

Annual Regulatory Report

for the year from July 2011 to June 2012

Incorporating Transpower's 2011/12
*Annual Compliance Monitoring
Statement* and information required
under a s53ZD notice issued to
Transpower by the Commerce
Commission on 23 February 2012

Keeping the energy flowing



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Executive summary

Transpower’s regulated transmission activities are governed by a regulatory framework set by the Commerce Commission (“the Commission”). This is our first Annual Regulatory Report under this framework.

We have previously forecast our maximum allowable revenue (“MAR”) for each year from 2011/12 to 2014/15 in accordance with the regulatory framework. Each year, we use the best available forecast to set prices for the coming year, and there is a ‘wash-up’ mechanism that we use to ensure our charges do not over- or under-recover permitted revenues.

This report contains the wash-up calculations relating to 2011/12, which are used to update our forecast revenue for 2013/14. We also update our forecast revenue for 2014/15 to reflect any new information we have. We do not update our revenues for 2012/13, because we have already set prices for that year.

The table below presents a summary of the movement in our revenue forecasts for 2013/14 and 2014/15, and refers to tables in the report that contain more detailed information. In summary, we have:

- reduced our forecast for 2013/14 by \$52.5 million (comprising a \$61.9 million reduction in our HVAC forecast and a \$9.4 million increase in our HVDC forecast), and
- reduced our forecast for 2014/15 by \$4.2 million (comprising a \$4.5 million reduction in our HVAC forecast and a \$0.3 million increase in our HVDC forecast).

Table 1: Summary of movements in forecast revenue

	Ref to table in report	2013/14			2014/15		
		Total \$m	HVAC \$m	HVDC \$m	Total \$m	HVAC \$m	HVDC \$m
Updated MAR forecast	25	874.3	713.7	160.5	959.7	804.5	155.2
Pass-through and recoverable costs (including 2011/12 wash-up)	25	4.0	2.0	1.9	15.2	12.5	2.8
Updated forecast revenue	25	878.3	715.8	162.5	974.9	816.9	158.0
Previously forecast revenue (October 2011)		930.8	777.7	153.1	979.1	821.4	157.7
Movement		(52.5)	(61.9)	9.4	(4.2)	(4.5)	0.3

The table below provides more detail on the components contributing to the movement in our forecast revenue for 2013/14 and 2014/15.

Table 2: Details of forecast revenue updates

	<i>Ref to table in report</i>	2011/12 \$m	2012/13 \$m	2013/14 \$m	2014/15 \$m
2011/12 MAR Forecast		644.0			
HVDC Rebate		(32.4)			
2011/12 Effective MAR Forecast	9	611.6			
Previous MAR forecasts (October 2011)	25		783.8	906.4	958.9
Actual MAR 2011/12	11	633.0			
Actual Revenue 2011/12	11	622.5			
2011/12 MAR Wash-up	11	10.6			
Intended wash-up from previous years	11	(25.9)			
Net 2011/12 MAR wash-up	11 & 25	(15.3)		(15.3)	
'Excess amount' adjustment	25			(5.0)	
Interest and tax adjustments	25			(12.1)	
Additional major projects	25			0.3	0.8
Updated MAR forecasts (October 2012)	25			874.3	959.7
2011/12 pass through and recoverable cost wash-up plus interest	25			(12.3)	
Forecast pass-through and recoverable costs	25		23.1	16.2	15.2
Updated revenue forecasts	25			878.3	974.9
Previous revenue forecasts	25		806.9	930.8	979.1

We completed six major projects during the 2011/12 year:

- Otahuhu substation diversity
- Upper South Island reactive support
- West Coast grid upgrade
- Second 110/66kV transformer at Dobson
- Maungatapere bus security
- Redclyffe bus security.

The cost of the Otahuhu substation project exceeded the regulatory allowance for the project. We have made an off-setting 'excess amount' adjustment of \$5 million to revenues for 2013/14. We have also applied to the Commission for an amended allowance and will reverse the excess amount adjustment in 2014/15 (in full or in part) if this application is

successful. All other projects were completed within their regulatory allowances and are delivering the approved outputs.

Our quality performance for 2011/12 met targets set by the Commission for all metrics other than HVAC circuit unavailability. The following table summarises our quality performance.

Table 3: Summary of quality performance.

Quality measures	Target	Actual	Target achieved?
Number of loss of supply events greater than 0.05 system minutes	21	19	Y
Number of loss of supply events greater than 1 system minute	3	2	Y
Unplanned HVAC circuit unavailability (%)	0.056	0.064	N
Unplanned HVDC bi-pole unavailability ¹ (%)	(no target set)	0.109	n/a
Total impact of interruptions (measured in system minutes)	16.69	14.45	Y

The two events involving a loss of supply of more than one system minute were:

- a series of outages caused by severe weather in the lower North Island on 15 August (1.26 system minutes)
- outages across the North Island on 13 December as a result of a sudden loss of supply from the Huntly power station (6.9 system minutes).

¹ Since 2007, half of Pole 1 has been decommissioned, and the other half has only been available under emergency conditions. As such, Pole 1 has been excluded from our calculations.

1 Introduction

This report covers Transpower's regulated transmission activities for the disclosure year 2011/12. It describes our financial and quality performance, and provides updated forecasts of our regulated revenues for 2013/14 and 2014/15 (we have already set prices for 2012/13).

Our regulated transmission activities are governed by a regulatory framework designed by the Commerce Commission ("the Commission") and called the Individual Price-Quality Path (IPP). The IPP:

- governs our expenditure allowances and allowable revenues
- provides for recovery of certain costs outside of our control
- governs approval, timing, outputs and cost recovery for major capital projects
- sets and monitors quality targets for our transmission services.

In this way, the IPP framework aims to ensure we operate efficiently, provide a suitable quality of service, and set prices that ensure an appropriate economic return. The IPP framework is unique to Transpower, and reflects the particular natural monopoly characteristics of our transmission network business.

The IPP is applied by regulatory control periods (RCPs). RCP1 is a four-year RCP from 2011/12 to 2014/15. This report covers all of the above aspects of the IPP for RCP1.

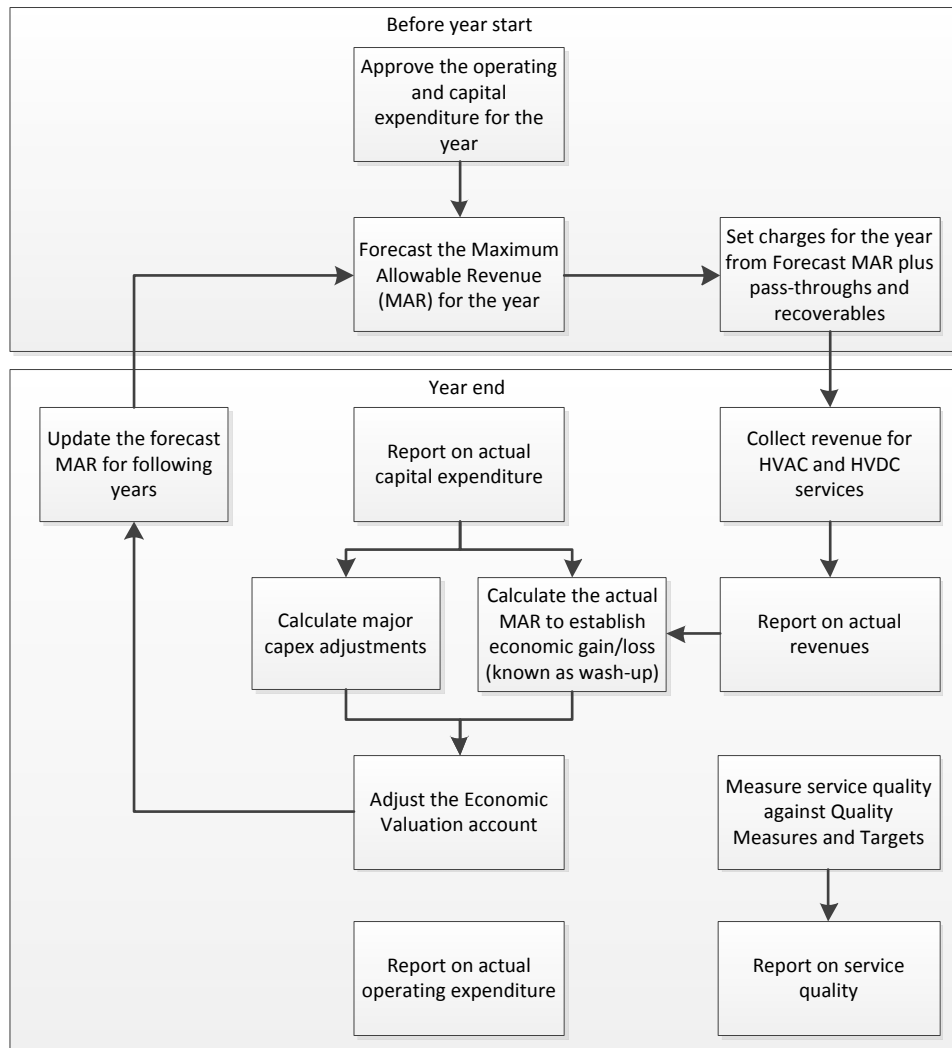
This is our first report under the IPP framework, so we would particularly welcome any feedback you have on how we can improve our reporting in future years.

1.1 The IPP framework

To assist the reader to navigate and understand the contents of this report, this section provides an overview of the IPP framework.

The figure below provides a process view of the IPP framework. We then explain each step in more detail. The report is structured to align with this process view of the framework.

Figure 1: Process diagram for operation of the IPP framework



The figure below explains each step of the IPP process, as it applies this year.

Figure 2: Overview of the IPP framework and the structure of this report

Step	Description	Reference
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Approve the operating and capital expenditure for the year </div> <div style="border: 1px solid black; padding: 5px;"> Forecast the Maximum Allowable Revenue (MAR) for the year </div>	<p>Before the start of RCP1, the Commerce Commission approved annual allowances for operating expenses and capital expenses for each year of the RCP.</p> <p>The Commerce Commission used the allowances, and a range of other information, to determine initial forecasts of the maximum allowable revenue (MAR) figures for each year of RCP1.</p>	<p>Not part of this report.</p>

Step	Description	Reference
Set charges for the year from Forecast MAR plus pass-throughs and recoverables	In November 2010, we set our charges for the 2011/12 pricing year. This took into account the applicable forecast MAR, plus estimated pass-through and recoverable costs.	Not part of this report.
Report on actual capital expenditure	During the year, we incurred actual capital expenditures that do not exactly match the forecast used to set revenue.	Capital expenditures are covered in Section 2.
<p data-bbox="245 719 459 824">Collect revenue for HVAC and HVDC services</p> <p data-bbox="245 857 459 963">Calculate the actual MAR to establish economic gain/loss (known as wash-up)</p> <p data-bbox="245 1144 459 1249">Calculate major capex adjustments</p>	<p data-bbox="499 712 1114 779">We collected revenues for our HVAC and HVDC transmission services during 2011/12.</p> <p data-bbox="499 869 1114 974">In this report, we have re-calculated the 2011/12 MAR using the actual timing and values of assets commissioned during the year.</p> <p data-bbox="499 1019 1114 1124">Comparing this 'actual MAR' with actual revenues provides a 'wash-up' amount representing over- or under-recovery for the year.</p> <p data-bbox="499 1169 1114 1236">In some cases, we must also make adjustments relating to the delivery of major projects.</p>	<p data-bbox="1141 1019 1348 1153">MAR wash-up calculations are covered in Section 3.</p> <p data-bbox="1141 1176 1348 1281">Major projects are covered in Section 4.</p>
Update the forecast MAR for following years	<p data-bbox="499 1339 1114 1512">We have updated our forecast MAR and forecast revenue for the coming year (2013/14) using wash-up amounts, major project adjustments, and updated estimates of pass-through and recoverable costs.</p> <p data-bbox="499 1556 1114 1729">We have also updated our forecast revenue for the final year of RCP1 (2014/15) to reflect any new major projects approved by the Commission, plus our latest estimates of pass-through and recoverable costs.</p>	<p data-bbox="1141 1339 1348 1512">Pass-through and recoverable costs are covered in Section 5.</p> <p data-bbox="1141 1556 1348 1729">Updated revenue forecast figures are covered in Section 6.</p>

Step	Description	Reference
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> Measure service quality against Quality Measures and Targets </div> <div style="text-align: center;">↓</div> <div style="border: 1px solid black; padding: 5px;"> Report on service quality </div>	<p>During the year, we measure service quality against a set of reliability metrics and targets.</p> <p>In RCP2, quality performance will be used to adjust our revenues. In RCP1, we report on what the revenue impact would be if this adjustment were in place now.</p>	<p>Quality performance is covered in Section 7.</p>
<div style="border: 1px solid black; padding: 5px;"> Report on actual operating expenditure </div>	<p>During the year, we incurred operating expenditure that differs from our opex allowance. There is no wash-up for this expenditure.</p>	<p>Operating expenditure is covered in Section 8.</p>

We will use the updated forecast revenue for 2013/14 to set HVAC and HVDC prices² for the pricing year starting April 2013³. The process of translating the forecast revenues into transmission prices is governed by a methodology that is approved by the Electricity Authority.

