur after the Commission has set the Minor capital expenditure allowance for the Remainder Period. Minor and Major capital expenditure approvals under the transitional provisions will remain valid and will not be subject to the capital expenditure input methodology. Once the capital expenditure input methodology applies, however, any Major capital expenditure submitted during RCP1 for approval will be subject to that new capital expenditure input methodology.[123]

5.1.7 Issues relating to Major project approvals are discussed in more detail in Section 5.7. This Chapter also sets out processes that are applicable to both Minor and Major capital expenditure, such as the decisions regarding substitution of approved capital expenditure (section 5.8), and the use of ex-post wash-ups (section 5.9) and hedging arrangements (section 5.10).

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[122] Electricity Industry Act 2010 s 52S.

[123] The input methodology that will be developed will include approaches for the assessment and approval of both Minor and Major capital expenditure allowances.

5.2 Overall Approach

5.2.1 Each of the two separate periods within RCP1 (Transition Year and Remainder Period) will have a separate ex-ante capital expenditure allowance for projects categorised as Minor capital.[124] This means that a one-year Minor capital expenditure allowance will be reflected in Transpower's forecast MAR for the Transition Year, and a three-year Minor capital expenditure allowance will be set for the Remainder Period.

5.2.2 Each of the two separate periods within RCP1 will also have approved Major capital projects incorporated into the calculation of each respective forecast MAR as set out in paragraph 3.6.1.

5.2.3 Under this ex-ante approach, Transpower will need to justify its Minor capital expenditure proposals by linking forecast expenditure to cost drivers, customer preferences, asset management strategies and good electricity industry practice. In relation to Major capital expenditure proposals submitted for approval before the capital expenditure input methodology comes into effect, Transpower will need to demonstrate that it meets the Grid Investment Test (GIT). The Commission considers that the degree of oversight of investment decisions should reflect the scale and complexity of a particular investment. Forecasts should demonstrate robust controls on expenditure and demonstrate appropriate cost-benefit tests for planned expenditures.

5.2.4 In summary, the capital expenditure approvals processes for RCP1 will work by applying two broad methods. First, for Minor capital expenditure, a process-based approach will apply. Second, Major capital expenditure projects will be subject to individual review under the GIT, however, once the capital expenditure input methodology is developed, Major capital expenditure will be subject to that process. Although new Minor capital expenditure proposals will be subject to the new capital expenditure input methodology, the first Minor capital expenditure proposal will relate to RCP2.

5.2.5 In relation to actual expenditure, wash-ups of actual capital expenditure against allowances will occur on an annual basis. The wash-ups will take into account any additional Major expenditure approved by the Commission during the RCP and other matters such as delays to expected or actual commissioning.

5.2.6 Only projects forecast to be commissioned during a given RCP may be included in capital proposals for that RCP, and only approved and commissioned capital projects may be added to the RAB.

5.2.7 Projects that have already been approved by the time the capital expenditure input methodology is determined (in terms of the Act, by 1 November 2011) will not be affected i.e. they will be allowed to enter the forecast MAR if forecast to be commissioned during the RCP.[125] These will not be subject to the new capital

[124] Future regulatory periods are likely to be five years and have a single ex-ante allowance for Minor capital expenditure.

[125] As explained in section 1.2.32, the Commission may apply for a three month extension.

expenditure input methodology. Unapproved projects, once the capital expenditure input methodology applies, however, will be subject to any new processes set out in that input methodology.

5.2.8 The approaches to Minor and Major capital expenditure projects are discussed in further detail in the following sections.

5.3 Capital Expenditure Classification: Major and Minor

Decision

5.3.1 The Commission's decision is that for both the Transition Year and the Remainder Period, any capital expenditure that does not fit into the category of Minor capital expenditure is to be classified as Major capital expenditure.

5.3.2 The following expenditure is to be classified as Minor capital expenditure:

a. asset replacement;

b. asset refurbishment;

c. during the Transition Year, enhancement projects less than $1.5 million or enhancement programmes with a value of less than $5.0 million;

d. during the Remainder Period, enhancement projects less than $5.0 million or enhancement programmes with a value of less than $5.0 million;

e. IST; and

f. Business Support capital expenditure.

5.3.3 These expenditure types are defined below.

<u>Asset Replacement</u>

5.3.4 Asset replacement means capital expenditure driven by Transpower's policies on replacing substantially all of an existing asset due to the condition or performance of that asset, but where replacement of the asset, or a sub-component of the asset does not materially improve the original service potential beyond that attributable to using modern equivalent assets.

<u>Asset Refurbishment</u>

5.3.5 Asset refurbishment means capital expenditure which will be commissioned during the regulatory period relating to an asset, or sub-component of an asset, and that materially extends its original economic life but does not improve its original service potential (e.g. tower painting).

<u>Minor Enhancements</u>

5.3.6 Asset enhancement means a capital expenditure project or capital expenditure programme that enhances an asset and which involves:

a. replacing the asset, or adding to or replacing a sub-component of the asset; or

b. materially improving the design attributes of the asset; or

c. improving the original service potential of the asset; or

d. work on existing assets or investment in new assets, but not including work on information systems and technology assets, where the main purpose is to:

   i. improve the performance of the asset so that it performs at a level above an appropriate standard of service and/or good industry practice; or

   ii. increase its capacity, reliability, or quality of supply, consistent with customer needs.

Information System and Technology

5.3.7 IST capital expenditure relates to expenditure which will be commissioned during the regulatory period, relating to the upgrade or replacement of infrastructure used in operating or supporting the operation of the grid, including:

- telecommunications network;
- SCADA EMS (including devices which provide data to SCADA)[126]; and
- network systems.

5.3.8 IST capital expenditure excludes capitalised TNP operating leases.[127]

Business Support capital expenditure

5.3.9 Business Support capital expenditure means non grid-related capital expenditure that will be commissioned during the regulatory period, and is required for the efficient operation of transmission grid services. This may include expenditure such as on office buildings, depots or workshops, tools, plant and machinery, office furniture or equipment, and other such non-grid capital expenditure.

Boundary between Major and Minor capital expenditure

5.3.10 If, during the regulatory period, there are Minor enhancement project scope variations, but the total forecast project value:

a. remains under the $1.5 million and $5 million cap for enhancement capital expenditure for the Transition year and Remainder Period respectively, this will not be considered grounds for seeking approval for additional funding. The Commission's expectation is that Transpower will manage within its overall Minor capital expenditure allowance; or

b. exceeds the $1.5 million or $5 million cap for enhancement capital expenditure, Transpower may submit a grid upgrade plan for that entire project or programme (note: the entire project must be submitted, not just the scope variation).

5.3.11 If Transpower submits to the Commission for approval a previously approved Minor enhancement project which has become a Major enhancement project due to scope

126 SCADA EMS refers to Supervisory Control and Data Acquisition / Energy Management System.

127 Transpower's telecommunications and Networks Programme (TNP) will replace its existing, largely radio-based telecommunications infrastructure with fibre-optic cable. Transpower has built and owns 920 kilometres of fibre, and leases a further 3,350 kilometres of the approximately 6,000 kilometres of fibre required for its Telecommunications and Networks Programme.

variations, the forecast value of the project at the time the Minor capital expenditure allowance was set will be deducted from the Minor capital expenditure allowance.

5.3.12 In this instance, the Commission will apply the GIT (or the subsequent test under the new capital expenditure input methodology once that applies) to the enhancement project. From the time the project is re-submitted for approval, it will be treated as a Major project.

Reasons

5.3.13 The Commission's emerging view was that any individual categories for asset replacement, asset refurbishment and asset enhancement projects were unnecessary, and that any project in excess of $1.5 million should be classified as a Major Project.[128]

5.3.14 The Commission's reason for the $1.5 million cut-off was that it considered it reasonable to expect that as projects increase in size and cost, they should receive an increasing level of scrutiny. This was instead of previous arrangements that separated capital expenditure by the nature of the work (e.g. replacement, refurbishment, and enhancement categories). This concept was supported at the Commission's electricity transmission workshop in general, but participants did not support the level at which the Commission had proposed to separate Minor and Major projects. Transpower suggested that the cut-off should be between $20 and $50 million, depending on the nature of the project.[129] Genesis Energy also submitted that $1.5 million was too low, but did not provide its view on what would be more appropriate.[130]

5.3.15 The decision on the cut-off for defining Minor and Major enhancement projects is also complicated by decisions on the appropriate level of substitutability between categories of expenditure. The Commission's emerging view on substitutability was that Transpower should be unconstrained within the Minor project category, except that it would not be able to substitute between the aggregated programmes category and other projects.[131] The Commission was also of the view that Transpower should not be able to substitute freely between Minor and Major projects. The Commission remains of the view that any decision on the appropriate cut-off for defining Minor and Major enhancement projects must consider what is allowed in terms of substituting individually approved capital projects for general expenditure on unrelated matters.

5.3.16 The Commission's draft decision was to increase Transpower's flexibility to substitute projects. MEUG supported the idea that Transpower should be provided a greater level of substitutability.[132] The Commission, however, remains of the view

128 Commerce Commission, *Emerging Views Paper*, 17 February 2010, p.15.

129 Commerce Commission, *Electricity Transmission Workshop Transcript*, 3 March 2010, p.98, lines 22-28.

130 Genesis Energy, *Submission on Electricity Transmission Workshop*, 24 March 2010, p.4.

131 Commerce Commission, *Emerging Views Paper*, 17 February 2010, p.14.

132 Commerce Commission, *Electricity Transmission Workshop Transcript*, 3 March 2010, p.145, lines 7-14.

that Transpower should not be able to substitute between Minor and Major projects (refer paragraph 5.8.10).

5.3.17 Although its emerging view was to remove the categories of expenditure (replacements, refurbishment, enhancement, IST), this concept being supported by Transpower in its post-workshop submission,[133] the Commission's draft decision was to adopt an approach that distinguishes enhancement projects from other minor expenditure. This was because it considered that the level of interest from stakeholders in enhancement projects and the scope for other parties to provide alternative solutions are likely to be much greater than for replacement and refurbishment and IST projects. Options for replacing and refurbishing existing assets are likely to be more limited, and less contentious than enhancement projects.

5.3.18 In line with this, and considering the feedback provided at the workshop and in post-workshop submissions, the Commission's draft decision was to remove the $1.5 million cap for replacement, refurbishment and IST expenditure. In relation to enhancement projects, a cap of $1.5 million would apply to the Transition Year, and $5 million to the Remainder Period.

5.3.19 The Commission's draft decision noted, however, that while no cap would apply to replacement and refurbishment expenditure, and that this capital expenditure could be fully and freely substituted, very large projects in the Minor category would likely receive additional scrutiny and attention. Under the review approach for Minor projects, the Commission is able to, and will likely, closely scrutinise the largest projects included in Transpower's proposal.[134]

5.3.20 In its submission on the Commission's draft decision, however, Meridian Energy continued to support a $20 million threshold, as it felt that a $5 million threshold sent the wrong investment signal to Transpower and is likely to have a detrimental impact on the integrity of the grid.[135] Contact Energy, supported by Genesis Energy, submitted that both the $1.5 million cut-off for the Transition Year and the $5 million cut-off for the Remainder Period are too low, and it supported a cut-off of $20 million for the whole of RCP1. It considered that a $5 million threshold risks creating a disincentive to investment by Transpower.[136], [137]

5.3.21 The Commission, however, considers that these views do not take into account the Commission's decision, in regard to replacement and refurbishment, where no cap is applied. These views do not balance the need for increased scrutiny on a small minority of key projects. Furthermore, increasing the remainder period threshold

[133] Transpower, *Electricity Transmission Post Workshop Submission*, 24 March 2010, p.5.