The pricing methodology allocates charges to distributors, generators and major users. We will publish our prices for the 2013 year in early December 2012 to allow our electricity distribution customers to update the prices that they set for their electricity retailer customers.

This report includes a number of historical and forecast figures, which are presented in nominal terms.

² 'HVDC' refers to our High-Voltage Direct Current link between Benmore in the South Island and Haywards (near Wellington) in the North Island. Our South Island generation customers fund this link. 'HVAC' refers to our High-Voltage Alternating Current networks in the North and South islands that make up the balance of our assets. All of our customers fund these networks.

³ This report discusses 'pricing years' and 'disclosure years'. Pricing years start on 1 April, and disclosure years start on 1 July. More detail is provided in Appendix A.1.9.

2 Capital expenditure

This section covers 'base' capital expenditure (capex)⁴. For 2011/12, base capex includes:

- all asset replacement expenditure
- all asset refurbishment expenditure
- enhancement projects costing less than \$1.5 million
- enhancement programmes costing less than \$5 million
- non-grid capital expenditure.

The Commission has approved an overall base capex allowance for RCP1, based on its assessment of our forecasts for each year of RCP1. The allowances relate to the value of the assets we commission, rather than to the amount we spend. This is a change from the way allowances previously operated.

Commissioned assets are added to our regulatory asset base (RAB) and we earn a return *on* capital (the assets in our RAB), plus a return *of* capital (via depreciation of the assets in our RAB).

The difference between forecast and actual base capex for 2011/12 forms the main part of the MAR wash up calculations described in Section 3.

If our commissioned base capex at the end of RCP1 exceeds our allowance then we may apply to the Commission for an increase in our allowance, subject to suitable justification.

The remainder of this section:

- discusses the use of commissioning-based accounting
- compares actual commissioned values for 2011/12 with forecast values
- explains material variances between forecast and actual figures
- reports on base capex adjustments.

2.1 Commissioning-based accounting

Like any business, we plan, monitor and control expenditure on a spend basis. However, the IPP framework operates on a commissioning basis for capex.

Commissioning almost always lags expenditure – due to the fact that suppliers are paid during the construction of assets (i.e., before commissioning occurs).

Challenges in transitioning to commissioning-based accounting include:

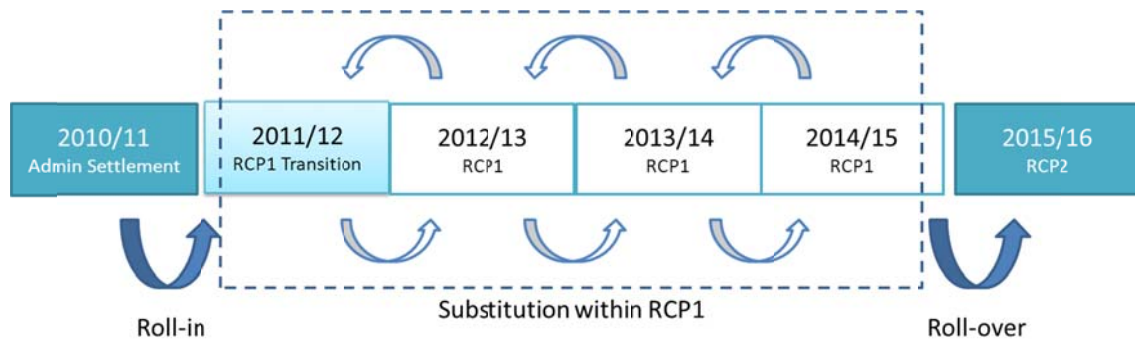
- forecasting and reporting detailed information on commissioning timing and values has traditionally been less of a focus than forecasting and reporting spend
- the commissioning date for a project finishing close to year-end can move to the next financial year due to the timing of administrative processes (as opposed to actual project delays)

⁴ This is sometimes referred to as 'minor' capex.

- commissioning dates for grid assets are affected by the need to optimise grid outages
- commissioning dates can also be shifted to optimise the coordination of work at a site
- initiatives to reduce expenditure in one year are not fully reflected in reduced commissioning values until future years.

We have full flexibility to substitute base capex between years of RCP1. However, the shift to a commissioning basis means that some base capex expenditure from prior to RCP1 is captured within RCP1 commissioning figures. This is illustrated below.

Figure 3: Movement of commissioning dates within and between control periods



2.2 Comparison of actual with forecast base capex

We are required to compare forecast and actual base capex at a ‘category’ level, and to explain any material variances.

Actual and forecast values are set out below. In the context of our forecast MAR for 2011/12 of \$644 million, we have interpreted ‘material variance’ to be a variance that is both greater than \$10 million⁵, and more than 10% of the category forecast.

Table 4: Forecast and actual base capital expenditure

Category	Allowance ⁶ \$m	Forecast ⁷ \$m	Actual \$m	Variance \$m	Variance %	Material ?
Enhancement	-	5.5	4.9	(0.6)	(11%)	N
Refurbishment	-	47.8	26.5	(21.3)	(45%)	Y
Replacement	-	125.9	142.4	16.5	13%	Y
TOTAL GRID CAPEX	-	179.2	173.8	(5.4)	(3%)	N

⁵ A capital expenditure variance of \$10 million in 2011/12 would typically (depending on the depreciation rate for the asset) have a revenue impact of less than \$6 million over the remainder of RCP1. This is less than 1% of our 2011/12 forecast MAR.

⁶ The allowance set an overall allowance, rather than an allowance broken down by category.

⁷ Forecasts are based on our business plan.

Category	Allowance ⁶ \$m	Forecast ⁷ \$m	Actual \$m	Variance \$m	Variance %	Material ?
Information Services and Technology (IST)	-	31.1	46.2	15.1	49%	Y
Business Support	-	1.5	1.7	0.2	13%	N
TOTAL	208.6	211.8	221.7	9.9	5%	N

Note: Figures may not add exactly due to rounding.

The following table sets out the more material identifiable variances across the range of grid capex.

Table 5: Material variances for individual base capex projects

	Variance \$m	Explanation
Refurbishment	(21.3)	Prioritisation of spend, particularly in grillage refurbishment programme (\$8m reduction), and resource constraints in tower painting has reduced capitalised value (\$10m reduction) and delayed capitalisation (\$10m reduction). This is partially offset by the rollover of projects planned to be commissioned in 2010/11 falling into 2011/12 (\$10m increase) and the earlier capitalisation of the Haywards synchronous condensers (\$9m increase).
Replacement	16.5	<ul style="list-style-type: none"> • Delays in commissioning across a number of projects from 2010/11 into 2011/12 (\$20m increase). • The costs for re-conductoring the Oteranga Bay Haywards DC line increased due to higher rewiring costs and the need for an additional bypass line section (\$16m increase). • Revenue meters have been installed at a faster rate than originally anticipated and have been capitalised on a site by site basis resulting in capitalisation occurring earlier than forecast (\$8m increase). • A number of indoor to outdoor conversions are delayed into later periods of RCP1 (\$19m reduction). Projects delayed are: <ul style="list-style-type: none"> – Penrose 33kV, due to substantial work already on at Penrose site (\$8m) – Hamilton 33kV, due to time required to cut-over supply banks and feeders being longer than planned (\$5m) – Redclyffe 33kV, delayed to align with supply bank replacement project (\$3.6m) – Takapu Rd 33kV, delayed to better spread programme

	Variance \$m	Explanation
		<p>spend over RCP1</p> <ul style="list-style-type: none"> A number of Transformer replacement were delayed (\$12m reduction) for the following reasons , including: <ul style="list-style-type: none"> Te Kaha substation, due to resource constraints (+\$6m)
Information Services and Technology (IST)	15.1	Re-phasing of some work related to the Telecommunication and Network Programme from 2010/11 into 2011/12 (\$6m increase), and other IST projects planned to be commissioned in 2010/11 moving into 2011/12.

Routine grid refurbishment and replacement

More generally, we have started to adopt an enhanced prioritisation approach that is reducing capex compared to previous expectations. This doesn't directly translate into a reduction in commissioned value in 2011/12, but should translate into a reduction in commissioned capex over the remainder of RCP1.

2.3 Base capex adjustments

There are a number of revenue and allowance adjustments relating to base capex that can apply through RCP1 or at the end of the period. The following table summarises these adjustments.

Table 6: Adjustments that can apply to base capex

	Description	When it applies
Unapproved amount	Revenue is adjusted to remove the benefit of any base capex that has not been through our internal approval processes.	Each year
Conversion	Expenditure that was included in the base capex allowance may instead be covered by a new major project. The base capex allowance is reduced accordingly. Similarly, the cost of a project or programme included in the base capex allowance may increase such that it exceeds the expenditure thresholds and must be removed from the base capex allowance.	Each year
CPI	The base capex allowance is adjusted to account for any disparity between forecast and actual consumer price index (CPI) rates.	Each year, from 2012/13
Excess amount	Revenue is adjusted to remove the revenue benefit of any base capex that exceeds the overall allowance for RCP1.	End of RCP1
Allowance increase	We may apply for an increase to approved base capex allowances.	End of RCP1

All base capex for 2011/12 has been through internal processes, so no 'unapproved amount' adjustment to revenue is required this year.

No base capex has converted to major project expenditure in 2011/12, so no 'conversion' adjustment to base capex allowances is required this year.

CPI adjustments to base capex allowances do not apply for 2011/12.

2.4 Historical base capex

For comparison, the following table sets out historical base capex from 2007/08 to 2010/11. The figures in the table are on a spend basis.

Table 7: Historical base capex

Category	2007/08 \$m	2008/09 \$m	2009/10 \$m	2010/11 \$m
Enhancement	8.4	12.7	22.1	7.1
Refurbishment	10.9	23.0	37.0	38.9
Replacement	28.8	34.4	77.4 ⁸	113.2
IST ⁹	33.0	38.9	66.5	62.5
Business support ¹⁰	-	-	-	-
Total	81.2	109.1	203.0	221.7

Note: figures are in nominal dollar terms and may not add exactly due to rounding.

2.5 Forecast capital expenditure

The table below provides updated aggregate forecasts of base capex, and major project expenditure for the remainder of RCP1. Figures are on a commissioning basis.

⁸ This includes expenditure of \$16.5 million approved by the Commerce Commission subsequent to publication of the 2009/10 threshold compliance statement

⁹ Prior to RCP1, this category included 'operating leases' that are now treated as operating expenditure.

¹⁰ We did not report against the 'business support' category prior to RCP1, and accordingly we have not reported these figures here.

Table 8: Forecast base and major capex

	2012/13 \$m	2013/14 \$m	2014/15 \$m
Base capex	334.2	297.3	176.4
Major projects	1,327.8	375.6	84.3
Total	1,662.0	672.9	260.7

Note: figures are in nominal dollar terms and may not add exactly due to rounding.

Forecast total base capex for RCP1 in Transpower's 2012/13 business plan (i.e., as at 30 June 2012) was \$1,029.6 million, compared to an allowance of \$1033.6 million.

Our capital expenditure plans are kept under continuous review. We are in the process of applying newly developed asset health and criticality measures to optimise our base capex for the remainder of RCP1. We are also reviewing projected major capital projects. This is occurring under the oversight of a 'Capital Governance Team' formed in 2011, which brings together senior executives with a cross-portfolio focus on capital expenditure planning and delivery. Our current expectation is that we are likely to commission up to 10% less base capex over the remainder of RCP1 than forecast in the 2010/11 business plan.

3 MAR wash-up

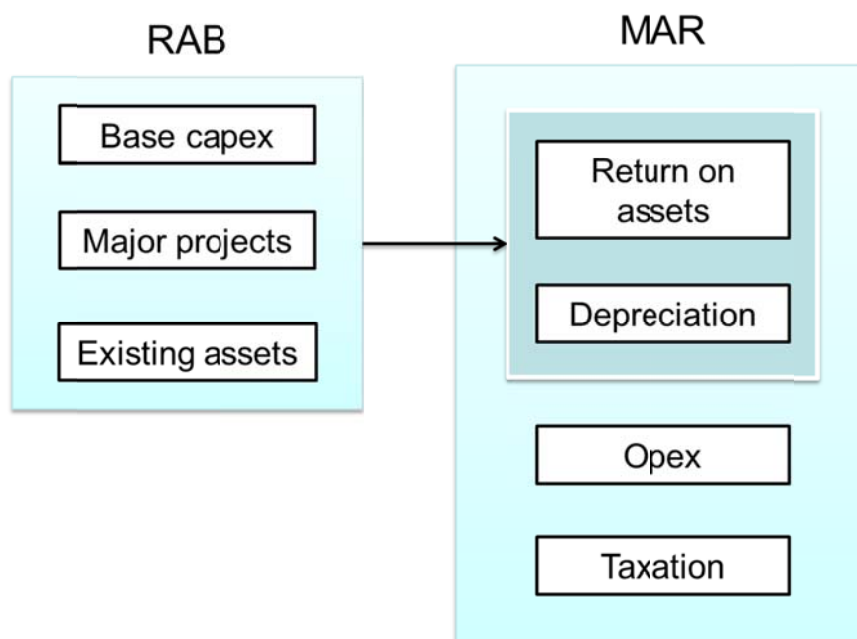
This section covers the revenue ‘wash-up’ calculation used to update prices for the pricing year starting April 2013.

The wash-up compares the revenues we earned in 2011/12 with an *ex post* assessment of the revenue permitted under the IPP framework. Any under- or over-recovery from 2011/12 is returned or recovered from customers via an update to our 2013/14 revenues and prices.

3.1 Forecast MAR for 2011/12

We calculated prices for our 2011/12 pricing year (starting 1 April 2011) based on forecasts of the MAR ‘building blocks’ for the year¹¹. The main building blocks are illustrated below.

Figure 4: Simplified representation of main MAR building blocks



The forecast MAR for 2011/12 was determined by the Commission in October 2010 to be \$644 million. Included in that forecast was a reduction of \$25.9 million relating to the return to customers of wash-ups from earlier years.

At the time we set our prices for the 2011/12 pricing year in November 2010, we forecast the commissioning of a major project, Pole 3 of the HVDC link, would be completed in the 2011/12. However, prior to the start of the pricing year it became apparent that the commissioning would be delayed to 2012/13. As such, we elected

¹¹ Prices are set based on a forecast total revenue number that includes the forecast MAR, plus estimates of pass-through and recoverable costs. Pass-through and recoverable costs are covered in Section 5 of this report. Updated forecast total revenues for 2013/14 and 2014/15 are included in Section 6 of this report.

to rebate \$32.4 million to our HVDC customers during the year. This rebate reduced prices to a 'pre-Pole 3' level.

Table 9: Forecast 2011/12 MAR

Description	TOTAL \$m	HVAC \$m	HVDC \$m
Approved forecast MAR	644	545	99
HVDC rebate	(32.4)	-	(32.4)
Effective forecast MAR	611.6	545	66.6

3.2 Actual MAR for 2011/12

We have now recalculated our MAR for 2011/12 to reflect the assets that we actually commissioned during 2011/12. This MAR calculation involves the first full application of the regulatory accounting rules under the IPP framework.

Table 10: Actual 2011/12 MAR

Description	TOTAL \$m	HVAC \$m	HVDC \$m
Actual MAR	633.0	570.7	62.3

3.3 MAR wash-up

The table below calculates our 2011/12 MAR wash-up by comparing our HVAC and HVDC revenues received in the pricing year with our actual MAR.

Table 11: Summary calculation of the MAR wash-up

	TOTAL \$m	HVAC \$m	HVDC \$m	Description
Opening RAB	2,606.7	2,411.2	195.5	Initial RAB determined as of 30 June 2011 in accordance with the Commerce Act (Transpower Thresholds) Notice 2008 and clause 2.2.2 of the IM Determination.
Commissioned assets	153.5	128.8	24.7	The value of assets that are weighted to take into account the date they are commissioned (e.g., an asset commissioned in month eight is included at one-third of its value).
RAB	2,760.2	2,540.0	220.2	Opening RAB plus the commissioned assets in the disclosure year.

	TOTAL \$m	HVAC \$m	HVDC \$m	Description
WACC	8.05%	8.05%	8.05%	75 th percentile estimate of Vanilla WACC applicable during RCP1 as determined by the Commission on 3 March 2011. ¹²
Capital charge	222.2	204.5	17.7	RAB x WACC
Operating expenditure	248.5	230.7	17.8	Commission's approved operating expenditure allowance of \$248.5 million specified in clause 5.2(7)(b)(i) of the IPP Determination.
Term credit spread differential	0.6	0.6	0.0	Estimated in accordance with clause 3.5.10 in Subpart 5 of Part 3 of the IM Determination.
Depreciation	140.4	120.7	19.7	Calculated in accordance with clause 3.3.1 in Subpart 3 of Part 3 of the IM Determination.
Tax	21.3	14.2	7.1	The regulatory tax allowance calculated in accordance with clause 3.4.1 in Subpart 4 of Part 3 of the IM Determination.
Actual MAR	633.0	570.7	62.3	Sum of capital charge, operating expenditure, term credit spread differential, depreciation and tax.
Operating revenue	622.5	555.9	66.5	Sum of the HVAC revenue and HVDC revenue, excluding pass-through and recoverable costs.
Ex-post economic gain or loss (gross wash-up)	(10.6)	(14.7)	4.1	The difference between the ex-post MAR and operating revenue for the disclosure year.
Intended wash-up from earlier years	25.9	36.3	(10.3)	Intended return to (from) customers relating to wash-ups from earlier years.
Net wash-up	15.3	21.5	(6.2)	

Note: Figures may not add exactly due to rounding.

In summary, excluding consideration of wash-ups from earlier years, we recovered \$10.6 million less than permitted in 2011/12. However, we had intended to under-recover \$25.9 million (due to wash-ups). As such, the net wash-up for 2011/12 is a \$15.3 over-recovery, comprising a \$21.5 million over-recovery from HVAC customers and a \$6.2 million under-recovery from HVDC customers. More detail on these calculations is in Appendix A.3.

¹² Commerce Commission, *Determination of the Cost of Capital for Services Regulated under Part 4 of the Commerce Act 1986*, Pursuant to Decisions 709, 710, 711, 712 and 713. Decision Number 718, 3 March 2011.

This analysis does not include the effect of over- or under-recovery of pass-through and recoverable costs. These are covered in Section 5. Further adjustments are also made to produce our updated total revenue figure for 2013/14. These are covered in Sections 4 (major project adjustments) and 6 (forecast revenue updates).

3.4 Historical and forecast MAR

For comparison, the following table sets out HVAC and HVDC revenues from 2007/08 to 2011/12, and updated forecast MAR figures for 2012/13 to 2014/15. All figures exclude pass-through and recoverable costs.

Table 12: Historical and forecast HVAC and HVDC revenues

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
HVAC	446.9	495.1	537.3	534.3	555.9	664.7	713.7	804.5
HVDC	92.9	82.9	81.6	84.8	66.5	119.1	160.5	155.2
Total	539.8	578.0	618.9	619.1	622.5	783.8	874.2	959.7

Note: figures are in nominal dollar terms and may not add exactly due to rounding.

3.5 Other disclosures

We are also required to disclose any material changes to our MAR calculation model, and any material changes in our policy of hedging capital expenditure. There have not been any such changes for 2011/12.

We are required to make adjustments under certain circumstances for costs associated with hedging arrangements. There are no such adjustments for 2011/12.

We can make adjustments to recognise the cost of an asset that has become 'stranded' in 2011/12. There are no such adjustments for 2011/12.

4 Major projects

Grid enhancement projects costing more than \$1.5 million (and grid enhancement programmes costing more than \$5 million) are approved by the Commission individually, based on an assessment of the market benefit of the project compared to other viable alternatives¹³. Each 'major project' has an approved allowance, timeframe and 'outputs'.

New rules for major project approvals were introduced on 31 January 2012. Before this, major projects were approved under a regulatory framework developed by the Electricity Commission.

This section covers:

- progress reports on major projects partially commissioned during 2011/12
- close-out reports on major projects completed during 2011/12, including any resulting revenue adjustments
- major projects newly approved by the Commission
- other variations and adjustments.

4.1 Progress reports

Several major projects were under construction on 30 June 2012, but had some assets commissioned during 2011/12. The following table compares forecast and actual commissioned values for these projects, and identifies material variances. As with base capex, we have interpreted 'material variance' as being both more than \$10 million, and greater than 10% of the forecast value.

Table 13: Major projects partially commissioned in 2011/12

	Title	Forecast \$m	Actual \$m	Variance \$m	Variance (%)	Material ?
HVDC	HVDC Grid Upgrade	442.1	16.1	(426.0)	(96.3%)	Y
NIGUP	North Island Grid Upgrade	0.1	50.9	50.8	50,800%	Y
NAAN	North Auckland and Northland Grid Upgrade	25.3	-	(25.3)	(100%)	Y
IGE – 1	HVDC 'interim grid expenditure'	8.4	-	(8.4)	(100%)	N
GUP200 8 Part III	Wairakei Ring	-	3.6	3.6	-	N
GUP200 9 Part IV	Bay of Plenty interconnection capacity upgrade	-	1.6	1.6	-	N

¹³ These are the relevant threshold figures for projects approved 2010/11. The thresholds will increase in future years.

	Title	Forecast \$m	Actual \$m	Variance \$m	Variance (%)	Material ?
GUP200 9 Part III	Wanganui-Stratford transmission investment proposal	8.1	7.7	(0.5)	6%	N
GUP200 8 Part VII	Bombay bus security	3.7	3.2	(0.5)	14%	N
GUP200 9 Part VII	Lower North South Island reliability transmission investment proposal	-	0.1	0.1	-	N

Note: Figures may not add exactly due to rounding.

Three major projects had material variances between forecast and actual commissioned values for 2011/12. Explanations are provided below.

HVDC Grid Upgrade

The forecast MAR calculations assumed that the new Pole 3 of the inter-island HVDC link would be commissioned in 2011/12. The project is now expected to be commissioned in 2012/13 due to delays in the supply of control systems.

North Island Grid Upgrade (NIGU)

We have progressively commissioned assets that make up part of the NIGU project as they have begun to be used to provide electricity transmission services. This differs from the accounting treatment assumed in constructing the forecast MAR. The effect of this treatment is to bring forward recovery of revenue relating to these assets, while reducing the accumulation of capitalised interest.

North Auckland and Northland Upgrade (NAaN)

As part of the North Auckland and Northland project, we are making lease payments to Vector for access to a tunnel that will carry a high-voltage cable through parts of Auckland.

The tunnel lease of \$50 million was recognised in June 2011. The forecast MAR assumed the lease would be recognised in two parts, reflecting underlying cash flows.

4.2 Close-out reports

Six major projects were commissioned in 2011/12. All of these were approved under rules that were developed by the Electricity Commission, which have since been superseded.

When a project is commissioned, several revenue or allowance adjustments may occur. The following table summarises these potential adjustments.

Table 14: Summary of possible adjustments to major projects

Adjustment	Description
CPI and FX	The approved allowance may be updated to account for differences between CPI and foreign exchange rates anticipated when the project was approved, and the rates that actually occurred during the project.
Excess amount	If the actual cost of a project exceeds the relevant approved allowance, then a revenue adjustment is made to remove the value of the 'excess amount'.
Output	If a project does not deliver the relevant approved outputs, then a revenue adjustment may be made to remove one-third of the value of the project.

In addition to these adjustments, we may apply to the Commission for:

- approval of an amended allowance, and
- agreement to vary agreed project outputs.

At the end of RCP1, we may also apply to the Commission to retain a portion of the value of any cost efficiencies achieved for major projects completed during the period.

Close-out adjustments

The only major project from 2011/12 to produce an adjustment is the Otahuhu substation diversity project. The actual cost of the project as at 30 June 2011 was \$104.8 million, which exceeds the currently approved amount of \$99 million¹⁴. We have applied to the Commission for an adjustment to the approved amount. However, the Commission is unlikely to reach a decision in time to allow an adjusted approved amount to be used for the purposes of calculating revenues for 2013/14. As such, we have made an excess amount adjustment to 2013/14 revenues of \$5 million to prevent over-recovery relative to the approved allowance. This will be reversed (in part or in full) in 2014/15 if the Commission amends the approved amount.

The following tables provide a close out report for each major project completed in 2011/12:

- Otahuhu substation diversity
- Upper South Island reactive support
- West Coast grid upgrade
- Second 110/66kV transformer at Dobson
- Maungatapere bus security
- Redclyffe bus security.

¹⁴ The cost as at 30 June 2012 excludes an easement that has subsequently been coded to the project and is included in our overspend application.