[134] As noted previously, this is an interim approach. Cut-off levels and the matter of substitution will be re-examined, and re-consulted upon when the Commission develops its capital expenditure input methodology.

[135] Meridian Energy, *Submission on Transpower's input methodologies determination and draft reasons paper*, 25 August 2010, p.3, paragraphs 9-12.

[136] Contact Energy, *Cross submission on draft determination and input methodologies for Part 4 regulation of Transpower*, 25 August 2010, pp 3-4.

[137] Genesis Energy, *Cross Submission on Input Methodologies and Individual Price-Quality Path for Transpower*, 25 August 2010, p.3.

from $1.5 million to $5.0 million has reduced the number of projects Transpower will be required to submit for approval.

5.3.22 The Commission has considered the additional submissions on this matter. In general, the Commission continues to consider that many more options exist for enhancement projects, including non-transmission alternatives that must be considered, and therefore, these should be treated differently. The Commission's draft decision to increase the existing cut-off from $1.5 million per project to $5 million for the Remainder Period represents an increase from the value used under the administrative settlement. This is also an increase from that proposed in the Commission's emerging views.

5.3.23 The overall approach to the cut-off will reduce the likely number of projects requiring individual regulatory approval, and is consistent with ultimately moving toward a less onerous ex-ante capital expenditure regime. These decisions, however, will be revisited when the Commission consults on the capital expenditure input methodology.

5.3.24 Finally, there may be instances where enhancement projects undergo scope changes. As a result, these changes may cause the project to cross the boundary from Minor into the Major project category. Where projects change classification, the Commission's view is that Transpower may submit that project to the Commission in accordance with the process set out for Major projects (refer paragraph 5.7). This provides Transpower the flexibility to either manage within its Minor capital expenditure allowance, if it so chooses, or to submit the project for individual approval.

5.3.25 If Transpower elects to submit such a project to the Commission for approval, the Commission's decision is to reduce the Minor capital expenditure allowance by the amount of the initial project forecast. The effect of this reduction will be offset by the amount of the Commission's approval under the Major capital expenditure approach, if the proposal is approved. This is considered appropriate because the scrutiny provided to individual projects should supersede any allowance provided by the review conducted when setting the Minor capital expenditure allowance.

Business Support Assets

5.3.26 Under the administrative settlement, the Commission accepted Transpower's proposal that the Business Support Assets category of capital expenditure would not be subject to regulatory scrutiny. In its decision not to declare control of Transpower, the Commission observed that although there would be no constraint in the short-term on this expenditure, the Commission was of the view that this risk was acceptable.[138] The Commission noted that Transpower's practical ability to inefficiently substitute between operating expenditure and this category of capital expenditure, thereby making a windfall gain from its operating expenditure allowance, was not clear, but was unlikely to be significant. The Commission also noted that efficient substitution is to be encouraged and the benefits of any

[138] Commerce Commission, *Decision and Reasons for Not Declaring Control of Transpower New Zealand Limited*, 13 May 2008, pp 49-50, paragraphs 229, 230 and 235.

substitution would be available to be passed on to consumers at the next reset of the thresholds. The approach under the administrative settlement was accepted on a 'short-term' basis, and the Commission's decision is to not continue with this approach.

5.3.27 Under Part 4, the Commission is moving to an approach whereby all operating and capital expenditure is approved on an ex-ante basis. The Commission considers it practical to consider expenditure on Business Support Assets using the same approach as for other Minor capital expenditure. This will also provide Transpower additional flexibility to manage its portfolio of Minor capital expenditure by including an additional category of capital expenditure (Business Support Assets) with which other Minor capital expenditure will be able to be substituted.

5.3.28 Transpower's actual Business Support capital expenditure from 2006/07 until 2008/09, as well as Transpower's forecast of commissioned expenditure for 2009/10 until 2011/12, is provided in Table 5.1 below:

Table 5.1 Business Support capital expenditure

Year	Amount ($$ millions)
2006/07	$12.1m
2007/08	$7.9m
2008/09	$12.1m
2009/10	$16.6m (forecast)
2010/11	$12.1m (forecast)
2011/12	$13.6m (forecast)

5.4 Transition Year Minor Capital Expenditure Allowance

Decision

5.4.1 The Commission's decision is that the Transition Year Minor capital expenditure allowance to apply to Transpower is $208.6 million.

5.4.2 An allowance of $225.6 million was used to set the Transition Year forecast MAR. This allowance of $225.6 million will be reduced by $17 million to exclude operating lease payments as set out in section 5.5.

Reasons

5.4.3 In order to set an allowance for Transition Year Minor capital expenditure, the Commission requested that Transpower provide a forecast of its proposed capital expenditure for the 2011/12 year, consistent with the approach taken under the settlement agreement,[139] by early 2010. Transpower provided its proposal, seeking a Minor capital expenditure allowance of $243 million.

5.4.4 The Commission has undertaken an assessment of that proposal, following a similar process to that provided for under the administrative settlement. The Commission notes, however, that it was not constrained by the administrative settlement in reaching its decision with regards to setting the level of approved capital expenditure for 2011/12 for the individual price-quality path for Transpower as that decision relates to a period after the expiry of the settlement.

5.4.5 The Commission engaged Strata Energy Consulting Limited (Strata) to assist it in its review and to provide its independent opinion on what a reasonable level of Minor capital expenditure would be for 2011/12.

5.4.6 Strata found that Transpower had, for the most part, forecast its capital expenditure in a manner consistent with the requirements of the settlement. Strata found that in terms of implementing process improvements (e.g. targeting least cost efficient interventions), Transpower had made significant progress in the 2009/10 year.[140] Strata also advised the Commission, however, that it considered further savings could be achieved. Strata concluded that, because of the significant difference between the projects planned to be undertaken and those projects actually undertaken in 2009/10 (as at the time of Strata's review), as well as Transpower's history of under-spending, it was difficult to rely on Transpower's business plan. Because of this, Strata considered it would be appropriate for the Commission to set a threshold lower than that proposed by Transpower.

5.4.7 Strata found that the level of expenditure that had been fully subject to Transpower's internal review and approval processes was too low to rely on Transpower's processes to ensure the proposed level of capital expenditure was appropriate. Only 29.9% of RRE and 3.2% for IST expenditure had completed Transpower's approval process. As a result, Strata concluded that Transpower's proposal was not an appropriate basis for setting an approved level of capital expenditure. Strata suggested, as an alternative, that the Commission base the 2011/12 Minor capital expenditure allowance on the level approved for the 2010/11 year (the final year of the administrative settlement). Strata noted that Transpower's proposed level of capital for 2011/12 ($243m) was only $3 million lower than what it had proposed for 2010/11 ($246m).[141]

> …many aspects of the 2011/12 Business Plan are a continuation of key categories of capital expenditure in the 2010/11 Business Plan e.g. tower painting, grillage refurbishment, single-phase transformer replacement, circuit breakers, reconductoring, etc. Also the level of capital expenditure is almost identical ($176.3m in 2010/11 and $177.0m in 2011/12).

139 The relevant aspects of the approach under the administrative settlement that Transpower was required to apply are set out at: *Supplement to New Zealand Gazette of 26 June, Commerce Act (Transpower Thresholds) Notice 2008*, 27 June 2008, Issue 106, Schedule 2 Part 2, p. 2816.

140 2009/10 is the most recent year for which actual performance can be reviewed.

141 Strata Energy Consulting Limited, *Review of Transpower's 2011/12 Non Part F Capital Expenditure Plans (Asset Replacement, Refurbishment & Enhancement and Information Services & Technology)*, May 2010, Section 3.4.2, p.29.

5.4.8 Strata concluded that the Commission should apply the same threshold to the Transition Year under the individual price-quality path as it had determined under the administrative settlement for non-Part F expenditure for the 2010/11 year:

> Given the extent of the similarities between the Business Plans for each year and the absence of a better alternative, Strata recommends the Commission applies the same Threshold as is established for the 2010/11 year, to the 2011/12 year.[142]

5.4.9 The Commission considered Transpower's proposal, the advice it has received from Strata, as well as submissions on its consultation on the non-Part F threshold to be set for Transpower for 2010/11. As noted in its draft individual price-quality path decision and its decision on Transpower's 2010/11 non Part F capital expenditure, the Commission was somewhat concerned about Transpower's history of under-delivering capital expenditure and its capacity to increase its delivery of Minor capital expenditure to the levels proposed.[143]

5.4.10 At the time of its draft individual price-quality path decision, the Commission had no further information on historical performance to that considered when setting the non-Part F capital expenditure threshold for 2010/11. Given it relied on Transpower's assurances to the Commission that it had improved its capacity to deliver the forecast expenditure, the Commission's draft decision was that Strata's proposed approach to setting the level for approved capital, was a pragmatic solution.

5.4.11 Since completing its review of Transpower's proposed 2011/12 capital expenditure, however, the Commission has moved away from providing its approval based on forecast capital expenditure for a given period, in favour of approving a level of capital expenditure that is forecast to be commissioned during that given period. Previously, under the administrative settlement, Transpower's revenue requirement was based upon approved forecasts of capital expenditure, with the year-end wash-up taking into account actual assets commissioned. An approach based on commissioned capital expenditure provides consistency of approach between the forecasts and that used at year-end. Likewise, as this approach will be used for the Remainder Period and subsequent RCPs, the Commission considers it should use this approach for the Transition Year.

5.4.12 Transpower's forecast of assets to be commissioned in 2011/12 was approximately $204 million, including approximately $17 million of IST operating leases (providing a combined total of $221 million). Transpower's forecast of assets to be commissioned was approximately $22 million less than Transpower's proposed level of capital expenditure of $243 million (which was provided to the Commission for review as the basis of Strata's assessment).

142 Strata Energy Consulting Limited, *Review of Transpower's 2011/12 Non Part F Capital Expenditure Plans (Asset Replacement, Refurbishment & Enhancement and Information Services & Technology)*, May 2010, Section 3.4.2, p.29.

143 Commerce Commission, *Regulation of Electricity Lines Businesses: Decision on 2010/11 Non-Part F Capital Expenditure Threshold for Transpower New Zealand Limited*, 4 June 2010, p.2.

5.4.13 In comparison, Transpower proposed a threshold of $246 million for the 2010/11 year, and the Commission set the threshold at $225.6 million ($20.4 million less than Transpower's proposal).

5.4.14 The Commission consulted on including Transpower's forecast of Business Support Assets capital expenditure of approximately $14 million into the category of Minor capital expenditure. The impact of this is to increase the forecast level to a combined total of approximately $235 million. This is comprised of:

- capital to be commissioned $204 million;
- IST operating leases $17 million; and
- Business Support Assets $14 million.

5.4.15 Given that in 2010/11 the Commission made a $20 million downward adjustment to the level of capital expenditure, and noting the similarities between the expenditure programme in 2010/11 and 2011/12 (paragraph 5.4.8) and that the findings of Strata's review also apply to 2011/12, another downward adjustment of similar magnitude appears appropriate. However, given the Minor category now includes an allowance for Business Support Assets, the downward adjustment must be at least partially offset to accommodate this. Given the changeover from forecasting on an expenditure basis, to an 'as commissioned' basis, the Commission recognises that previous forecasts and adjustments are not entirely comparable with Transpower's forecasts of commissioned assets. On this basis, and being conservative in Transpower's favour, the Commission's draft decision was to set the Minor capital allowance at $225.60 million, inclusive of the amount forecast by Transpower for Business Support Assets expenditure.