Table 15: Otahuhu substation diversity

Project Description				
Works to the existing switchyard with a focus of constructing a new GIS switchyard at Otahuhu.				
Commissioned values				
	Actual	Expected (P50)	Variance	Material?
Total project	\$104.8m*	\$94.0m	\$10.8m	Y
Commissioning dates				
	Actual	Approved date	Variance	Material?
All components	Nov 2011	2009	2 years	Y
Project Outputs				
Achieved Outputs				Material Variance to Approved Outputs?
Remove all over-crossings of existing substation at Otahuhu				N
Install bus section circuit breakers in the existing 220kV switchyard				
Procure, construct, commission and operate a 220kV GIS switchyard and a new AIS switchyard at Otahuhu, connected and adjacent to, but geographically separated from, the existing switchyard				
Transfer approximately half of the circuits from the existing switchyard to the new switchyards				
Obtain designations, and resource consents necessary for the above				
Output adjustment – n/a				
Lessons Learned				
Sufficient contingencies are required where projects with significant uncertainties are required to be delivered in a short timeframe.				
Cost Efficiencies				
	Estimated Value	Assumptions		
The GIS, building and 220 kV cables were open tendered as a turnkey contract	\$4.0m	Comparison of tender prices		
Major Capex Overspend Adjustment				
Allowance (P90)				\$99.0m
Actual cost				\$104.8m
CPI and FX disparities adjustment applies?				N
Excess amount				\$5.8m
Overspend adjustment				\$5.8m
Variance Explanations				
Reference				
Commissioning value	Refer to our 'Otahuhu Overspend Application' currently being considered by the Commission.			
Commissioning date	The primary objectives of the project were achieved on 19 May 2010, which exceeded the delivery time expectation. The approved delivery date was, however, not achieved due to: <ul style="list-style-type: none"> regulatory approval being deferred (in part, due to judicial review), which delayed the start of the project, and the Southdown circuit cables failing when first commissioned. These had to be replaced and this delayed the final commissioning of the project. 			

* Subsequent to the disclosure year an additional \$1.3m relating to the cost of obtaining easements has been included in the project cost and is reflected in the overspend application.

Table 16: Upper South Island reactive support

Project Description				
Reliability investment that increases reactive support in Christchurch and the Upper South Island.				
Commissioned value				
	Actual	Expected (P50)	Variance	Material?
Total project	\$56.7m	\$65.2m	(\$8.5m)	Y
Commissioning dates				
	Actual	Approved date	Variance	Material?
75 Mvar capacitor at Islington 220kV	Oct 2008	Jul 2008	3 m	N
+150/-75Mvar dynamic reactive support at Islington 220kV	Oct 2009	Jul 2009	3 m	N
+/- 40 Mvar dynamic reactive support at Kikiwa 220kV	Jan 2011		1 y 6 m	Y
Reactive Power controller (RPC) upgrade/replacement at Islington	Nov 2011		2 y 4 m	Y
Project Outputs				
Achieved Outputs				Material Variance to Approved Outputs?
75 Mvar capacitor at Islington 220kV				N
+150/-75Mvar dynamic reactive support at Islington 220kV				
+/- 40 Mvar dynamic reactive support at Kikiwa 220kV				
Reactive Power controller (RPC) upgrade/replacement at Islington				
Output adjustment – n/a				
Lessons Learned				
It is advantageous, at the beginning of a new technology project, to have adequate design review workshops with the supplier so a common understanding of design can be achieved and issues clarified.				
Cost Efficiencies				
	Estimated Value	Assumptions		
The tender process allowed for tenderers to propose various technologies for Kikiwa. The successful tenderer offered a new product that they had developed and it appears that that the price provided was a “market entry” price.	\$2.0m	Cost efficiency relates to the discount on the asset provided compared to other tendered prices and subsequent price estimates on the adopted technology.		
Major Capex Overspend Adjustment				
Allowance (P90)				\$70.0m
Actual cost				\$56.7m
CPI and FX disparities adjustment applies?				N
Excess amount				Nil
Overspend adjustment				Nil
Variance Explanations				
Reference				
Commissioned value	The tendered prices for the Islington and Kikiwa dynamic reactive power plants were lower than the budget estimate because of: <ul style="list-style-type: none"> the new technology discount as described above tenders being more competitive than estimated. 			
Commissioning date	The introduction of new technology meant the specification, design, and construction took longer than was originally anticipated.			

Table 17: West Coast upgrade

Project Description				
Construction of a second 110kV circuit from Dobson to Reefton and installation of a binary switched capacitor bank at Hokitika.				
Commissioned values				
	Actual	Expected (P50)	Variance	Material?
Total project	\$16.8m	\$19.0m	(\$2.2m)	Y
Commissioning dates				
	Actual	Approved date	Variance	Material?
HKK Binary switch capacitor	Jun 2010	2011	6 m	N
New DOB-RFN line	Sep 2011		-	N
Project Outputs				
Achieved Outputs				Material Variance to Approved Outputs?
110kV circuit from Dobson to Reefton with 525A continuous rating				N
Binary switched capacitor bank of at least 14 MVar				N
Output adjustment – n/a				
Lessons Learned				
n/a				
Cost Efficiencies				
	Estimated Value	Assumptions		
Local Westpower staff and expertise were used to design and build the line, and supply and install the capacitor banks at Hokitika	\$0.8m	Actual cost versus cost expected using contracting staff from out of the region		
Major Capex Overspend Adjustment				
Allowance (P90)				\$19.0m
Actual cost				\$16.8m
CPI and FX disparities adjustment applies?				N
Excess amount				Nil
Overspend adjustment				Nil
Variance Explanations				
Reference				
Commissioned Values	The project was completed under a fixed price contract with payments made on delivery of commissioned assets; therefore there was no requirement for us to account for interest during construction or inflation. The contingency was also not used.			

Table 18: Second 110/66kV transformer at Dobson

Project Description				
Purchase and installation of a second interconnecting transformer at Dobson				
Commissioned values				
	Actual	Expected (P50)	Variance	Material?
Total project	\$4.3	\$4.5m	(\$0.2m)	N
Commissioning dates				
	Actual	Approved date	Variance	Material?
All components	Sep 2011	Apr 2007	4y 5m	Y
Project Outputs				
Achieved Outputs			Material Variance to Approved Outputs?	
110/66/11kV 75MVA interconnecting transformer			N	
Output adjustment – n/a				
Lessons Learned				
n/a				
Cost Efficiencies				
n/a				
Major Capex Overspend Adjustment				
Allowance (P90)			\$4.5m	
Actual cost			\$4.3m	
CPI and FX disparities adjustment applies?			N	
Excess amount			Nil	
Overspend adjustment			Nil	
Variance Explanations				
Reference				
Commissioning date	The project was deferred pending submission of the West Coast GUP. Although a revised commissioning date was not formally approved by the Electricity Commission acceptance of a deferral is evident in the May 2010 document <i>'Reasons for Decision - Tactical Transmission Upgrades - Application for amended interim grid expenditure'</i>			

Table 19: Maungatapere bus security

Project Description				
Retrofitting of a bus coupler to the 110kV substation at Maungatapere and upgrade of the associated protection equipment				
Commissioned value				
	Actual	Expected (P50)	Variance	Material?
Commissioned value	\$3.1m	\$3.9m	(\$0.8m)	N
Commissioning dates				
	Actual	Approved date	Variance	Material?
All components	Aug 11	Jun 2010	1 y 2 m	Y
Project Outputs				
Actual Outputs				Material Variance to Approved Outputs?
Install a bus coupler on the Maungatapere 110kV bus.				N
Upgrade the protection at the Maungatapere 110kV bus to include: <ul style="list-style-type: none"> • bus zone protection, • circuit breaker fail, and • duplicate line protection. 				
Output adjustment – n/a				
Lessons Learned				
We learned that dead tank disconnecting circuit breakers (DCBs), that have integral current transformers, and disconnectors, are a credible alternative to standalone equipment that is normally used.				
Cost Efficiencies				
	Estimated Value	Assumptions		
The DCBs have a much smaller footprint than the standalone equipment we had traditionally used and can fit within the existing space while achieving the required safety and maintenance clearances. Using traditional equipment would have required extension of the existing yard and relocation of a number of 110 kV bays, which would have been considerably more expensive.	\$0.8 to \$1.4m	The estimated cost includes the cost of new equipment, circuit relocations, consenting and easements that would have been required had the DCBs not been used.		
Using DCBs reduces the required frequency of disconnector maintenance. This reduces the whole of life cost and, just as importantly, improves long-term availability and reliability.	\$0.4m	Maintenance cost savings over the life of the asset. Estimate does not include the benefit of improved reliability due to difficulties in valuing this.		
Major Capex Overspend Adjustment				
Allowance (P90)				\$4.1m
Actual cost				\$3.1m
CPI and FX disparities adjustment applies?				N
Excess amount				Nil
Overspend adjustment				Nil
Variance Explanations				
Reference				
Commissioning date	There were delays related to adoption of new technology.			

Table 20: Redclyffe bus security

Project Description				
Installation of a bus coupler and associated upgrading of the protection equipment at the Redclyffe substation in the Hawke's Bay region.				
Commissioned values				
	Actual	Expected (P50)	Variance	Material?
Total project	\$1.9m	\$1.8m	\$0.1m	N
Commissioning dates				
	Actual	Approved date	Variance	Material?
110kV bus security	Jun 2012	Jun 2010	2 y 6 m	Y
Project Outputs				
Achieved Outputs				Material Variance to Approved Outputs?
110kV bus coupler Upgraded protection at 110kV bus Output adjustment – n/a				N
Lessons Learned				
n/a				
Cost Efficiencies				
	Estimated Value	Assumptions		
Running the major expenditure project in conjunction with a base capex project allowed enabling work and design costs to be shared.	\$0.2m	The estimated value includes shared costs allocated to the base capex project that were unavoidable and would have been incurred if it was only the major expenditure project that was completed		
Using DCBs reduces the required frequency of disconnector maintenance. This reduces the whole of life cost and, just as importantly, improves long term availability and reliability.	\$0.24m	Maintenance cost savings over the life of the asset. Estimate does not include the benefit of improved reliability due to difficulties in valuing this.		
Major Capex Overspend Adjustment				
Allowance (P90)				\$1.9m
Actual cost				\$1.9m
CPI and FX disparities adjustment applies?				N
Excess amount				Nil
Overspend adjustment				Nil
Variance Explanations				
Reference				
Commissioning date	Equipment availability post the Christchurch Earthquake caused the initial delay, aggravated by equipment damage during construction. The initial delay resulted in the pre-winter outage window being missed. Work restriction pre the Rugby World Cup then impacted the delivery with work being deferred until late 2012.			

4.3 New major projects

In April 2012, the Commission approved a proposal to spend up to \$9.5 million to increase the capability of the grid to export generation from Kawerau. The *Kawerau generation export enhancement project* is expected to cost \$7.7 million and to be built in two phases – the first phase in summer of 2012/13, and the second phase by 2014. We have forecast this project adding \$0.3 million to our revenue for 2013/14 and \$0.8 million for 2014/15.

4.4 Non-transmission solutions

Major projects can include ‘non-transmission solutions’, which are funded via recoverable costs. Refer to Section 5.3 for explanations of variances and forecasts relating to non-transmission solutions.

We did not complete any non-transmission solutions during the disclosure year.

4.5 Other variations and adjustments

We can seek approval to recover ‘sunk costs’ with respect to projects that have been approved, but subsequently abandoned. We have made no such applications in 2011/12.

5 Pass-through and recoverable costs

The revenue figure that we use to set prices includes forecasts of pass-through and recoverable costs.

Pass-through costs are costs that are not within our control and are 'passed-through' to our customers. Pass-through costs comprise:

- local government rates
- Commerce Commission levies
- Electricity Authority levies.

Recoverable costs are similar to pass-through costs, but carry some risk of non-recovery under certain circumstances. Recoverable costs include:

- instantaneous reserves (IR) charges¹⁵
- non-transmission solutions (NTS)¹⁶.

This section calculates a wash-up for the 2011/12 year, updates forecast costs for 2013/14 and 2014/15, presents a comparison of forecast and actual costs for the last four years, and explains changes to non-transmission solutions.

5.1 2011/12 wash-up

The table below shows the wash up of 2011/12 pass-through and recoverable costs, calculated by comparing the forecast costs used for pricing with the actual costs we incurred.

Table 21: Allocation of pass-through and recoverable wash-up amounts to HVAC and HVDC

Description	TOTAL \$m	HVAC \$m	HVDC \$m
Forecast pass through and recoverable costs	39.2	21.1	18.2
Actual pass through and recoverable costs	28.5	11.1	17.5
Wash-up	(10.7)	(10.0)	(0.7)

Note: Figures may not add exactly due to rounding.

In summary, we over-recovered \$10.7 million in 2011/12 for pass-through and recoverable costs. Most of this relates to a non-transmission solution, as described in Section 5.3.

¹⁵ We purchase back up supply (or demand interruption) from the IR market to cover the risk of a failure of the HVDC link causing an under-frequency event in the island receiving supply from the link.

¹⁶ Most major grid upgrade projects are designed to improve the reliability of the grid. In some cases, it is possible to achieve similar reliability improvements by non-transmission means (i.e., by use of a 'non-transmission solution'). For example, paying some customers to reduce their consumption at times of peak demand may defer the need for a grid upgrade.

5.2 Updated forecast costs

Updates to previously forecast pass-through and recoverable costs for 2013/14 and 2014/15 are set out below.

Table 22: Updated forecast pass-through and recoverable costs

Forecast	2013/14			2014/15		
	TOTAL \$m	HVAC \$m	HVDC \$m	TOTAL \$m	HVAC \$m	HVDC \$m
Electricity Authority levy	5.4	5.4	0.0	5.5	5.5	0.0
Commerce Commission levy	2.5	2.5	0.0	2.0	2.0	0.0
Local government rates	5.1	4.9	0.2	5.2	4.9	0.3
Total pass-through costs	13.0	12.7	0.3	12.7	12.5	0.3
Instantaneous Reserves (IR)	2.4	0.0	2.4	2.5	0.0	2.5
Non-transmission solutions	0.8	0.8	0.0	0.0	0.0	0.0
Total recoverable costs	3.2	0.8	2.4	2.5	0.0	2.5
Total pass-through and recoverable costs	16.2	13.5	2.7	15.2	12.5	2.8

Note: figures are in nominal dollar terms and may not add exactly due to rounding.

5.3 Non-transmission solutions

The following table compares forecast and actual expenditure on non-transmission solutions for 2011/12.

Table 23: Forecast and actual non-transmission solution expenditure

gup Code	Title	Forecast \$m	Actual \$m	Variance \$m	Material ?
GUP2009 Part VII	Upper North Island Dynamic Reactive Support	7.7	0.4	(7.3)	Y
IGE - 3	Upper South Island DSP trial for grid support contracts	-	0.6	0.6	N

Note: figures are in nominal dollar terms

We forecast expenditure of \$7.7 million in 2011/12 on procuring demand curtailment as part of a major project designed to improve voltage stability in the upper North Island.

When we went to market to procure demand response, we did not receive any offers that would have been economic to implement. The main issue was identified as the start-up costs that each potential participant would incur. To reduce the costs to potential participants of entering the demand response market, we have changed the scope of our project to deliver a software platform that will enable participants to offer demand response using common software.

As a result, we spent \$1 million on the development of demand response systems in 2011/12, which is \$6.6m less than forecast. Hence there is a recoverable costs wash-up of \$6.6 million. We are currently forecasting further expenditure of \$0.8 million in 2013/14.

5.4 Historical pass-through and recoverable costs

For comparison, this section presents forecast and actual pass-through and recoverable costs for the four years prior to 2011/12.

Table 24: Historical pass-through and recoverable costs

	2007/08 \$m	2008/09 \$m	2009/10 \$m	2010/11 \$m	2011/12 \$m
Pass-through costs¹⁷					
Forecast	13.8	12.5	14.3	13.2	13.4
Actual	16.0	8.8	12.6	10.5	10.1
HVAC wash-up	(2.2)	3.7	1.7	2.7	3.3
HVDC wash-up	0.0	0.0	0.0	0.0	0.0
Recoverable costs					
Forecast	0.0	3.7	0.0	0.1	25.8
Actual	1.9	4.4	0.4	0.4	18.5 ¹⁸
HVAC wash-up	(1.9)	(0.7)	(0.4)	(0.3)	6.7
HVDC wash-up	0.0	0.0	0.0	0.0	0.7

Note: figures are in nominal dollar terms and may not add exactly due to rounding.

¹⁷ Prior to 2010/11, there was not a separate category of 'recoverable' costs. In this table, historical non-transmission solutions are shown under recoverable costs

¹⁸ HVDC Reserves were not treated as pass-through or recoverable costs prior to 2011/12.

6 Updated revenue forecasts

This section brings together MAR update, major project, and pass-through and recoverable cost information from Sections 3 to 5 to provide updated revenue forecasts for the remainder of RCP1.

Table 25: Updated forecast revenue for the remainder of RCP1

	2013/14			2014/15		
	Total \$m	HVAC \$m	HVDC \$m	Total \$m	HVAC \$m	HVDC \$m
Previous MAR forecasts	906.4	755.7	150.6	958.9	803.7	155.2
Additional major projects	0.3	0.3	-	0.8	0.8	-
2011/12 MAR wash-up	(15.3)	(21.5)	6.2	-	-	-
'Excess amount' adjustment	(5)	(5)	-	-	-	-
Interest and tax adjustments ¹⁹	(12.1)	(15.8)	3.7	-	-	-
Updated MAR forecasts	874.3	713.7	160.5	959.7	804.5	155.2
2011/12 pass-through and recoverable costs wash-up plus interest ²⁰	(12.3)	(11.5)	(0.8)			
Forecast pass-through and recoverable costs	16.2	13.5	2.7	15.2	12.5	2.8
Updated revenue forecasts	878.3	715.8	162.5	974.9	816.9	158.0
<i>Previous revenue forecasts</i>	<i>930.8</i>			<i>979.1</i>		

Note: figures are in nominal dollar terms and may not add exactly due to rounding

Subject to confirmation of these figures by the Commission, we will use the updated forecast 2013/14 revenues to set prices for the pricing year starting on 1 April 2013.

We expect to advise our customers of their individual charges in December this year.

¹⁹ The figures for additional major projects, the 2011/12 MAR wash-up and the excess amount adjustment are net of tax and interest. Calculation of the interest and tax adjustments shown here are detailed in Appendix A.5, Table 44.

²⁰ Adjusted for interest over a two-year period (from 2011/12 to 2013/14)

7 Quality

This section reports on service quality measures that are monitored by the Commission for RCP1.

We will propose a new suite of 'grid output measures' for RCP2 that will form the basis of a performance incentive, linked to allowable revenue. There is no such arrangement for RCP1 in operation, but we are required to calculate what the revenue adjustment would have been were such an arrangement in place based on current service quality measures.

7.1 Quality measures and targets

The Commission has specified a set of measures, and target service quality levels for each of those targets. The following table compares actual performance against the Commission targets.

Table 26: Actual performance against targets for four quality measures

Quality measures	Target	Actual	Target achieved?
Number of loss of supply events greater than 0.05 system minutes ²¹	21	19	Y
Number of loss of supply events greater than 1 system minute	3	2	Y
Unplanned HVAC circuit unavailability (%)	0.056	0.064	N
Unplanned HVDC bi-pole unavailability ²² (%)	(no target set)	0.109	n/a
Total impact of interruptions (measured in system minutes)	16.69	14.45 ²³	Y

The only target that we did not achieve for 2011/12 was for unplanned unavailability of the HVAC circuits. The total unavailability for the year was 0.064%, of which six circuits accounted for 0.028%. These are summarised below.

²¹ A 'system minute' is a loss of supply equivalent to losing peak demand for one minute. For example, losing supply to a city the size of Hamilton for around 40 minutes during a peak winter night would be roughly equivalent to one system minute. .

²² Since 2007, half of Pole 1 has been decommissioned, and the other half has only been available under emergency conditions. As such, Pole 1 has been excluded from our calculations.

²³ An outage caused by generation units tripping at Huntly accounted for 6.9 system minutes. If that event were excluded, the total impact would be 7.55 system minutes.

Table 27: Description of significant HVAC unavailability events

Location	Unavailability %	Description
Whakatu (Hawkes Bay)	0.006	A 33 kV feeder fault caused an explosion of a feeder circuit breaker and an incomer circuit breaker. The damage meant that a transformer and circuit were out of service until a replacement incomer circuit breaker was installed
Mangere – Otahuhu (Auckland)	0.006	A circuit breaker would not latch closed and there were delays in sourcing a new part
Te Kaha (Bay of Plenty)	0.006	A circuit was unreliable under strong winds which caused many auto-recloses and trips. Difficult terrain and weather conditions made fault finding lengthy. Fortunately the load was able to be served by local diesel generation
Rangipo-Wairakei (Waikato)	0.003	Gale force winds felled plantation pine trees across a transmission line and caused significant damage to a transmission tower
Ohaaki (Waikato)	0.003	A hydraulic system on a circuit breaker failed, and it and the associated circuit were removed from service for repairs
Castle Hill (Canterbury)	0.003	Snow build-up caused a circuit to trip and auto-reclose several times

Expanded detail on these HVAC circuit unavailability contributions is provided in Appendix A.6

7.2 Interruptions greater than 1 system minute

There were two loss-of-supply events greater than 1 system minute in 2011/12. Together, these two events caused a loss of supply of 8.16 system minutes.

Table 28: Report on events greater than 1 system minute

Event	Reason	Our response
15 August 2011 1.26 system minutes Taranaki and Wellington	Six separate interruptions to supply from one severe weather event. (see Appendix A.6 for more detail)	The outages were due to severe snow and wind, and conditions hindered efforts to return lines to service. In Wellington, we believe that snow and ice build-up, combined with strong winds, caused an aerofoil effect on some circuits that caused conductors to move upwards into contact with vertically adjacent phases. Our solution is to install spacers to help maintain physical phase separation on critical spans of two key circuits. Installation to be completed

Event	Reason	Our response
		<p>before winter 2013.</p> <p>In Taranaki, we believe that faults on the OPK-SFD A lines occurred when vertically adjacent phases came within fault distance of each other. We believe this was due to upper circuits sagging under snow and ice loading and/or lower circuits moving suddenly upwards as a result of snow off-loading. Our preferred solution is to extend the middle cross-arms of the OPK-SFD A line towers, to ensure horizontal offset of the vertically adjacent phases. This is scheduled for installation before winter 2013.</p> <p>These events will also inform future line design.</p>
<p>13 December 2011</p> <p>6.90 system minutes (estimated)</p> <p>91 points throughout the North Island.</p>	<p>Generators at Huntly Power Station tripped causing disconnection of 850 MW of generation from the grid. Approximately 560 MW of load was shed across the North Island from Interruptible Load (IL) and Automatic Under-Frequency Load Shedding (AUFLS).</p>	<p>Generation supply was restored as quickly as possible. Until the cause of the event was known, Huntly output was restricted to ensure its loss could be covered by normal spinning reserves. After investigation, the protection relay circuits at Huntly were re-designed to remove the risk of a similar event. The overload protection on Genesis Energy's Unit 5 is being redesigned and implementation is expected before the end of 2012. In addition, the coupling between the generators and the grid at Huntly has been increased.</p> <p>We held an industry forum on lessons learned from this event.</p>

7.3 Historical and forecast quality performance

For comparison, the following table sets out performance against each of the Commission's targets, plus total outages in system minutes, from 2007/08 to 2011/12. We also provide updated forecasts for the remainder of RCP1.

Table 29: Historical and forecast quality performance

Quality measure	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Number of loss of supply events greater than 0.05 system minutes	25	18	19	18	19	20	20	20
Number of loss of supply events greater than 1 system minute	3	4	4	3	2	3	3	3
Unplanned HVAC circuit unavailability (%)	0.035	0.064	0.052	0.079	0.064	0.059	0.059	0.059
Unplanned HVDC bi-pole unavailability (%)	0.021	1.035	0.319	0.086	0.109	0.314	0.314	0.314
Total impact of interruptions (in system minutes)	27.96	18.10	23.45	15.17	14.45	19.83	19.83	19.83

Because quality performance is primarily event-driven in the short-term, the forecasts are based on an average of performance over the previous five years²⁴.

7.4 Hypothetical revenue adjustments

This section calculates the adjustments that we would apply in 2013/14 if there were a linkage between quality performance and revenue.

The adjustments are based on the following assumptions:

- four of the Commission’s quality measures each have an equal weighting (HVDC bi-pole unavailability is excluded)
- no revenue adjustment applies if actual performance is the same as target performance
- out-performance (up to a ‘cap’) results in a positive revenue adjustment, and under-performance (down to a ‘collar’) results in a negative revenue adjustment
- the combined adjustment may increase or decrease our revenue by up to 1% of our 2011/12 forecast MAR.

²⁴ We note that decommissioning of HVDC Pole 1, commissioning of Pole 3 and re-commissioning of Pole 2 makes comparison against previous performance less valid. However, there is not another suitable basis available for forecasting HVDC bi-pole unavailability.

The results of these hypothetical adjustments for 2011/12 are set out below for information purposes. Target, cap and collar figures are all as specified by the Commission.