5.4.16 Submissions on the Commission's draft decision did not support the Commission's draft decision. Transpower submitted that, based on Transpower's 2009/10 performance and demonstrated ability to deliver its Minor capital expenditure programme, the Minor capital expenditure allowance for the Transition Year should be $235 million, as previously proposed to the Commission.[144]

5.4.17 In contrast, however, MEUG did not support the Commission and proposed that an allowance at $225.6 million was too high and gave the benefit of doubt to Transpower while acknowledging concern of historical under-delivery on minor capital expenditure.[145]

5.4.18 The Commission notes that its draft decision was contingent on Transpower delivering on its assurance to the Commission that its capacity issues have been resolved. The Commission is satisfied that Transpower has delivered according to its forecasts.

144 Transpower, Part 1 – *Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, 9 August 2010, p.57.

145 Major Electricity Users' Group, *Submission on Transpower Individual Price-Quality Path Draft Reasons paper*, 9 August 2010, appendix, p.3.

5.4.19 On balance, the Commission is of the view that an allowance at $225.6 million is reasonable. Noting that under-expenditure is washed-up at the end of each year of RCP1, and that Transpower has demonstrated its capacity to achieve its forecasts in the 2009/10 year, the Commission considers that it should set the allowance based on its view of what is a necessary level of expenditure. This approach is consistent with the regulatory objective of promoting an appropriate level of investments. Accordingly, the Commission adopted an allowance of $225.6 million when calculating the forecast MAR to apply to the Transition Year.

5.5 Transition Year Minor Capital Expenditure Wash-up

Decisions

5.5.1 The Commission's decision is that the Transition Year Minor capital expenditure allowance to apply to Transpower for the Transition Year wash-up is $208.6 million.

Reasons

5.5.2 An allowance of $225.6 million was used to set the Transition Year forecast MAR. This allowance of $225.6 million will be reduced by $17 million to exclude operating lease payments. This will be done at the time the wash-up calculation is undertaken for the Transition Year.

5.5.3 An allowance of $17 million had been included in the draft individual price-quality path decision to cover operating leases during the Transition Year. This was consistent with the approach in the administrative settlement whereby such operating leases were capitalised. Under the new asset valuation input methodology, however, operating leases no longer qualify for inclusion in the RAB. For this reason, in applying the determination to the MAR wash-up for the Transition Year, an adjustment to the Minor capital expenditure allowance is required to exclude Transpower’s forecast of capitalised operating leases, which is noted above as approximately $17 million.

5.5.4 Taking into account Transpower’s historical and more recent performance, Strata’s advice and submissions on the Commission's 2010/11 non Part F capital expenditure decision, and the adjustment to remove operating leases from the allowance, the Commission’s view is that an appropriate Minor capital expenditure allowance for the Transition Year for the purposes of the year end wash-up is $208.60 million.

5.6 Remainder Period Minor Capital Expenditure Allowance

Decision

5.6.1 The Commission’s decision is that it will require Transpower to submit to the Commission a Minor capital expenditure proposal that sets out what Transpower considers to be a reasonable, necessary and efficient level of expenditure to apply to each year of the Remainder Period. The proposal must be based on expected commissioned expenditure.

5.6.2 The Commission will review Transpower's proposal and, following consultation, determine and set the allowance to apply to each year of the Remainder Period.

Reasons

5.6.3 The decision to undertake a single review of Transpower's planned Minor capital expenditure for the three-year Remainder Period in 2011 is consistent with the Commission's view that it should move, over time, to a regime where all capital expenditure is approved on an ex-ante basis.

5.6.4 The approach to Minor capital expenditure is based on the view that the projects included in Transpower's Minor capital expenditure proposal will provide a sound basis for the Commission to establish an allowance to be included in the MAR for the Remainder Period if Transpower can provide sufficient justification that:

- its internal policies and processes are effective in delivering technically appropriate capital expenditure projects and programmes at least cost;[146]
- the processes are properly and consistently applied; and
- Transpower has demonstrated capability to implement the capital expenditure programme.

5.6.5 A key focus of the process review will be on assessing the adequacy of Transpower's capital expenditure policies and processes for achieving least-cost capital expenditure outcomes. Key factors in achieving least-cost capital expenditure are considered to be the use of:

a. accurate and complete asset condition monitoring and assessment processes;

b. effective options analysis, including non-transmission alternatives where appropriate;

c. cost-benefit analysis and economic testing;

d. accurate costing methodologies;

e. effective challenge processes;

f. effective procurement processes; and

g. targeted capital expenditure cost reduction/containment efforts (such as demonstrating efforts to provide cost reduction incentives to contractors, i.e. sharing of cost savings).

5.6.6 In addition to the process review, a relatively detailed technical examination of a sample of individual Minor projects will be undertaken. This will seek to test Transpower's adherence to relevant policies and processes through examining business cases and other project documentation. It will be used to establish whether and to what extent the policies and processes have been properly and consistently applied, and whether, in the case of the sampled projects, the capital expenditure is reasonable or not.

[146] Least cost refers to the lowest whole of life cost, taking into account an economic assessment of all quantitative and qualitative costs over the life of the asset, including reliability, risk, and maintenance costs.

5.6.7 These findings would be used to provide a view on the reasonableness of Transpower's Minor capital expenditure proposal as a whole. The advantage of this approach is that it avoids the need to undertake highly detailed technical and economic reviews of a large number of individual projects while maintaining a degree of targeted oversight.

5.6.8 In terms of whether or not expenditure forecasts have been prepared in accordance with Transpower's capital works and IST planning processes and policies, the Commission considered what proportion of Minor capital expenditure it should reasonably expect to have completed the requisite internal approval steps by the time the Minor capital expenditure proposal is submitted. It considers that, given the inherent uncertainties and the multi-year scope of the assessment, and the lead time required for Transpower to prepare and submit its expenditure plans, it would not be reasonable or cost-effective to require Minor projects to have completed all internal approval steps by the time of providing the proposal. For example, scoping or costing projects in advance may result in the need for rework if specifications, costs, or priorities change.

5.6.9 The Commission is relying on the rigour of Transpower's approved policies, processes and asset management strategies to ensure the reasonableness of its forecasts, to ensure appropriate least-cost outcomes. Transpower will not be expected to have fully applied those processes by the time it submits its proposal. However, the Commission considers it reasonable to expect that 100% of projects and programme work will have gone through Transpower's internal approval processes prior to the expenditure commencing. For this reason, the Commission's decision is that while all capital expenditure may be entered into the RAB, an EV adjustment must be made to offset the revenue impact of the value of those assets over the life of those assets, for any capital expenditure that does not fully comply with, or has not been fully subject to, Transpower's approved processes (refer paragraph 3.9.18).

5.6.10 Noting that scope changes may occur that cause certain Minor Enhancement capital expenditure to move from being classified as Minor to Major capital expenditure, the Commission has provided a process for Transpower to receive additional approval in such instances (refer to paragraph 5.3.10).

5.6.11 While customised price-quality proposals are required to be supported with a report by an independent verifier, in the case of Transpower specifically, the Commission intends to undertake its own extensive review of Transpower's operating expenditure and capital expenditure proposal. It will be engaging its own expert advisors in this regard, and, for this reason, considers the amount of duplication of review that would exist warrants removal of the requirement for Transpower to employ an independent verifier.

5.7 Major Capital Expenditure Projects

Decision

5.7.1 The Commission's decision is that Major projects will be subject to individual approval utilising the test set out in the capital expenditure input methodology. Until that input methodology is determined, the GIT set out under Part F of the EGRs will be applied by the Commission.

5.7.2 Projects approved prior to the relevant forecast MAR determination will be included in the forecast MAR. Projects not approved prior to the relevant forecast MAR determination will be excluded from the forecast MAR when first set.

5.7.3 Major capital expenditure assets approved subsequent to the Remainder Period forecast MAR being set, will be incorporated into the forecast MAR at the next available MAR update (refer paragraph 3.8.3).

5.7.4 Major capital expenditure assets will be included in the RAB in accordance with the asset valuation input methodology. If actual capital expenditure exceeds the regulatory approval, an EV adjustment will be required to offset this excess cost, in accordance with paragraph 3.9.18.

5.7.5 Major capital expenditure will be included in the calculation of each forecast MAR (via an estimate of the return of and on capital from the date of commissioning) on an individual project basis.

5.7.6 The Commission will not provide ex-post approval for any Major projects.

5.7.7 Transpower will be required to provide a list of contingent projects at the time it submits its forecast MAR calculations that apply to the Remainder Period.

Reasons

5.7.8 As discussed in Chapter 1, the capital expenditure input methodology will be developed and consulted on during the 2011 calendar year. The Commission's decision on the approach for approving Major projects, therefore, is an interim approach until that new input methodology is determined. The Commission's interim approach and the individual price-quality path determination will be amended during RCP1, as necessary, to reflect the capital expenditure input methodology. Projects approved prior to the capital expenditure input methodology determination will retain their approval.

5.7.9 If any Major projects have not received regulatory approval prior to the initial MAR determination (so they are not incorporated in the MAR at the start of the regulatory period), they may be assessed during the regulatory period. Major projects that are approved and forecast to be commissioned during RCP1 will be included in the first available MAR update.

5.7.10 Any Major projects that are approved and commissioned during the Transition Year, prior to setting the MAR for the Remainder Period, will be incorporated into the Remainder Period MAR.

5.7.11 All Major capital expenditure projects must have ex-ante approval from the appropriate regulatory agency (i.e. the Electricity Commission or the Commerce

Commission) prior to being included in the RAB.[147] The Commission's rationale for not engaging in ex-post approvals is discussed in Section 5.9.

Remainder Period approvals

5.7.12 The Commission assumed responsibility for approving Major capital expenditure projects from 1 November 2010. Projects submitted prior to 1 November 2010 were reviewed by the Electricity Commission under the Part F processes.

5.7.13 Projects submitted subsequent to 1 November 2010 and prior to the capital expenditure input methodology being determined, will be reviewed by the Commerce Commission under the processes set out in Part F of the EGRs. Once the capital expenditure input methodology takes effect, projects will be reviewed under the processes set out in that capital expenditure input methodology.

5.7.14 Consistent with the Commission's view that it should move, over time, to a regime where capital expenditure is approved on an ex-ante basis, the Commission will incorporate all Major capital expenditure projects into Transpower's MAR if they have received approval prior to the relevant MAR determination.

Contingent Projects

5.7.15 Transpower's Major capital investments, i.e. those that are subject to the GIT, are often large and infrequent. The timing, cost, and even whether the need for these large investments will eventuate, is often dependent on events beyond Transpower's control. This introduces uncertainty as to the need, timing and/or cost of these large investments, and the question arises as to whether to allow for such costs when setting Transpower's MAR.

5.7.16 The Commission has not placed any restriction on Transpower's ability to seek approvals for Major capital expenditure during RCP1. For this reason, as large uncertain projects become more certain, Transpower may seek regulatory approval for that expenditure, and recover its costs via the wash-up process. The Commission's decision to require Transpower to provide a forecast of contingent projects, is effectively implementing a 'dry-run' of the contingent project mechanism that might be implemented in RCP2.[148]

5.7.17 Contingent projects are those projects whereby the costs are excluded from the forecast MAR because the need, timing, or cost of the project are uncertain.

5.8 Substitution of Approved Capital Expenditure

Decision

5.8.1 The Commission's decision is that, for RCP1, Transpower will be provided the flexibility to:

[147] For the avoidance of doubt, 'ex ante regulatory approval' means approval of the expenditure in advance of under taking the works.

[148] Whether the contingent projects approach is used in RCP2 depends upon the capital expenditure input methodology that is set by the Commission in late 2011.

a. fully substitute and reprioritise Minor capital expenditure between the subcategories of Minor capital expenditure; and

b. fully substitute and reprioritise Minor capital expenditure between the Transition Year and each year of the Remainder Period, but not between RCPs.