Table 30: Hypothetical revenue adjustments based on 2011/12 outcomes

Quality measure	Collar	Target	Cap	Actual	Adjustment \$m
Number of loss of supply events greater than 0.05 system minutes	31	21	10	19	0.3
Number of loss of supply events greater than 1 system minute	5	3	1	2	0.8
Unplanned HVAC circuit unavailability (%)	0.083	0.056	0.029	0.064	(0.5)
Total system minutes (planned and unplanned)	29.07	16.69	4.31	14.45	0.3
Hypothetical revenue adjustment					0.9

Details of supporting calculations, plus graphical representation of each hypothetical revenue adjustment, are included in Appendix A.7.

8 Operating expenditure

The Commission set an operating expenditure (opex) allowance for 2011/12 of \$248.5 million. This section provides a comparison of forecast and actual opex for 2011/12 and explains material variances. We have interpreted 'material variance' to be a variance that is both greater than \$6 million and more than 10% of the category forecast²⁵.

Table 31: Forecast and actual operating expenditure for 2011/12

Category	Allowance ²⁶ \$m	Actual \$m	Variance \$m	Variance %	Material ?
Instantaneous reserve event charges	-	0.1	0.1	-	N
Ancillary service charges (black start and over frequency arming)	1.3	1.7	0.4	31%	N
Transmission and substation maintenance	117.3	100.2	(17.1)	(15%)	Y
Communications and control	2.6	3.3	0.7	27%	N
IST operations	21.2	23.4	2.2	10%	N
Operating leases	14.5	16.5	2.0	14%	N
Departmental	69.7	72.6	2.9	4%	N
Investigations	11.7	12.2	0.5	4%	N
Insurance premiums	10.2	11.2	1.0	10%	N
Total Opex	248.5	241.2	(7.3)	(3%)	N

Note: figures may not add exactly due to rounding.

The only material variation in operating expenditure compared to forecast was with respect to grid maintenance. As with routine base grid capex, this partly reflects an improved prioritisation approach that we introduced this year. Other explanations are:

- during the year we in-sourced staffing of our three Regional Operating Centres (ROCs), resulting in savings. From the time when the ROCs were in-sourced, costs were also transferred from the 'transmission and substation maintenance' category to the 'departmental' category.
- there was a one-off temporary slow-down in work due to the transition to new maintenance contractors following a re-tendering exercise during the year
- restrictions relating to the Rugby World Cup caused a slow-down in routine maintenance and project work that lasted longer than we had forecast.

²⁵ \$6 million is less than 1% of our 2011/12 forecast MAR.

²⁶ We have used opex allowance figures for comparison because, with the exception of instantaneous reserves charges, the allowance is broken down by the required categories.

8.1 Historical and forecast operating expenditure

For comparison, the table below shows actual operating expenditure for 2007/08 to 2011/12, and updated forecasts for the remainder of RCP1. Expenditure is broken down by categories for each year.

Table 32: Historical and forecast operating expenditure

	2007/08 \$m	2008/09 \$m	2009/10 \$m	2010/11 \$m	2011/12 \$m	2012/13 \$m	2013/14 \$m	2014/15 \$m
Event charges	-	-	0.6	0.4	0.1	0.4	0.4	0.4
Black start and over-frequency arming	1.0	1.1	1.1	1.5	1.7	1.8	1.8	1.9
Grid maintenance	88.9	99.3	97.9	106.9	100.2	106.1	116.6	118.3
Comms	4.0	3.6	3.7	3.4	3.3	3.4	3.6	3.7
IST operations	21.1	22.4	19.9	21.1	23.4	28.4	25.0	25.7
Leases	9.6	8.8	13.3	15.3	16.5	17.9	18.0	18.2
Departmental	64.5	68.2	66.4	75.3	72.6	79.3	77.8	81.2
Investigations	11.9	13.8	8.3	11.0	12.2	10.0	8.2	7.8
Insurance	9.2	9.2	9.3	9.2	11.2	15.4	15.7	16.0
Total operating expenditure²⁷	210.3	226.4	220.6	244.0	241.3	262.6	267.2	273.0
<i>Opex allowance</i>					248.5	279.8	281.2	287.9
<i>Reconciliation to historical compliance statements</i>								
<i>Add HVDC reserve costs 2007/08 - 2010/11 (included in allowance)</i>	14.8	27.5	7.2	4.7	0.0	-	-	-
<i>Less operating leases (2007/08 - 2010/11) as capitalised</i>	(9.6)	(8.8)	(13.3)	(15.3)	(16.5)			
Total operating expenditure	215.5	245.1	214.5	233.4	224.7	-	-	-

Note: figures are in nominal dollar terms and may not add exactly due to rounding

Forecast operating expenditure for RCP1 in Transpower's 2012/13 business plan (i.e., as at 30 June 2012) was \$1,044.0 million, compared to an allowance of \$1,097.4 million.

We continuously review our operating expenditure. Accordingly, the forecast is subject to on-going change over the remainder of RCP1.

²⁷ Excluding pass-through costs, recoverable costs, and reserves costs.

A.1 The legislative context for this report

This appendix sets out the legislative context for this report, and incorporates compliance statements we are required to make.

A.1.1 Annual compliance monitoring statement

This annual regulatory report incorporates:

- the annual compliance monitoring statement required by Part 5 of the Commerce Act (Transpower Individual Price-Quality Path) Determination 2010 (including all consolidated amendments to 31 January 2012)²⁸ (“the IPP Determination”)
- information required by the Notice to Supply Information under Section 53ZD of the Commerce Act 1986²⁹ (“the s53ZD Notice”) issued by the Commerce Commission in February 2012.

A.1.2 Input parameters to regulated price and quality path

Unless otherwise specified, or separately agreed with the Commission, input parameters to Transpower’s regulated price and quality path disclosed in this Statement are calculated or determined, where applicable, in accordance with:

- the Commerce Act (Transpower Input Methodologies) Determination 2010 (including all consolidated amendments to 1 November 2011)³⁰ (“the IM Determination”)
- the Commerce Act (Transpower Input Methodologies)(Capital Expenditure) Determination 2012 (“the Capex IM Determination”).

We have relied on certain interpretations that we have agreed with the Commission, and which are listed in an email from the Commission dated 1 October 2012.

A.1.3 Terms and references

Unless the context otherwise requires, terms used in this report have the same meanings as in the Commerce Act 1986 or the IPP Determination and references to Parts or clauses are references to Parts or clauses in the IPP Determination unless otherwise specified.

A.1.4 Compliance with the information requirements

As required by clause 5.1(1), Transpower confirms that it has complied with the information requirements, including relevant calculations, specified in Part 5 in relation to the price path in Part 3, the quality standards in Part 4 and the quality incentive mechanism referred to in clause 5.6.

²⁸ Issued on 31 January 2012.

²⁹ Notice to Supply Information to the Commerce Commission, Section 53ZD of the Commerce Act 1986 dated 23 February 2012 from the Commerce Commission to Transpower NZ Ltd.

³⁰ Issued on 1 November 2011

A.1.5 Information supporting and explaining Transpower's compliance with the IPP Determination

In accordance with clause 5.1(2), Transpower has accompanied in this report the associated information specified in Part 5 for the disclosure year and for comparative years, and any further information necessary to fully support and explain Transpower's compliance with the IPP Determination.

As required by clause 5.8, this report comprises a written statement, a directors' certificate executed by two directors of Transpower in Appendix A.8 and an independent assurance report in Appendix A.9.

A.1.6 Checklist of all information required

In Appendix A.10 of this report, Transpower has provided a checklist of all information required by Part 5 of the IPP Determination and the s 53ZD Notice and references to where in this report that information can be found

A.1.7 Approval of updates to Forecast MAR

Section 6 of this report seeks from the Commission the approval of updates to the 2013/14 and 2014/15 Forecast MAR in accordance with clauses 3.3(1) and 3.3(2).

A.1.8 Monetary figures

Monetary figures in this Statement are in New Zealand dollars and at nominal prices unless otherwise stated.

A.1.9 Pricing years and disclosure years

This report discusses 'pricing years' and 'disclosure years'. Pricing years run from 1 April to 31 March, whereas disclosure years run from 1 July to 30 June.

Where we report on quality performance, forecast and actual capital expenditure and operating expenditure, and quality performance, we use disclosure years. Where we report on revenue, we use pricing years. For example, the operating revenue that we report in Section 3 for the disclosure year 1 July 2011 to 30 June 2012 was the revenue we recovered from 1 April 2011 to 31 March 2012. In effect, we treat pricing year revenue as if it were earned during the applicable disclosure year.

A.2 Adjustment to zero historical accumulated wash-ups

The IPP framework requires the zeroing of historical accumulated wash-up balances over the eight-year period from 2012/13 to 2019/20. The historical balances were accumulated in HVAC and HVDC 'economic valuation' (EV) accounts. This appendix shows the calculation of the figure to be used to zero the historical EV balances. The zeroing adjustment is already factored into the approved forecast MAR figures for 2012/13 to 2014/15.

The calculations take into account the EV balances as at 1 July 2011, the EV adjustments made in 2011/12, and forecast interest. The calculated EV adjustments are grossed up to a forecast pre-tax input to be used in forecast MAR calculations.

Table 33: HVAC Economic Value (EV) account zeroing adjustment

HVAC	RCP1				RCP2				
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
WACC (IPP 5.3 (2) (b))	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
Tax	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%
Opening balance (IPP5.3 (2) (a)) \$m	82.4	52.1	47.1	41.7	35.9	29.7	23.0	15.9	8.2
2011/12 EV adjustment	(36.2)								
Opening balance \$m	46.2	52.1	47.1	41.7	35.9	29.7	23.0	15.9	8.2
Forecast interest \$m	5.9	3.7	3.3	3.0	2.6	2.1	1.7	1.1	.6
Return EV balance \$m		(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)
Forecast closing \$m	52.1	47.1	41.7	35.9	29.7	23.0	15.9	8.2	-
Net EV return \$m	(36.2)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)
Gross EV return \$m	(50.3)	(12.2)	(12.2)	(12.2)	(12.2)	(12.2)	(12.2)	(12.2)	(12.2)

Table 34: HVDC Economic Value (EV) account zeroing adjustment

HVDC	RCP1				RCP2				
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20
WACC IPP 5.3 (2)(b)	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%	7.19%
Tax	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%	28.0%
Opening AC balance IPP5.3 (2) (a) \$m	(106.7)	(104.1)	(94.0)	(83.2)	(71.6)	(59.2)	(45.9)	(31.7)	(16.4)
2011/12 EV adjustment	10.3								
Opening balance \$m	(96.4)	(104.1)	(94.0)	(83.2)	(71.6)	(59.2)	(45.9)	(31.7)	(16.4)
Forecast interest \$m	(7.7)	(7.5)	(6.8)	(6.0)	(5.1)	(4.3)	(3.3)	(2.3)	(1.2)
Recovery EV balance \$m		17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Forecast closing \$m	(104.1)	(94.0)	(83.2)	(71.6)	(59.2)	(45.9)	(31.7)	(16.4)	-
Net EV recovery \$m	10.3	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Gross EV recovery \$m	14.3	24.4	24.4	24.4	24.4	24.4	24.4	24.4	24.4

A.3 Calculation of the MAR wash-up

This appendix provides more detail on the calculation of the 2011/12 MAR wash-up.

The first table below sets out MAR wash-up calculations for the HVAC and HVDC accounts. The following tables show the working calculations for each of the notes identified in the first table.

Table 35: MAR wash-up for HVAC and HVDC accounts

MAR wash-up building block	Formula	Notes:	Total \$m	HVAC \$m	HVDC \$m
RAB	A	1	2,760.2	2,540.0	220.2
Vanilla WACC	B		8.05%	8.05%	8.05%
Capital charge	C = A x B		222.2	204.5	17.7
Revenue	D	2	622.5	555.9	66.5
Operating expenditure	E	8	248.5	230.7	17.8
Term credit spread differential <i>(Note: allocated on RAB HVAC/HVDC basis)</i>	F		0.6	0.6	0.0
Depreciation	G	3 & 4	140.4	120.7	19.7
Net operating profit before tax	H = D-E-F-G		232.9	204.0	28.9
Tax	I		21.3	14.2	7.1
Net operating profit after tax	J = H - I		211.6	189.8	21.8
MAR Wash-up (EV account entry)	K = C - J		10.6	14.7	(4.1)

Note: figures may not add exactly due to rounding.

Table 36: Note 1 – Regulated Asset Base (RAB) calculation

RAB				HVAC	HVDC	Total	HVAC	HVDC
				\$m	\$m	\$m	\$m	\$m
Opening balance						2,606.7	2,411.2	195.5
		Mid-month	Commissioned assets					
Weighted average commissioned assets (assuming mid-month commissioning)	July	11.5	0.7	5.6	6.0	0.7	5.3	
	August	10.5	22.4	2.7	22.0	19.6	2.4	
	September	9.5	33.9	0.8	27.5	26.9	0.7	
	October	8.5	22.4	0.2	16.0	15.9	0.1	
	November	7.5	17.2	9.4	16.7	10.8	5.9	
	December	6.5	35.1	1.6	19.8	19.0	0.8	
	January	5.5	26.1	3.9	13.7	12.0	1.8	
	February	4.5	29.2	7.5	13.8	10.9	2.8	
	March	3.5	9.5	5.3	4.3	2.8	1.5	
	April	2.5	23.8	10.2	7.1	5.0	2.1	
	May	1.5	32.1	7.9	5.0	4.0	1.0	
	June	0.5	33.0	4.7	1.6	1.4	0.2	
Total			285.4	59.8				
					2,760.2	2,540.0	220.2	

Note: figures may not add exactly due to rounding.