5.8.2 In contrast, Transpower will not be able to substitute any capital expenditure approved for an individual Major project to any other project(s).

5.8.3 The approach to substitution for RCP2 onwards will be determined as part of the Commission's capital expenditure input methodology.

Reasons - Minor capital substitution

5.8.4 In its draft reasons paper, the Commission considered it appropriate to restrict Transpower's ability to substitute capital expenditure between the Transition Year and the Remainder Period. Transpower, in response, requested that the Commission reconsider allowing for some substitution between the Transition Year and Remainder Period in its final decisions.[149]

5.8.5 MEUG, in its submission, however, stated that it was not confident the level of operational flexibility afforded by Commission's proposal will lead to efficiency gains. MEUG asserts that Transpower has an acknowledged poor approval process that will result in resources being spent on projects not meeting the requirements of a proper approval process to the detriment of consumers.[150]

5.8.6 The Commission's decision is, however, that because the Transition Year and Remainder Period are now essentially being assessed on the same basis,[151] there is no difficulty in allowing substitution across these periods. MEUG's concern can be addressed by the Commission examining Transpower's policies and strategies at the time it reviews Transpower's operating expenditure/capital expenditure proposal. The approval itself is provided as a whole, based on the review of programmes, forecasts, scenarios and assumptions. The approval is not at an individual project level, and Transpower should have the flexibility to reprioritise during the period.

5.8.7 Accordingly, Transpower will be provided the flexibility to fully substitute and reprioritise Minor capital expenditure within RCP1. Compliance at the end of RCP1 will consider performance against the aggregate amount of approved capital expenditure for all four years of RCP1.

5.8.8 To minimise negative incentives which may exist where capital expenditure cannot be prioritised from one regulatory year to another, the Commission considers it appropriate to provide Transpower with flexibility to, where efficient, prioritise by deferring projects from one year to another, and bringing other projects forward.

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149 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, 9 August 2010, p.68.

150 Major Electricity Users' Group, *Submission on Transpower Individual Price-Quality Path Draft Reasons paper*, 9 August 2010, appendix, p.4.

151 Previously, the Transition Year was to be set and assessed based upon the settlement agreement approach, as opposed to principally being assessed under the individual price-quality framework.

Flexibility to do this across years within a regulatory period may help minimise inefficient expenditure and the incentives for Transpower to simply spend the full amount of its allowance.

5.8.9 The decision regarding the level of substitutability must be made together with the decision regarding the appropriate boundary between Minor and Major project categories. Achieving this balance is discussed in Section 5.3.15 to 5.3.23. The Commission also considers its decision on the level of substitutability is appropriate for RCP1 due to the inherent level of uncertainty in Transpower's forecast Minor capital expenditure, and the magnitude of its recent and proposed increases in capital spend. This approach will provide Transpower with appropriate operational freedom to manage its investment plans and respond in a timely way to changes arising in its business and operational environment.

Reasons - Major capital substitution

5.8.10 The Commission does not consider that it would be appropriate for Transpower, having undertaken detailed analysis and gained regulatory approval for specific Major projects, to use the approved costs of that project for other work. Likewise, the magnitude of Major capital projects is likely to be such that, if substitution with the Minor capital category was allowed, substitution of even a single Major project could potentially swamp the Minor category and undermine the efficiency incentives being provided.

5.8.11 Providing the ability to substitute approved Major capital may also undermine the need to effectively consult different third parties where projects costs can be transferred from one approved project to one that has not been approved. This would also effectively avoid the need for regulatory approval on certain projects.

5.9 Ex-post Approvals for Major and Minor Capital Expenditure

Decision

5.9.1 The Commission's decision is that Transpower will be required to manage its level of Minor capital expenditure within the allowance determined by the Commission. Accordingly, ex-post approval for Minor capital expenditure will only be provided in exceptional circumstances, where Transpower can demonstrate that it was unable to foresee the expenditure that became essential to maintain the security of supply of the national grid and could not be deferred.

5.9.2 The amount of any ex-post approval of Minor capital expenditure will not be included in any wash-up of the MAR.[152]

5.9.3 The Commission does not intend to provide ex-post approval for Major capital expenditure. Any Major capital expenditure that does not receive ex-ante approval must not be included in any forecast MAR update or any year-end wash-up.

[152] As noted in paragraph 3.9.18, all assets enter the RAB at cost, even if that value is in excess of the approved level. The approval allows Transpower to make a further EV adjustment to offset the prior EV adjustment made by Transpower to offset the excess value of this capital expenditure.

5.9.4 The Commission will not accept any application for capital expenditure in excess of the pre-approved level for any individual year of an RCP. If Transpower wishes to apply for additional capital expenditure on an ex-post basis, then it may only include this application in the annual compliance monitoring statement that relates to the final year of that RCP.

Reasons

Minor capital expenditure

5.9.5 The Commission intends in future, to move to a regime under which Transpower's revenue allowance is set on an ex-ante basis, with minimal use of wash-ups and ex-post reviews. A step in this direction is to not allow ex-post approval of expenditure over and above the Minor capital expenditure allowance, unless exceptional circumstances are presented. The Commission considers it appropriate to limit the use of the ex-post approval to exceptional circumstances only, to ensure the correct discipline and incentives are provided for Transpower to manage project costs and make efficient prioritisation decisions, as well as ensure it provides an accurate forecast of its capital expenditure requirements.

5.9.6 The Commission's reason for retaining the ex-post wash-up mechanism for Minor capital expenditure in RCP1 is solely to ensure consumers are not disadvantaged if Transpower under-delivers against its Minor capital expenditure allowance.

5.9.7 The purpose of ex-post approvals is that where any exceptional situations do arise, the Commission may approve additional capital expenditure upon which recovery of revenues is appropriate. The amount of that approval will not, however, be included in any wash-up (refer paragraph 3.9.14).

5.9.8 The Commission expects that, prior to undertaking, commissioning and submitting for ex-post approval of any Minor capital expenditure over and above the approved level, that capital expenditure would have been fully subject to Transpower's internal approval processes.

5.9.9 The Commission also considers it appropriate not to consider any application for capital expenditure in excess of the pre-approved level for any individual year of an RCP (except the last year of each RCP) because Transpower has been provided the flexibility to move capital expenditure freely between years. In this manner Transpower has the ability to take into account timing and other such changes. As Transpower has been provided the flexibility to operate a dynamic capital expenditure programme within the approved limits, the Commission considers that timing issues are unlikely to meet the ex-post approval criteria of 'exceptional'.

5.9.10 It should also be noted that the Commission has also increased Transpower's flexibility in this regard by allowing substitution between the Transition Year and Remainder Period.

Major capital expenditure

5.9.11 The Commission's reason for not providing ex-post approval for Major capital expenditure is that it does not consider it a good and appropriate process for Transpower to seek regulatory approval for capital expenditure that it has already incurred. Part of the approval process is to ensure options are considered, economics have been tested, and to allow and ensure appropriate consultation. Seeking approval on an ex-post basis undermines the intended regulatory approval process, the ability for the Commission to undertake these steps, and to ensure correct process. For this reason, the Commission's decision is that it will not engage in any Major capital expenditure approval process except on an ex-ante basis.

5.10 Foreign Exchange and Commodity Hedging on Capital Expenditure

Decisions

5.10.1 Major capital expenditure project approval will be based on actual or estimated forward rates in accordance with Transpower's application of its hedging policy.

5.10.2 A request for approval of a change in value of a project as a result of variations in assumed hedging rates once the project is commissioned, will be subject to approval by the Commission. This approval will only be done by considering the entire variation in project value overall.

5.10.3 Minor capital expenditure allowances will be set by the Commission after reviewing Transpower's estimates of the forward rates. Transpower's estimates must be based upon and in accordance with Transpower's hedging policy, as applied at the capital expenditure planning stage.

5.10.4 There will be no wash-ups of the Minor capital expenditure allowances in respect of these hedging estimates.

5.10.5 Where commodity instruments in respect of capital expenditure projects are acquired in accordance with Transpower's hedging policy and the instruments do not qualify under GAAP at any stage for hedge accounting, any gain or loss on the instruments that is taken to Transpower's profit or loss will be included in the calculation of the EV accounts at the time of the year end wash-up.

5.10.6 Where other forms of financial instrument such as forward foreign exchange instruments are acquired in accordance with Transpower's hedging policy and qualify under GAAP for hedge accounting in respect of capital expenditure at the time of acquiring the instruments, but subsequently cease to meet the tests for effective hedges, any gain or loss on the instruments that is taken to Transpower's profit or loss will be included in the calculation of the EV accounts at the time of the year end wash-up.

5.10.7 The Commission will monitor the effectiveness of the application of Transpower's hedging policy.

5.10.8 Transpower will disclose details of any instrument that ceases to qualify as an effective hedge.

Reasons

5.10.9 The Commission's decision on the asset valuation input methodology is that capital expenditure projects are to be valued in accordance with GAAP. This will result in gains and losses from foreign exchange and commodity instruments that are intended by Transpower to serve as hedges in respect of capital expenditure projects also being accounted for in accordance with GAAP.

5.10.10 Transpower submitted that prior to the price-quality path applying, gains and losses on hedge contracts relating to capital expenditure were borne by Transpower's shareholder in circumstances where hedge accounting is not able to be used under GAAP.[153] This applies to some foreign exchange instruments and a large proportion of commodity instruments that are intended to be hedges on capital expenditure projects.

5.10.11 Where instruments qualify as effective hedges under GAAP (i.e. meet conditions that qualify them as hedges for accounting purposes), the gains and losses will be capitalised into asset values. In contrast, gains and losses on instruments that fail the tests for effective hedges will be taken to Transpower's profit and loss account for financial accounting purposes.[154] Under the Commission's decision these gains and losses will, under specified conditions, be included in the calculation of the EV accounts, which will result in those gains and losses being apportioned back to the forecast MARs.

5.10.12 Transpower has a policy of comprehensive hedging of capital expenditure projects that is updated annually and approved by Transpower's Board of Directors. Currency management is restricted to hedging of committed or expected underlying business exposures, which the policy defines as an exposure to a contract or purchase order, or where an expenditure proposal is highly likely to be approved.

5.10.13 If Transpower enters into hedges, the Commission expects that, consistent with its policy, Transpower will hedge its foreign exchange exposures in an efficient and comprehensive way, such that instruments are undertaken that qualify as effective hedges in respect of capital expenditure projects and thus qualify for hedge accounting under the applicable accounting standard (currently NZ IAS 39). This will generally mean that hedging gains or losses will be capitalised to the RAB.

5.10.14 Major capital expenditure approval values will, therefore, implicitly reflect the quality of Transpower's foreign exchange hedging. Thus, capital expenditure levels will be set by the Commission after assessing values that Transpower has proposed (using actual or estimated forward rates for valuing each project in accordance with Transpower's application of its hedging policy at the stage of planning capital expenditure). Documentation provided in support of capital expenditure approvals will be expected to include confirmation regarding this point.

5.10.15 Variations of the assumed hedging rates, once the project is commissioned, may give rise to a significant change in value of the project relative to the approved project cap. If Transpower seeks approval of additional project costs, such an application

153 Transpower, *Part 1 – Submission to the Commerce Commission on: Input Methodologies Transpower and Individual Price-Quality Path Transpower Draft Reasons Paper*, 9 August 2010, pp 69-70.

154 Transpower, *Calculation of the year end revenue requirement 2009/10*, letter from Transpower , 26 August 2010.

would be subject to review only as part of any variation of the overall project as a whole.