Table 37: Note 2 – Revenue

Revenue	Total \$m	HVAC \$m	HVDC \$m
Transmission revenue for the 3 months 1 April - 30 June 2011	177.2	156.0	21.2
Transmission revenue for the 9 months 1 July - 31 March 2012	516.8	453.3	63.5
Transmission revenue for the pricing year ended 30 June 2012	694.0	609.3	84.7
<i>less</i> customer projects and new investment contracts	(32.3)	(32.3)	0.0
<i>less</i> pass through and recoverable cost related revenue	(39.2)	(21.1)	(18.2)
Regulated transmission Revenue pricing year ended 31 March 2012	622.5	555.9	66.5

Note: figures may not add exactly due to rounding.

Table 38: Note 3: – Depreciation

Depreciation	Total \$m	HVAC \$m	HVDC \$m
Total depreciation for 2012 financial year per GAAP	149.1	131.1	18.0
<i>plus</i> pseudo asset depreciation	6.4	6.4	0.0
<i>less</i> depreciation in commissioning year	(9.1)	(8.8)	(0.3)
<i>less</i> depreciation on assets which will be fully depreciated in RCP1	(34.2)	(32.3)	(1.9)
<i>plus</i> allocated depreciation from assets fully depreciated in RCP1	17.6	16.2	1.4
<i>plus</i> dismantling costs	5.7	4.3	1.4
<i>plus</i> net asset write-offs	5.4	4.1	1.2
Capitalised interest adjustment for the difference between GAAP and WACC	(0.4)	(0.3)	(0.1)
Note 4			
	140.4	120.7	19.7

Note: figures may not add exactly due to rounding.

Table 39: Note 4 – Capitalised interest depreciation adjustment

Capitalised interest depreciation adjustment			Total \$m	HVAC \$m	HVDC \$m
Capitalised interest on commissioned assets	A		7.3	6.0	1.3
Capitalised interest rate used on commissioned assets	B	7.62%			
Gross-up of capitalised interest	C= A/B		95.6	78.6	17.0
WACC post-tax interest rate used in MAR 2011/12 year	D	7.19%			
Capitalised interest at WACC	E=CxD		6.9	5.7	1.2
Depreciation Adjustment	A-E		0.4	0.3	0.1

Table 40: Note 8 – Operating allowance

Operating allowance		Total \$m	HVAC \$m	HVDC \$m
2012 opex allowance		248.5		
Actual Opex		241.2	223.9	17.3
Reallocation of 2011/12 opex allowance based on actual spend		248.5	230.7	17.8
Shareholder total; Variance actual to opex allowance		7.3	6.8	0.5

Note: figures may not add exactly due to rounding.

Table 41: Historical *ex-post* customer economic gain / loss

Disclosure Year	Ex-post economic gain / (loss)		
	\$m		
	Total	HVAC	HVDC
2007/08	(33.7)	(37.1)	3.4
2008/09	(1.1)	3.0	(4.1)
2009/10	12.2	10.6	1.6
2010/11	(44.4)	(55.5)	11.0
2011/12	(10.6)	(14.7)	4.1

Note: figures may not add exactly due to rounding.

A.4 Calculation of major capex adjustment

This appendix sets out calculations verifying the \$5 million adjustment to the 2013/14 MAR relating to the Otahuhu substation diversity project.

Table 42: Otahuhu substation diversity major project 'excess amount' adjustment

Otahuhu substation diversity project	
Amount included in rate base (\$m)	104.8
Approved amount (\$m)	99.0
Excess amount in rate base (\$m)	5.8
2013/14 MAR adjustment (\$m)	5.0

The Otahuhu substation diversity project is subject to an application to the Commission to vary the approval amount. The application is made after the disclosure year and, as such, the excess amount used here is on the basis of an unchanged approval amount. The application to the Commission includes considerable detail regarding the forecast and actual costs for the project.

A.5 Calculation of updated forecast MAR and revenue for 2013/14 and 2014/15

The calculations that support the updates are

- Appendix A2: Adjustment to zero historical accumulated wash-ups over eight years
- Appendix A3: MAR wash-up
- Appendix A4: Major capex overspend adjustment

Table 43: Calculation of updates to forecast MAR and revenue for 2013/14 and 2014/15

	2013/14			2014/15		
	Total \$m	HVAC \$m	HVDC \$m	Total \$m	HVAC \$m	HVDC \$m
Maximum Allowable Revenue (MAR) set on 31 October 2011	906.4	755.7	150.6	958.9	803.7	155.2
Updates to MAR for 2013/14 and 2014/15						
GUP 2009 Part XII - Kawerau generation export enhancement: (approved April 2012; forecast commissioning December 2013)	0.3	0.3	0.0	0.8	0.8	0.0
2011/12 EV Adjustment	(23.3)	(30.5)	7.1			
2011/12 EV Adjustments grossed up for tax	(32.4)	(42.3)	9.9	0.0	0.0	0.0
Updated forecast MAR for 2013/14 and 2014/15	874.3	713.7	160.5	959.7	804.5	155.2

	2013/14			2014/15		
	Total \$m	HVAC \$m	HVDC \$m	Total \$m	HVAC \$m	HVDC \$m
Updates to forecast revenue						
Pass-through and recoverable costs wash-up, plus interest	(12.3)	(11.5)	(0.8)			
Rates forecast for 2013/14 and 2014/15	5.1	4.9	0.3	5.2	4.9	0.3
EA levies as per latest forecast for 2013/14 to 2014/14	5.4	5.4	0.0	5.5	5.5	0.0
CC levies as per latest forecast for 2013/14 to 2014/15	2.5	2.5	0.0	2.0	2.0	0.0
Pass-through costs forecast for 2012/13 and 2014/15	13.0	12.7	0.3	12.7	12.5	0.3
Reserves as per latest forecast for 2013/14 to 2014/15	2.4	0.0	2.4	2.5	0.0	2.5
DSP as per latest forecast for 2013/14 to 2014/15	0.8	0.8	0.0	0.0	0.0	0.0
Recoverable costs forecast for 2012/13 and 2014/15	3.2	0.8	2.4	2.5	0.0	2.5
Updated forecast revenue	878.3	715.8	162.5	974.9	816.9	158.0

Note: figures may not add exactly due to rounding.

Table 44: Calculation of 2011/12 EV adjustment grossed up for tax

	Total \$m	HVAC \$m	HVDC \$m
MAR wash-up for 2011/12	10.6	14.7	(4.1)
Wash-up from earlier years	(25.9)	(36.2)	10.3
Net MAR wash-up for 2011/12	(15.3)	(21.5)	6.2
Major project overspend (Otahuhu sub-station diversity)	(5.0)	(5.0)	-
Closing balance 2011/12	(20.3)	(26.5)	6.2
Interest 2012/13	(1.5)	(1.9)	0.4
Closing balance 2012/13	(21.8)	(28.4)	6.7
Interest 2013/14	(1.6)	(2.0)	0.5
Closing balance 2013/14	(23.3)	(30.5)	7.1
2011/12 EV adjustment, grossed up for tax	(32.4)	(42.3)	9.9

Note: figures may not add exactly due to rounding.

A.6 Quality report detail

This appendix provides more detail of events that contributed to the HVAC unavailability results for 2011/12.

Table 45: Detail of events contributing to HVAC unavailability performance

Circuit	Outage Duration (days)	Resultant Unavailability	Comment
RDF-WTU1	24.5 ^a	0.006%	The Redclyffe-Whakatu circuit 1 is configured as a transformer feeder with Whakatu transformer T4. The outage was initiated when a 33 kV feeder fault resulted in the explosion of a feeder circuit breaker and the T4 incomer circuit breaker. Because of the extent of the damage, T4 and circuit 1 were out of service for an extended period while a replacement incomer circuit breaker was installed. A 33 kV outdoor to indoor conversion is planned for the Whakatu substation.
MNG-OTA1	8.3 ^a	0.006%	The Mangere-Otahuhu circuit 1 became unavailable for service because the circuit breaker at Otahuhu developed a mechanical fault and would not latch closed. At the time of the fault being discovered, this circuit was to be taken out of service on a daily basis for a week for planned work at Otahuhu. Because of the circuit breaker fault the circuit could not be returned to service overnight as planned. There were delays in sourcing a new part from the manufacturer, and new part was made locally.

Circuit	Outage Duration (days)	Resultant Unavailability	Comment
TKH-WAI1	7.1	0.006%	<p>The Te Kaha-Waiotahi circuit had become particularly unreliable during conditions of strong winds which caused many auto-recloses and trippings. The protection relay on the circuit had indicated a likely fault zone, but several fault patrols had failed to find the problem. On six occasions after several failed attempts to reclose the circuit it was left out of service until line patrols had been completed. Because of the difficult terrain, the difficult weather conditions, and the availability of a diesel generator to supply the load at Te Kaha, there was reduced urgency for returning the circuit to service, and the resultant outages were quite lengthy.</p> <p>More sophisticated distance-to-fault measuring equipment was installed on the circuit. Works have now been carried out on the line which appears to have fixed the tripping issue.</p>
RPO-WRK1	3.6	0.003%	<p>Gale force winds felled plantation pine trees across the transmission line causing significant damage to a transmission tower. The tower was repaired and the Rangipo-Wairakei circuit returned to service. Prior to this event Transpower had approached the plantation operator about removing the trees but had not been successful.</p>
OKI-NAP-WRK2	8.2 ^{ab}	0.003%	<p>The hydraulic system on circuit breaker 302 at Ohaaki (OKI) had failed, and it and the associated OKI-NAP-WRK2 circuit were removed from service for repairs. There are only a two of this model circuit breaker fitted with the hydraulic mechanism installed, and they are known to have particular maintenance issues. After this failure it was decided to replace the circuit breaker with a modern Spring mechanism model. The other two CB will be replaced based on condition, performance and age.</p>

Circuit	Outage Duration (days)	Resultant Unavailability	Comment
COL-CLH-APS-OTI1	2.9	0.003%	During heavy snow conditions in June 2012 the Coleridge-Castlehill-Arthurs Pass-Otira circuit tripped and auto-reclosed several times because of snow build up. Line patrols could not be carried out because of the very difficult conditions. The line section between Castle Hill and Arthurs Pass was disconnected and the two ends returned to service in order to restore supply. There was no permanent damage to the line.

Notes:

a – duration capped at seven days for unavailability calculation.

b – part of this occurred in 2010/11.

Table 46: Further detail regarding 15 August 2011 event

Start	Finish	Duration (minutes)	Average Estimated MW not supplied	System Minutes	Point of Supply Affected	Reason
03:45	11:44	479	6.9	0.48	Opunake	Both Opunake-Stratford circuits tripped.
16:15	16:35	20	54	0.16	Gracefield	Both Gracefield-Haywards circuits tripped.
19:13	19:48	35	51.7	0.27	Gracefield	One Gracefield-Hayward circuit had tripped at 09:05 and the second tripped at 19:13.
19:52	20:15	23	50.6	0.17	Gracefield	One circuit was still unavailable because of the earlier fault, and the second circuit tripped again.
19:17	19:30	13	48.1	0.08	Linton	The Bunnythorpe-Linton-Wilton had already tripped and then the Haywards-Linton circuit tripped causing the interruption.
19:34	19:59	25	47.1	0.11	Linton	The Haywards-Linton circuit was returned to service, but tripped again four minutes later.
Total for Event				1.26		

A.7 Calculation of hypothetical revenue adjustments

This appendix provides supporting calculations and graphs for the hypothetical revenue adjustments that would apply if the Commission’s current service quality measures were linked to a performance incentive regime. We have assumed that the total value at risk is 1% of the 2011/12 forecast MAR, and that the four measures are evenly weighted. As such, the value at risk per measure is (\$644 million * 1% * 25% =) \$1.6 million. The table below sets out calculations for each revenue adjustment.