5.10.16 Minor capital expenditure allowances will be based on an estimate of the forward rates applicable to those projects. Transpower's proposed rates must be compliant with its hedging policy, as applied at the capital expenditure planning stage. The Commission will review these forward rates when setting the allowances. There will be no wash-ups of the Minor capital expenditure allowances in respect of these hedging estimates.

5.10.17 Transpower submitted that all gains and losses from hedge contracts should be accounted for via the EV accounts.[155] However, the Commission has concluded that there is potential for Transpower to enter into or acquire foreign exchange instruments for other than the Minor and Major capital expenditure projects, e.g. for hedging debt, and therefore considers that it is appropriate to require initial effective hedging as a condition of allowing any gains and losses on those instruments to be passed through to customers.

5.10.18 This means that where a foreign exchange instrument that qualified for hedge accounting in respect of capital expenditure when transacted ceases to qualify for hedge accounting in the course of a year, the resulting gain or loss will be taken to the EV accounts in the year end MAR wash-up, which will have the effect of passing the hedging costs and benefits on that instrument to customers. This variation in approach from the administrative settlement potentially benefits Transpower, but is consistent with having a comprehensive policy of capital expenditure hedging applying to capital expenditure projects.

5.10.19 A similar hedging policy applies for exposures to the prices of aluminum and copper, where secondary financial markets are available to allow efficient hedging. Aluminium and copper are significant components of Transpower's overseas purchases, and although Transpower has a stated objective to enter into fixed price contracts, vendors will typically ask for price-escalation clauses to cover underlying changes in the price of raw materials used to construct the capital expenditure items that Transpower is purchasing.

5.10.20 Transpower submitted that, unlike foreign exchange instruments, it is very difficult to achieve hedge accounting for the commodity instruments that are intended to be hedges on capital expenditure projects, even though the amounts of the underlying commodities required and the required delivery dates are known.[156] The Commission has concluded that as there is less potential for Transpower to enter into commodity instruments for other than the Minor and Major capital expenditure projects, it is not appropriate to require initial effective hedging as a condition of allowing any gains and losses on the commodity instruments to be passed through to customers.

[155] Transpower, *Updates to Input Methodologies (Transpower) and Individual Price-Quality Path (Transpower)*, 26 November 2010, p.6.

[156] Ibid, p.12.

5.10.21 The Commission considers that the hedging gains and losses that qualify to be passed through to customers should be allowed for in the forecast MAR separately from the operating expenditure allowance, and separately from Transpower's setting of pass-through costs and recoverable costs. It prefers the use of the EV accounts to pass to customers any such hedging gains or losses that are not capitalised to the RAB.

5.10.22 The Commission's decision encourages Transpower to achieve a high level of effective hedging in accordance with its hedging policy (by minimising the EV account adjustments).

5.10.23 To enable the Commission to monitor the effectiveness of applying its hedging policy, Transpower will include in its annual compliance monitoring statement the details of any changes to its policy with regard to capital expenditure hedging. Transpower will also provide the Commission with details of any commodity instrument intended to be a hedge and that does not qualify as an effective hedge, or any other commodity or foreign exchange instrument that initially qualifies as an effective hedge, but that ceases to qualify as an effective hedge during the year.

CHAPTER 6: QUALITY INCENTIVE MECHANISM AND QUALITY STANDARDS

In summary, the Commission's decision is to include a quality incentive mechanism that links Transpower's regulated revenue to the quality of service it provides and quality standards that Transpower must comply with.

The quality incentive mechanism includes the following:

a. a symmetrical approach for RCP1 allowing for penalties or rewards based on a sliding scale;

b. the revenue at risk/reward set at 0% for RCP1, with the revenue at risk for subsequent regulatory periods set by the Commission prior to the start of Transpower's first pricing year in the regulatory period;

c. the starting point for setting targets for RCP1 will be average performance over the previous five years, with caps and collars set at two standard deviations either side of the target except where the data set for the five years is skewed by a single event or year in which case the Commission will consider a longer period of up to seven years;

d. targets, caps, collars and weighting factors set by the Commission to calculate the revenue reward or penalty for each year of the regulatory control period 1;

e. targets, caps, collars and weightings factors for subsequent regulatory control periods set by the Commission prior to the start of the first pricing year of the regulatory control period;

f. the following five quality measures linked to the revenue at risk for each regulatory control period:

    i. total impact of interruptions, expressed in terms of 'system minutes' of unserved energy;

    ii. loss of supply event frequency, expressed as the number of unplanned interruptions over 0.05 system minutes;

    iii. loss of supply event frequency, expressed as the number of unplanned interruptions over 1.0 system minutes;

    iv. availability, expressed as the HVAC circuit unavailability (unplanned); and

    v. availability, expressed as HVDC bi-pole unavailability (unplanned); and

g. No targets, caps and collars set for HVDC bi-pole unavailability (unplanned) in RCP1.

The targets, caps, collars and weightings for each of the quality measures for the first year of RCP1 are set out in the table below.

Parameter	Loss of Supply Event Frequency		Availability		Total Impact of Interruptions
	Number of loss of supply events >0.05 system minutes	Number of loss of supply events >1.0 system minute	HVAC circuit unavailability (unplanned) %	HVDC bi-pole unavailability (unplanned)	Total system minutes
Target	21	3	0.056	Not in RCP1	16.69
Cap	10	1	0.029	Not in RCP1	4.31
Collar	31	5	0.083	Not in RCP1	29.07
Weighting	25%	25%	25%	Not in RCP1	25%

The quality standards require Transpower to provide the Commission:

a. actual performance for each of the quality measures;

b. reasons for any failure to meet the quality targets;

c. for all interruptions over 1.0 system minute, a report that sets out:

   i. the reason or reasons for the interruption;

   ii. Transpower's response to the interruption;

   iii. any change to Transpower's policies as a result of the interruption; and

   iv. the impact of the interruption in system minutes;

d. for all interruptions over 1.0 system minute, within 5 working days of supply being restored, a report that includes:

   i. to the extent that Transpower has been able to determine using reasonable endeavours, the reason or reasons for the interruption; and

   ii. Transpower's initial response to the interruption; and

   iii. an estimate of the impact of the interruption in system minutes; and

e. the impact that Transpower's actual performance would have had on Transpower's forecast MAR under the quality incentive mechanism, had that quality incentive mechanism applied to Transpower's forecast MAR in the pricing years in RCP1.

6.1 Introduction

6.1.1 This Chapter sets out the Commission's decision on the quality measures that apply to Transpower under the s 52P determination. In setting the quality measures for Transpower the Commission has sought to promote outcomes consistent with outcomes produced in workably competitive markets such that the objectives in s 52A(1)(a) to (d) occur. This Chapter identifies how the Commission's decisions are consistent with that overall purpose.

6.1.2 Section 53M(3) provides that quality standards may be prescribed in any way the Commission considers appropriate. However, any requirements relating to quality standards for Transpower in a s 52P determination must be based on, and be consistent with, quality standards for Transpower that are set by the Electricity Authority.[157]

6.1.3 In June 2010 the Commission released its Draft Reasons Paper. With regard to quality, the Commission proposed applying a quality incentive mechanism, based on a basket of quality measures, that places a portion of Transpower's revenue at risk (in the case of underperformance) and offers potential rewards (in the case of performance better than the target).[158]

6.2 Quality Incentive Mechanism

6.2.1 The approach to individual price-quality regulation for Transpower involves setting a forecast MAR for each year of a regulatory period based on forecasts of capital and operating expenditure assessed by the Commission. During the regulatory period Transpower can maximise its profits by reducing costs below the allowable revenue. While cost reductions could occur because of improved efficiency, they could also result from reduced service quality.

6.2.2 The Commission's inclusion of a quality incentive mechanism aims to address the incentive to lower quality standards in order to maximise profits, by linking Transpower's regulated revenues to the quality of the service it provides.

6.2.3 The proposed approach is consistent with overseas regulatory approaches in which regulators seek to ensure that reductions in expenditure by electricity transmission businesses are not achieved to the detriment of quality standards. Both the Office of Ggas and Electricity Markets (Ofgem) and the Australian Energy Regulator (AER) link regulated revenue of transmission businesses to the quality of the service transmission businesses provide using measures similar to the decisions set out in this Chapter.

6.2.4 Following the repeal of s 54M(6) by the Electricity Industry Act, the Act now includes s 54V(6), which states:

> Requirements relating to quality standards for Transpower in a section 52P determination must be based on, and be consistent with, quality standards for Transpower that are set by the Electricity Authority; but the Commission may prescribe them in any way it considers appropriate, as authorised by section 53M(3).

6.2.5 For the purposes of meeting the requirements of the Act, the Commission reviewed the quality measures used by the Electricity Authority against the quality measures the Commission has included in the quality incentive mechanism. The relationship between the quality measures used by the Electricity Authority and the quality measures included in the Commission's quality incentive mechanism is discussed in section 6.7.

[157] Commerce Act 1986, Section 54V(6).

[158] Commerce Commission, *Individual Price Quality Path (Transpower) Draft Reasons Paper*, 28 June 2010, Chapter 6.

6.2.6 Section 53M(2)(c) allows the Commission to require consumer compensation payments under the individual price-quality path as a type of incentive scheme related to the setting of quality standards. However, the Commission notes that providing compensation to specific consumer groups would present a number of challenges. Challenges include asymmetric compensation, with compensation paid to specific consumers that suffer quality deficits being unlikely to be balanced by additional payments to Transpower following over delivery of quality to particular consumer groups. The Commission does not plan to consider consumer compensation until the quality incentive mechanism is operational and the revenue at risk has been set.

6.2.7 The Commission notes that the Electricity Authority is considering an unconditional service guarantee approach that looks to provide compensation to users of the transmission grid in the event of loss of supply. The Commission will work with the Electricity Authority to ensure the Commission's requirements relating to quality standards for Transpower are based on, and consistent with, quality standards for Transpower that are set by the Electricity Authority as required by s 54V(6).

6.3 Framework Design

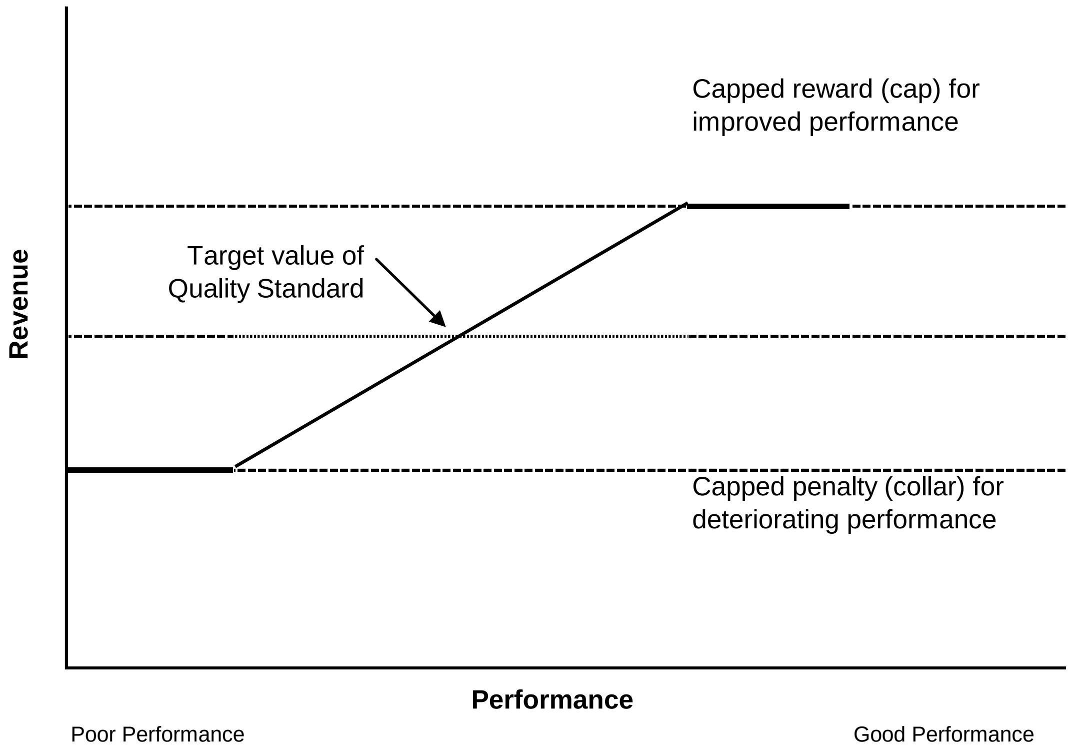
6.3.1 The Commission considers that the impact of the incentive mechanism on the revenue allowance would be determined by:

- the type and number of quality measures used in the mechanism;
- the target, cap and collar applicable to each quality measure;
- the relative weighting of the quality measure compared to other quality measures; and
- the revenue percentage at risk (or reward) under the mechanism.

6.3.2 A generic performance profile linking a quality measure to revenue is set out in

6.3.3 Figure 1 below. The impact on revenue will be separately calculated for each quality measure, and then aggregated using quality specific weighting factors. The approach for setting targets, caps, collars and weightings for each quality measure is set out in the sections below.

Figure 6.1 Figure 1 Revenue vs. Performance



6.4 Revenue at Risk

Decision

6.4.1 The Commission's decision is that:

- the quality incentive mechanism should be symmetrical for RCP1, i.e. it should allow for both penalties and rewards as a result of performance below or above a set target (additional revenue over-and-above maximum allowable revenue), and that the Commission will assess the suitability of a symmetrical quality incentive mechanism prior to each subsequent regulatory control period;
- penalties and rewards relating to quality performance should be based on a sliding scale, with the percentage of revenue that can be gained or lost set prior to the regulatory period;
- initially, in RCP1, performance will be assessed and reported against a specified set of quality measures and targets, but the revenue at risk/reward will be set at 0%; and
- for subsequent regulatory periods, the percentage of revenue at risk/reward will be set by the Commission prior to the start of Transpower's first pricing year of each regulatory period.

Reasons

6.4.2 While Transpower has historically reported on various components of its quality performance, this has not previously been explicitly linked to revenue.

6.4.3 As discussed above, the Commission considers an incentive mechanism linking Transpower's quality performance with revenue is an integral part of an individual price-quality path.

6.4.4 The incentive mechanism requires setting a percentage of annual maximum allowable revenue that can be gained (on top of maximum allowed revenues) in the event of superior performance or lost in the event of under-performance against specified quality measures.

6.4.5 The Commission's decision also includes a transition period in which performance is reported but no revenue is at risk. While Transpower has historically reported on most of the proposed measures, or variants of them (refer subsequent sections), it has not set and assessed performance against target levels linked to revenue at risk. Establishing a quality incentive mechanism, but setting the maximum penalty/reward at 0% for the first regulatory period allows the Commission and Transpower to gain experience with setting statistically valid parameters, and better understand the inter-relationships between the various factors.

6.4.6 In its submission on the Commission's Draft Reasons Paper, Genesis stated that it understood the Commission's decision to set revenue at risk at 0% but queried whether the Commission is being too cautious and could look to place a small proportion of revenue at risk or reward for the latter years of RCP1 (for example years 3 and 4).[159]

6.4.7 In cross submissions on the Draft Reasons Paper, Meridian and Contact Energy[160] agreed with Genesis. Meridian stated that by not introducing revenue at risk in RCP1, the Commission is removing the "incentive" part from its quality incentive mechanism and that the requirement to merely report quality performance is not consistent with the imposition of a binding price-quality path that the regulation of Transpower under Part 4 contemplates.[161]

6.4.8 The Commission considers that there would be limited benefit from setting a small portion revenue at risk/reward in years 3 and 4, as proposed by Genesis and supported by Meridian as the untested measures, targets, caps and collars may not provide appropriate incentives on Transpower.

[159] Genesis Energy, *Input Methodology and Individual Price-Quality Path for Transpower*, 6 August 2010, p.4.

[160] Contact Energy Limited, *Cross submission on draft determination and input methodologies for Part 4 regulation of Transpower*, 25 August 2010, p.13.

[161] Meridian, *Meridian Energy's submission on Transpower input methodology determination and draft reasons paper*, 25 August 2010, p.5, clause 25.

6.4.9 MEUG[162] and Transpower[163] agreed that the incentive and penalty scheme should be monitored and reported but no revenue gain or loss implemented to assist gain experience ahead of RCP2.

6.4.10 The link between revenue and quality will be established for RCP2 by setting a percentage of Transpower's revenue at risk. The level of revenue at risk in RCP2 will be set by the Commission following consideration of the information Transpower submits for quality targets and revenue at risk, as well as Transpower's forecasts of operating and capital expenditure for RCP2.

6.4.11 The Commission is also required to determine an input methodology for Transpower's capital expenditure by 1 November 2011 (with a possible three month extension). Any capital expenditure incentive mechanism within that input methodology will need to be consistent with the quality incentive mechanism. This may require amendments to the quality incentive mechanism prior to RCP2.

6.4.12 Transpower has expressed support for a quality incentive mechanism that links its quality performance to its revenue.[164] Transpower also agrees that the quality incentive mechanism should be symmetrical during RCP1, penalties and rewards should be based on a sliding scale, revenue at risk/reward will be set at 0% for RCP1 and the level of revenue at risk/reward for subsequent regulatory control periods will be set by the Commission prior to the start of the regulatory control period.[165]

6.5 Setting Targets, Caps and Collars

Decision

6.5.1 The Commission's decisions are that:

a. targets, caps and collars for each of the measures for each year of the first regulatory period will be determined using the most recent five years of historical performance data, unless the data for the five years is skewed by a single event or year in which case the Commission will consider using a longer historic period of up to seven years;

b. the starting point for setting targets will be average performance over that period, with caps and collars set at two standard deviations either side of the target, unless two standard deviations results in unrealistic numbers, such as greater than 100% or less than zero. In this case the cap and collar would be set at a lower value, for example, at one standard deviation. The Commission

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162 MEUG, *Submission on Transpower Individual Price-Quality Path Draft Reasons Paper*, 9 August 2010, Appendix p.5.

163 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, p.71.

164 Transpower, *Electricity Transmission Post Workshop submission,* 24 March 2010, p.12.

165 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, p.71.

will also take into account any adjustments necessary to achieve desired future performance, or make allowances for activities on the grid;

c. a sliding scale (slope) rewards or penalises performance relative to the target level for each measure, in proportion to the level of performance. Caps and collars reflect the performance levels beyond which further decreases (below the collar) or increases (above the cap) in performance result in no further penalty or reward;

d. targets, caps and collars will not be set for HVDC bi-pole availability for RCP1. However, Transpower will be required to disclose performance on this measure in its annual compliance statement;

e. dead-bands around target levels will not be used;

f. Transpower will provide forecasts of quality performance to the Commission, as well as Transpower's views on what are reasonable targets, caps and collars applicable to each of the quality measures prior to the start of the Remainder Period within RCP1 and the subsequent regulatory control periods, supported by sufficient information and evidence, including, and in conjunction with, its proposed operating and capital expenditure forecasts; and

g. the Commission will determine and set the targets, caps and collars for the Remainder Period and each subsequent RCP prior to the start of the first pricing year of each regulatory period.

Reasons

6.5.2 The Commission considers that the data set used to calculate the targets, caps and collars should reflect the circumstances that the grid would operate under during the relevant regulatory period including the level of constraints on the system and the volume of capital works proposed to be undertaken on the grid.

6.5.3 The Commission has given consideration to using up to seven years of historical data to calculate the targets, caps and collars. The Commission considers that basing the targets, caps and collars on the last five years is likely to provide a reasonable representation of the operating conditions over the first regulatory period. However, the Commission acknowledges that a five year data set could be adversely affected by one-off events that may skew the calculation of targets, caps and collars. For this reason the Commission considers that a longer data set, up to seven years, may be more appropriate in some cases.

6.5.4 Transpower supports the use of a five year historical data set. However, it notes that the process to determine performance parameters must be sufficiently flexible to allow for modifications to the dataset where it does not adequately reflect the conditions expected going forward.[166] In particular, Transpower noted the following:

a. all proposed measures may be negatively affected by Transpower's increased capital programme over the next regulatory period(s);

[166] Transpower, *Electricity Transmission Post Workshop Submission*, 24 March 2010, p.33.

b. extrapolating past HVDC performance is not a valid means of establishing parameters for future HVDC performance;

c. changes to Transpower's policies on reclosing circuits after trippings has had a significant impact on times to return assets to service.[167] This affects all three of the proposed measures; and

d. the scheme should allow for parameters to be modified to take account of factors that would reasonably be expected to affect future performance, such as increases or decreases in capital and operating expenditure (including maintenance), aging of the total asset stock, and changes to the regulatory environment.[168]

6.5.5 Transpower has also stated that setting a limit on the values included in the calculation of the targets, caps and collars would be a more effective way of treating outlier events than extending the period used to set the parameters.[169]

6.5.6 In its submission on the Commission's Draft Reasons Paper Meridian stated that it strongly supports the introduction of quality standards for assessing Transpower's performance and it agreed with the Commission's general approach to quality standards. However, Meridian disagreed with the Commission's draft decision to set targets, caps and collars based on five years of historical data. In Meridian's view, this period is in fact representative of a level of performance which is significantly poorer than Transpower's long run performance. Meridian submits that the Commission should use a historical data set of at least 7 years rather than use a period that is dominated by inferior performance.[170]

6.5.7 The Commission continues to consider that the last five years of data is likely to provide a better representation of the operating conditions over the first regulatory period than using 7 years of data. However, as stated above where the five year data set is adversely affected by one-off events that may skew the calculation of targets, caps and collars the Commission will consider using a longer data set of up to seven years of data.

6.5.8 The data set used for setting targets, caps and collars for the remainder year is set out in section 6.8 of this chapter.

6.5.9 The target level of performance for a particular quality measure is the level of performance in a particular year that results in Transpower receiving neither reward

[167] Following a 'conductor drop' incident in Auckland in February 2009, Transpower revised its policy on reclosing circuits after trippings, an outcome of which has been markedly increased times to restore circuits to service. This is not reflected in the historical data on which the Commission proposes establishing targets and other parameters.

[168] Transpower, *Electricity Transmission Post Workshop Submission,* 24 March 2010, p.12.

[169] Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, p.71.

[170] Meridian Energy, *Meridian Energy's submission on Transpower's input methodologies determination and draft reasons paper*, 9 August 2010, pp30, 31.

nor penalty.[171] Higher or lower performance levels will produce rewards or penalties, determined by the slope of the sliding scale. To avoid doubt, the target level does not represent an optimal or acceptable level of performance; rather it is an expected level of performance, given the circumstances the system will operate under. In addition the targets, caps and collars set for RCP1 are being used to test the quality incentive mechanism during RCP1. For these reasons, the Commission will be using historical averages for setting target levels.

6.5.10 The sliding scale (slope) rewards or penalises performance relative to the target level for each measure, in proportion to the level of performance. Caps and collars reflect the performance levels beyond which further decreases (below the collar) or increases (above the cap) in performance result in no further penalty or reward.

6.5.11 Transpower agrees that a sliding scale with caps and collars should be used to determine the penalty or reward for actual performance relative to the quality incentive mechanism.[172]

6.5.12 The Commission's decision is to set caps and collars at two standard deviations from the target level for the first regulatory period, if two standard deviations provides caps and collars within a meaningful range. The Commission recognises this approach has a number of imperfections such as that some of the measures are not normally distributed. However, the Commission considers this to be a pragmatic approach to setting a performance range within which Transpower can influence its performance during a regulatory period. If two standard deviations does not provide a meaningful range for a specific measure (such as resulting in a collar value below zero system minutes) the Commission will consider using one standard deviation to set the cap and collar.

6.5.13 The Commission considered the use of 'dead-bands' around the target, within which no rewards or penalties would apply. This would avoid rewarding or penalising Transpower for normal fluctuations in performance. However, the Commission did not consider that this increase in complexity would produce any real benefits due to the likely unders and overs across measures and between years within the regulatory control period. Transpower supported this view, further noting that the use of dead-bands appears to be declining in the Australian regime.[173] The Commission also considers the sliding scale should be based on a linear relationship between the target and the cap and collar for each quality measure as this is the most straight forward option.

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171 Note that while this is discussed in aggregate terms, performance is assessed against the parameters for each measure, and weightings applied, to determine the aggregate penalty or reward.

172 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers*, August 2010, p.72.

173 *Transpower workshop transcript*, 2 March 2010, pp.33-34.

6.6 Weightings

Decision

6.6.1 Weightings set the relative impact of each quality measure on the revenue at risk. The Commission's decision is that:

a. weighting factors will be applied to each of the quality measures to calculate the revenue reward or penalty for each year of the regulatory control period;

b. for the Transition Year of RCP1 all quality measures will be equally weighted;

c. for the Remainder Period and subsequent regulatory periods the Commission will consider setting a higher weighting for loss of supply measures relative to outage measures;

d. for RCP2 onwards the Commission will consider setting a higher weighting for HVAC availability relative to HVDC (in proportion to the value of the asset base);

e. Transpower will propose the weighting to be applied to each of the quality measures when it submits its proposed quality targets, caps and collars to the Commission;

f. the Commission will assess Transpower's proposal and determine and set the weightings it considers appropriate for the control period; and

g. when setting the weightings for each quality measure the factors the Commission takes into account will include (but will not be limited to):

i. the extent to which each quality measure provides an incentive to improve performance most valued by consumers;

ii. the availability of accurate and reliable data for determining values for each quality measure;

iii. scope that Transpower has to improve its performance, as measured by each of the quality measures; and

iv. the extent to which the quality measures overlap.

6.6.2 Transpower agreed with the Commission's approach for setting the weightings for the quality measures.[174]

6.7 Quality Measures

6.7.1 In its Draft Reasons Paper the Commission considered including four quality measures in the quality incentive mechanism. The four quality measures were:[175]

a. total impact of interruptions, expressed in terms of system minutes of unserved energy;[176]

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174 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers*, August 2010, pp.72-73.

175 Commerce Commission, *Draft Reasons Paper*, 28 June 2010, pp71-71 clause 6.7.1.

b. loss of supply event frequency, expressed as the number of unplanned interruptions over a certain duration;

c. unavailability, expressed as the percentage of grid assets that are unavailable, on average, as a result of outages; and

d. average outage duration, in minutes.

6.7.2 The Commission's final decisions on the quality measures included in the quality incentive mechanism are set out below. The definitions for the quality measures used are set out in the individual price-quality determination.

6.7.3 The Commission's approach is based on the incentive mechanism including a small number of relatively high-level parameters which together provide an indication of Transpower's overall quality performance from year to year. It does not see value in including a larger number of disaggregated measures in the quality incentive mechanism at this stage.

6.7.4 The Commission notes that Transpower currently reports on a significant number of aggregated and disaggregated measures as required under the Code, the Act (information disclosure) and of its own volition. Therefore, this more detailed information is already available to interested parties.

Total impact of interruptions

Decision

6.7.5 The Commission's decision is that total impact of interruptions (both planned and unplanned) will be included in the quality incentive mechanism.

6.7.6 The definition of the total impact of interruptions measure is included in the individual price-quality determination.

6.7.7 Transpower will also be required to separately report total impact of interruptions (planned and unplanned), impact of planned interruptions and impact of unplanned interruptions (all in system minutes) within the information disclosures requirements.

Reasons

6.7.8 Total impact of interruptions measures the annual total supply interruptions (planned and unplanned) in system minutes (i.e. the unserved energy resulting from an outage, expressed in terms of an equivalent system-wide impact).

6.7.9 Total impact of interruptions is a key quality measure in the administrative settlement and was included as a potential quality measure in the Commission's Draft Reasons Paper and its Emerging Views Paper. It provides a high level view of the extent to which events have negatively affected consumers.

6.7.10 In its submission on the Draft Reasons Paper Transpower disagreed with the inclusion of the total impact of interruptions measure in the quality incentive mechanism because:

[176] The total impact of interruptions was entitled total duration of interruptions in the Draft Reasons Paper.

a. the figure will inevitably vary markedly from year to year because of changes in weather patterns and other events outside Transpower‘s control, regardless of any actions that Transpower might take;

b. a single high impact / low probability event can markedly skew the outcome;

c. use of the system minutes measure has been discontinued in Australia;

d. the measure is misleading and potentially counter-productive, because the same event occurring at different times, seasons or locations may result in very different system minute totals; and

e. actions by transmission customers may contribute to system minute events and actions which could reduce such events may be within the control of transmission customers rather than Transpower.[177]

6.7.11 MEUG commented at the Transpower workshop that total interruptions is a 'headline statistic', and as such, should not be entirely excluded from the regime. It queried whether there might be ways to work around the issues identified by Transpower.[178]

6.7.12 The Commission considers that the quality incentive mechanism needs to include a quality measure that reflects the impact interruptions have on end consumers of electricity lines services provided by Transpower. The Commission considers that the total impact of interruptions measure, in system minutes, can meet this requirement. The Commission acknowledges that the total impact of interruptions measure, in system minutes, will be affected by the time and location of any interruptions but that time and location are also factors that drive the impact interruptions have on end consumers of electricity lines services. As stated below the Commission will assess the suitability of the total impact of interruptions definition during RCP1.

6.7.13 In deciding whether to include the total impact of interruptions in the quality incentive mechanism the Commission considered the basket of measures that could be used to reflect overall quality performance, including the extent to which the total impact of interruptions measure overlaps with other measures (discussed in subsequent sections). It also considered how the total impact of interruption historical data could be used to produce a quality measure target, cap and collar that could be included in a quality incentive mechanism. The Commission considers that:

a. there is overlap between the measures of total impact of interruptions, average outage duration and loss of supply event frequency (discussed below) as all three measures cover the impact on consumers from supply interruptions;

b. the total impact of interruptions and loss of supply event frequency measures will together provide incentives for Transpower to reduce the number and length of supply interruptions; and

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177 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers*, August 2010, pp73-74.

178 Transpower Workshop Transcript, 2 March 2010, p.43

c. because of the overlap between the three measures and the incentives provided by the total impact of interruptions and loss of supply event frequency measures the measure, of average outage duration is not required in the incentive mechanism.

6.7.14 The Commission also considered whether the total impact of interruption measure should be limited to unplanned interruptions only (as opposed to an aggregate of planned and unplanned interruptions).

6.7.15 In its submission on the Draft Reasons Paper Transpower disagreed with the inclusion of planned interruptions in the total impact of interruptions measure because:

- planned outages resulting in interruptions are generally needed because of particular characteristics of grid design, such as supply via a single circuit or a single transformer; and
- the only way of avoiding such interruptions is to invest in duplicate assets.

6.7.16 Planned outages (some of which will result in supply interruptions) are managed and controlled by existing processes, such as the outage protocol, that Transpower is required to comply with. In addition, as Transpower will be undertaking a large number of required maintenance and construction projects over RCP1, at least some of which will require planned interruptions, the Commission needs to ensure it does not create incentives that could result in that work being delayed or reduced.

6.7.17 The Commission concluded that including planned interruptions in the total interruption measure will not provide incentives for Transpower to limit the work it undertakes due to:

- the number of planned interruption system minutes being relatively small compared to unplanned interruption system minutes;[179] and
- the historic information used to set the total impact of interruption target is likely to include planned interruptions similar in size to Transpower's planned interruptions going forward, resulting in the RCP1 targets recognising the duration of the planned interruptions required.

6.7.18 The Commission also recognises that the current administrative settlement includes total impact of interruptions (aggregate of planned and unplanned) as a key quality measure and that it is important to retain consistency between quality measures used in the administrative settlement and the quality measures within the Transpower quality incentive mechanism.

6.7.19 For the reasons set out above the Commission will include the total impact of interruptions (planned and unplanned) in the Transpower quality incentive mechanism for RCP1. However, prior to RCP2 the Commission will assess the

[179] The five year average (2004/05 to 2008/09) for the impact of planned interruptions is 2.96 system minutes with a standard deviation of 0.53. The five year average (2004/05 to 2008/09) for the impact of unplanned interruptions is 18.08 system minutes with a standard deviation of 12.28.

suitability of the total impact of interruptions definition, including planned interruptions being included in the total impact of interruptions measure for RCP2.

6.7.20 Because the total impact of interruptions measure is a high level performance indicator for transmission consumers, Transpower will be required to separately report on the total impact of interruptions, impact of planned interruptions and impact of unplanned interruptions in system minutes under the information disclosure regime.

Statutory requirements

6.7.21 As discussed in paragraph 6.1.2, the setting of quality standards by the Commission is limited by the Act. The Commission notes that the Code requires Transpower to establish targets and report on the amount of unserved energy due to planned and unplanned interruptions at customer point of service.[180] Therefore, the Commission considers that including total impact of interruptions in system minutes in the incentive mechanism is giving effect to quality standards set by the Electricity Authority (as required under s 54V(6) of the Act).

Loss of supply event frequency

<u>Decision</u>

6.7.22 The Commission's decision is that loss of supply event frequency will be included in the quality incentive mechanism. This will comprise two sub-measures:

a. number of loss of supply events over 0.05 system minutes; and

b. number of loss of supply events over 1.0 system minutes.

6.7.23 This measure includes only events which result in actual loss of supply, does not include interruptions caused by a connected customer and is based on all assets operated as part of the grid. The definition of the loss of supply event frequency is contained in the individual price-quality determination.

<u>Commission's reasons</u>

6.7.24 Loss of supply event frequency measures the number of unplanned interruption events that occur which have an impact greater than a specified threshold(s). This measure is useful because it is directly related to the impact of loss of supply on customers, and is highly visible.

6.7.25 The Commission's Emerging Views Paper and its Draft Reasons Paper included loss of supply event frequency as a potential measure to be included in the quality incentive mechanism, and proposed that it comprise the number of interruptions over 0.05 and 1.0 system minutes. This approach is similar to that used in the Australian regime, and was supported by Transpower at the March 2010 Electricity Transmission workshop[181] and in its submission on the Draft Reasons Paper.[182]

[180] Electricity Industry Participation Code 2010, clause 12.127(e) & (f).

[181] Transpower Workshop Transcript, 2 March 2010, pp.35-38.

Genesis Energy supported the use of this measure in its post-workshop submission.[183]

6.7.26 The Commission considers that inclusion of these measures will provide incentives for Transpower to reduce the number of short or small impact interruptions to supply (over 0.05 system minutes) and the number of loss of supply events which cause substantial inconvenience to a large number of consumers (over 1.0 system minutes).[184]

6.7.27 As this measure includes only events which result in actual loss of supply, it does not include interruptions to generators or outages that do not result in any loss of supply. The definition of the measure, including inclusions and exclusions, is contained in the individual price-quality determination.

Statutory requirements

6.7.28 As discussed in paragraph 6.1.2, setting of quality standards by the Commission is limited by the Act. The Commission notes that the Code requires Transpower to establish targets and report on the annual number of planned and unplanned interruptions for a number of different asset categories.[185] Therefore, the Commission considers that including loss of supply frequency measures in the incentive mechanism is giving effect to quality standards set by the Electricity Authority (as required under s 54V(6)).

Unavailability

<u>Decision</u>

6.7.29 The Commission's decision is that availability[186] will be included in the quality incentive mechanism, in the form of two measures:

a. HVAC circuit unavailability (unplanned), being the percentage of HVAC circuits are unavailable, on average, due to unplanned outages; and

b. HVDC bi-pole unavailability (unplanned), being the proportion of energy that could have been transmitted, except for limitations of capacity, due to unplanned outages.

6.7.30 As a transition measure, HVDC bi-pole unavailability (unplanned) will be reported during the first regulatory period, but targets, caps and collars will not be set and the measure will be excluded from the incentive mechanism.

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[182] Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, pp.75.

[183] Genesis Energy, *Submission on Transpower Regulation Workshop*, 24 March 2010, p.5.

[184] Transpower has stated that one system minute is roughly equivalent to an interruption affecting the whole of Hamilton for 40 minutes over a winter evening peak.

[185] Electricity Industry Participation Code 2010, Clause 12.127.

[186] Availability is 1-unavailability.

6.7.31 The definition of the availability measures is contained in the individual price-quality determination.

Reasons

6.7.32 System unavailability measures the percentage of the grid that was unavailable, during the regulatory period, due to outages. Availability measures are useful because they provide a broad measure of the risk of supply interruptions. Low levels of availability are not necessarily associated with poor reliability, though lower availability would, in general, be expected to lead to more interruptions. Availability also has an effect on prices in the wholesale electricity market.

6.7.33 Availability measures were included in the list of potential quality measures in the Commission's Emerging Views Paper and its Draft Reasons Paper.

6.7.34 Availability measures are used (for regulated transmission businesses) in the Australian regime, where measures include total availability as well as disaggregated by critical/non-critical circuits, peak/off-peak hours, and transformer/ circuit/ reactive plant availability. The measures that apply to each business are tailored to the nature of the system, and disaggregation of measures has increased over time, with experience.

6.7.35 The Commission considered whether there would be value in disaggregating HVAC availability on such bases as criticality. However, it considered that aggregated measures are preferable for the first regulatory period. It notes that a large number of more disaggregated measures are reported by Transpower under the information disclosure requirements.

6.7.36 In the case of HVAC, the measure will be circuit unavailability only (as opposed to transformer and other equipment unavailability). The following sub-sections discuss these decisions.

Planned and unplanned outages in HVAC circuit unavailability

6.7.37 A primary consideration around availability measures is whether they should include both planned and unplanned outages. Limiting the measure to unplanned outages reduces the impact that planned work, and associated outages, has on the quality incentive mechanism during a regulatory period.

6.7.38 Alternatively, including both planned and unplanned outages provides a measure of the total risk to consumers of loss of supply, given a planned outage can result in a lower level of supply security.

6.7.39 In its submission on the Commission’s Draft Reasons Paper Transpower stated that it is not opposed to the unplanned unavailability measure proposed by the Commission, but notes that unplanned unavailability is an inherently unstable measure because of the considerable variability that may occur from year to year and the impact that could result from a very small number of extended events.[187]

6.7.40 The Commission's decision is that the HVAC circuit unavailability (unplanned) measure will include unplanned outages only for RCP1 and that the definition of the measure will be reviewed prior to RCP2 to determine if it is still appropriate to exclude planned interruptions.

HVDC bi-pole unavailability (unplanned)

6.7.41 The Commission considers HVDC bi-pole unavailability (unplanned) to be a key measure in the incentive mechanism, due to the criticality of the HVDC assets to the New Zealand electricity system. However, its decision is to exclude the measure from the incentive mechanism for RCP1, primarily due to difficulty in establishing relevant parameters for the measure. Unlike the other measures, historical data on HVDC bi-pole unavailability will not sufficiently reflect the operating conditions during the first regulatory period.

6.7.42 This is primarily due to the significant work on the HVDC link scheduled for the first regulatory period, including removal of Pole 1 from service, commissioning of the new Pole 3, half-life refurbishment of Pole 2, and an upgrade of the control systems to enable integrated operation of Poles 2 and 3. These events will have a significant impact on bi-pole unavailability.

6.7.43 In addition, historical data will be based on the performance of aging assets, which have radically different outage profiles to the new assets. Finally, as the HVDC link comprises a small number of assets, there will be no 'averaging' effect from variations in maintenance and faults as for HVAC.

6.7.44 The Commission considers there is little benefit to be derived from setting targets and monitoring performance against those targets given the lack of useable historic information and the level of work required on the assets.

6.7.45 The Commission expects that Transpower will report HVDC bi-pole unavailability under information disclosure. HVDC bi-pole unavailability will then be included in the quality incentive mechanism in the second and subsequent regulatory periods.

Circuit unavailability

6.7.46 The Commission's decision is that, at least for the first regulatory period, HVAC unavailability measures focus on circuit unavailability, i.e. exclude transformer unavailability. The key reasons for excluding transformer unavailability are:

- most of Transpower's fleet of supply transformers are connection assets provided under individual customer agreements. As a result, third parties can have a significant influence on performance of the assets; and

[187] Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, pp.76.

- HVAC transformer outages that affect supply are captured by the circuit availability measure.[188] It is the Commission's view that the benefit of adding a separate transformer measure is limited.

6.7.47 Transpower will be required to capture the data required for this measure over this time, to enable possible future inclusion of transformer unavailability measures in the incentive mechanism in subsequent periods.

Statutory requirements

6.7.48 As discussed in paragraph 6.1.2, setting of quality standards by the Commission is limited by the Act.

6.7.49 The Code requires Transpower to set service levels for annual unavailability of aggregate connection assets relating to the customer point of service, due to planned and unplanned outages, of any of those connection assets, that are a duration of one minute or longer.[189] Therefore, the Commission considers that including availability measures (as set out above) in the incentive mechanism is giving effect to quality standards set by the Electricity Authority (as required under s 54V(6) of the Act).

Average unplanned outage duration

<u>Decision</u>

6.7.50 The Commission's decision is that an average (unplanned) outage duration measure will not be included in the quality incentive mechanism.

6.7.51 However, the Commission recognises that it is testing the validity of the quality measures and quality targets, caps and collars during RCP1 and that average outage duration may play a role in the quality incentive mechanism in future control periods. For this reason the Commission will require that Transpower report an average outage duration measure within the information disclosure regime.

[188] The only transformer outages that are not captured in the circuit availability measure are those that do not impact on supply, as a result of redundancy.

[189] Electricity Industry Participation Code 2010, clause 12.127.

<u>Reasons</u>

6.7.52 The Commission considers that there is overlap between the measures of average unplanned outage duration, total impact of interruptions, and loss of supply event frequency. The Commission also considers that the total impact of interruptions and loss of supply event frequency measures will together provide appropriate targeted incentives for Transpower to reduce the number and length of supply interruptions.

6.7.53 Transpower stated in its submission on the Draft Reasons Paper that it agrees that an average (unplanned) outage duration measure should not be included in the quality incentive mechanism at this time but that the measure may play a role in future control periods.[190]

Statutory requirements

6.7.54 As discussed in paragraph 6.1.2, setting of quality standards by the Commission is limited by the Act. The Code does not currently require Transpower to record and report average unplanned outage duration directly.

6.8 Setting Targets for First Year of RCP1

Decisions

6.8.1 The Commission's decisions on quality measure targets, caps, collars and weighting for the Transition Year (2011/12) of RCP1 are set out in Table 6.1 below.

Table 6.1 Quality measures to apply

Parameter	Loss of Supply Event Frequency		Availability		Total Impact of Interruptions
	Number of loss of supply events >0.05 system minutes	Number of loss of supply events >1.0 system minute	HVAC circuit unavailability (unplanned)	HVDC bi-pole unavailability (unplanned)	Total system minutes
Target	21	3	0.056	Not in RCP1	16.69
Cap	10	1	0.029	Not in RCP1	4.31
Collar	31	5	0.083	Not in RCP1	29.07
Weighting	25%	25%	25%	Not in RCP1	25%

190 Transpower, Part 1 – *Submission to the Commerce Commission on Input Methodologies Transpower (excluding Chapter 6 – Cost of Capital) and Individual Price-Quality Path Transpower Draft Reasons Papers,* August 2010, pp.76-77.

Reasons

6.8.2 The targets, caps and collars for the first year of RCP1 (2011/12) have been determined using the approach set out in this Chapter, including the following:

a. targets, caps and collars for loss of supply event frequency and availability, based on historical performance data for the period 2004/05 to 2008/09 (previous five years);

b. caps and collars for the loss of supply event frequency and availability quality measures are set at two standard deviations either side of the target;

c. targets, caps and collars for total impact of interruptions have been based on historical performance data for the period 2002/03 to 2008/09 (previous seven years) because the five year data set is somewhat skewed by the large event at Otahuhu in 2005/06 ((29.8 system minutes), which resulted in annual total interruptions for the 2005/06 year of 40.81 system minutes;

d. the target for the total impact of interruptions is set at the average performance over the seven year period as the Commission considers this longer period provides a better indication of operating conditions that the grid will operate under during the first year of RCP1;

e. the cap and collar for total impact of interruptions are set at one standard deviation either side of the target as two standard deviations does not provide a meaningful range for this quality measure including resulting in the collar value being below zero system minutes;

f. weightings for the first year of RCP1 have been set evenly across the quality measures as all measures are related to supply interruptions; and

g. targets, caps and collars have not been set for HVDC bi-pole availability.

6.8.3 The target for the total impact of interruptions in the administrative settlement was 8.3 system minutes, which is the five year average total impact of interruptions from 1998/99 to 2002/03. As set out above the total impact of interruptions for the first year of RCP1 is 16.69 system minutes, which is the seven year average from 2002/03 to 2008/09.

6.8.4 While the total impact of interruptions target is a material increase from the settlement agreement the Commission considers that the target reflects the circumstances that the grid will operate under during the first year of RCP1. The Commission also considers that the purpose of the targets, caps and collars set for the RCP1 is to test the operation of the quality incentive mechanism including the interactions between the quality measures.

6.8.5 The targets, caps and collars for the Remainder Period of RCP1 (2012/13 to 2014/15) will be set by the Commission prior to the start of Transpower's 2012/13 pricing year.

6.9 Compliance Framework – Quality Standards

Decision

6.9.1 Transpower is required to disclose information to the Commission regarding the quality of the electricity transmission services it supplies. The quality standards, that Transpower must comply with, for the Transition Year and Remainder Period, are that Transpower must provide to the Commission:

a. actual performance for each of the quality measures;

b. reasons for any failure to meet the quality targets;

c. for all interruptions over 1.0 system minute, a report that sets out:

   i. the reason or reasons for the interruption;

   ii. Transpower's response to the interruption;

   iii. any change to Transpower's policies as a result of the interruption; and

   iv. the impact of the interruption in system minutes;

d. for all interruptions over 1.0 system minute, within five working days of supply being restored, a report that includes:

   i. to the extent that Transpower has been able to determine using reasonable endeavours, the reason or reasons for the interruption; and

   ii. Transpower's initial response to the interruption; and

   iii. an estimate of the impact of the interruption in system minutes; and

e. the impact that Transpower's actual performance would have had on Transpower's forecast MAR under the quality incentive mechanism, had that quality incentive mechanism applied to Transpower's forecast MAR in the pricing years in RCP1.