Table 47: Calculation of hypothetical revenue adjustments

Quality measure	Collar	Cap	Unit range	Revenue range \$m	Gradient \$m per unit	Target	Actual	Difference	Adjustment \$m
	x_{min}	x_{max}	$\Delta X = (x_{max} - x_{min})$	ΔY	$\Delta Y / \Delta X$	x_0	x	$dx = (x - x_0)$	$dy = dx * (\Delta Y / \Delta X)$
Number of loss of supply events greater than 0.05 system minutes ³¹	31	10	-21	3.2	-0.15	21	19	-2	0.3
Number of loss of supply events greater than 1 system minute	5	1	-4	3.2	-0.8	3	2	-1	0.8
Unplanned HVAC circuit unavailability (%)	0.083	0.029	-0.054	3.2	-59.6	0.056	0.064	0.008	(0.5)
Total system minutes (planned and unplanned)	29.07	4.31	-24.76	3.2	-0.13	16.69	14.45	-2.24	0.3
Hypothetical revenue adjustment									0.9

The following charts illustrate the hypothetical revenue adjustment for each of the service quality measures.

³¹ For this quality measure, the target figure is not mid-way between the cap and the collar. Rather than using asymmetric gradients above and below the target, we have adopted a consistent gradient. This means that the revenue adjustment would be a \$1.65 million increase if we achieved the cap and \$1.5 million reduction if we reached the collar.

Figure 5: Quality incentive (number of events greater than 0.05 system minutes)

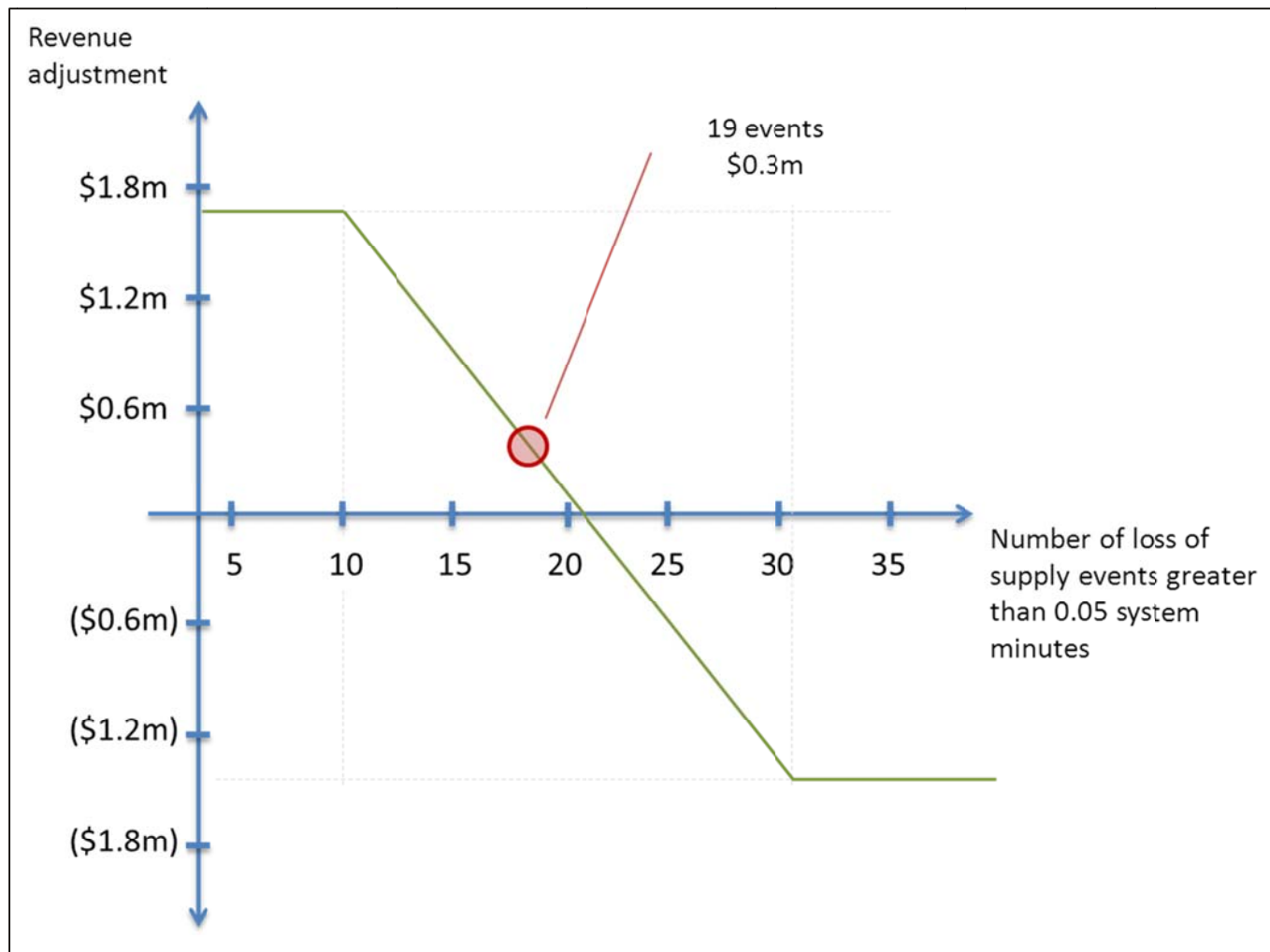


Figure 6: Quality incentive (number of events greater than one system minute)

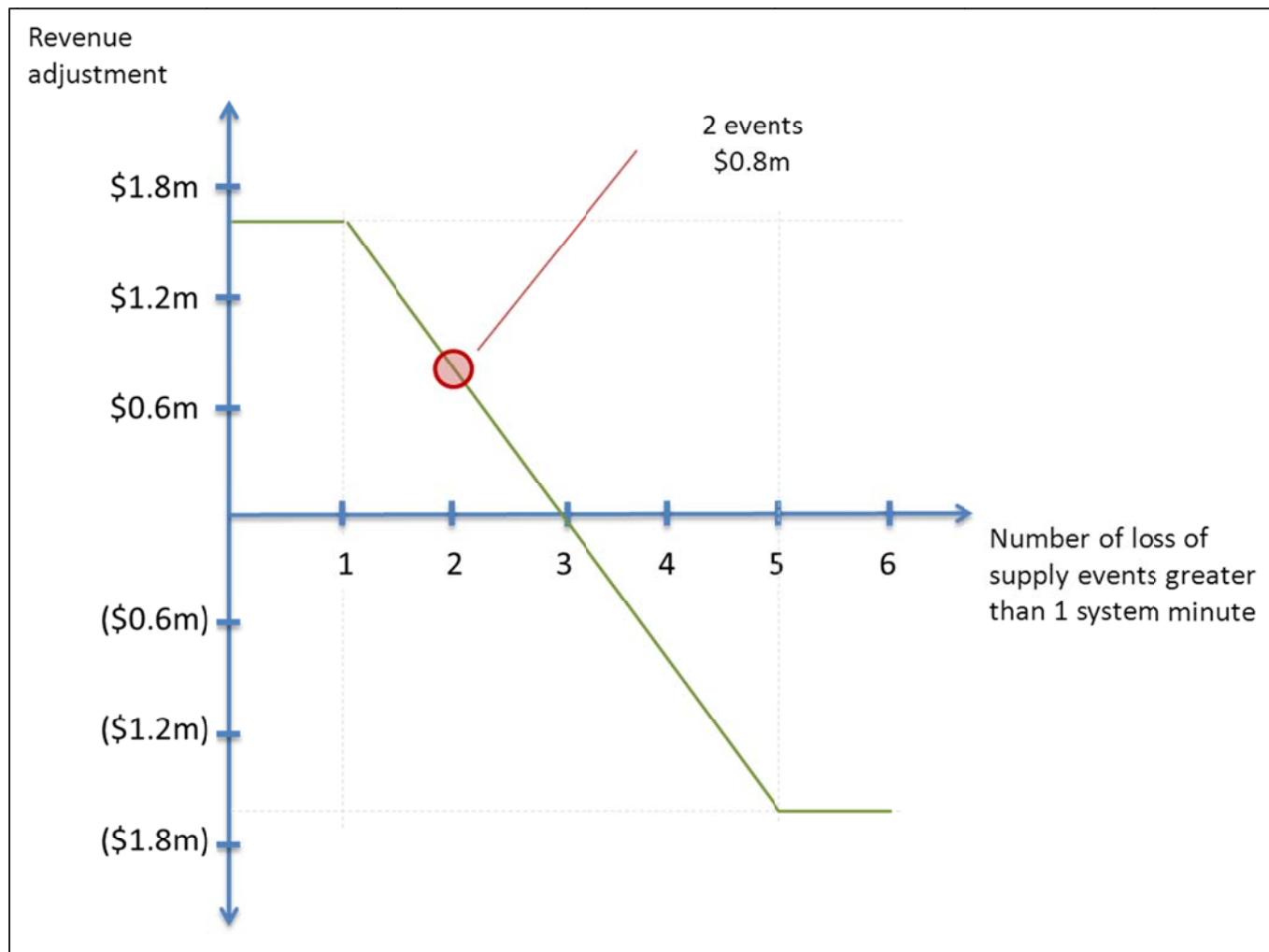


Figure 7: Quality incentive (unplanned HVAC circuit unavailability)

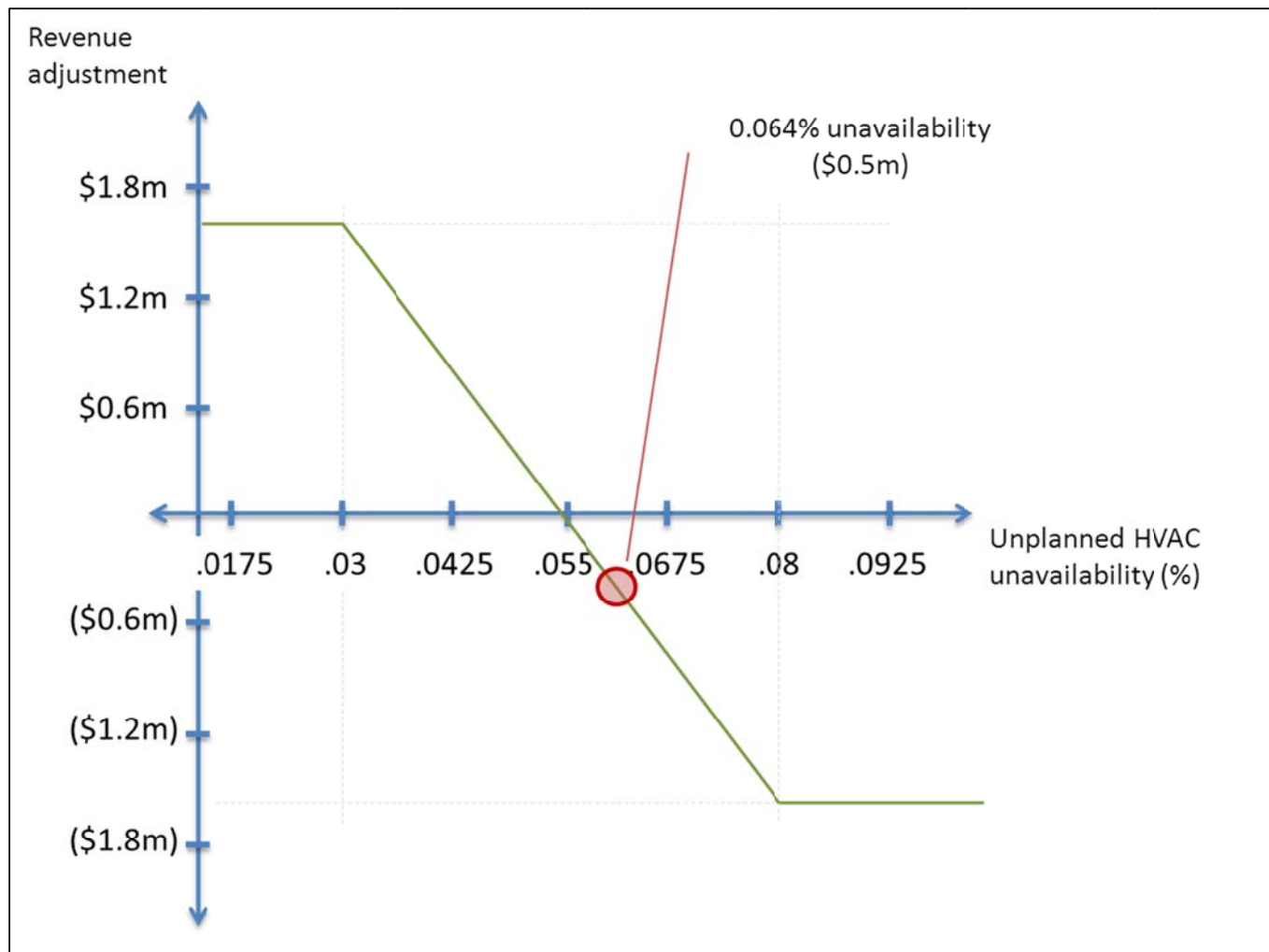
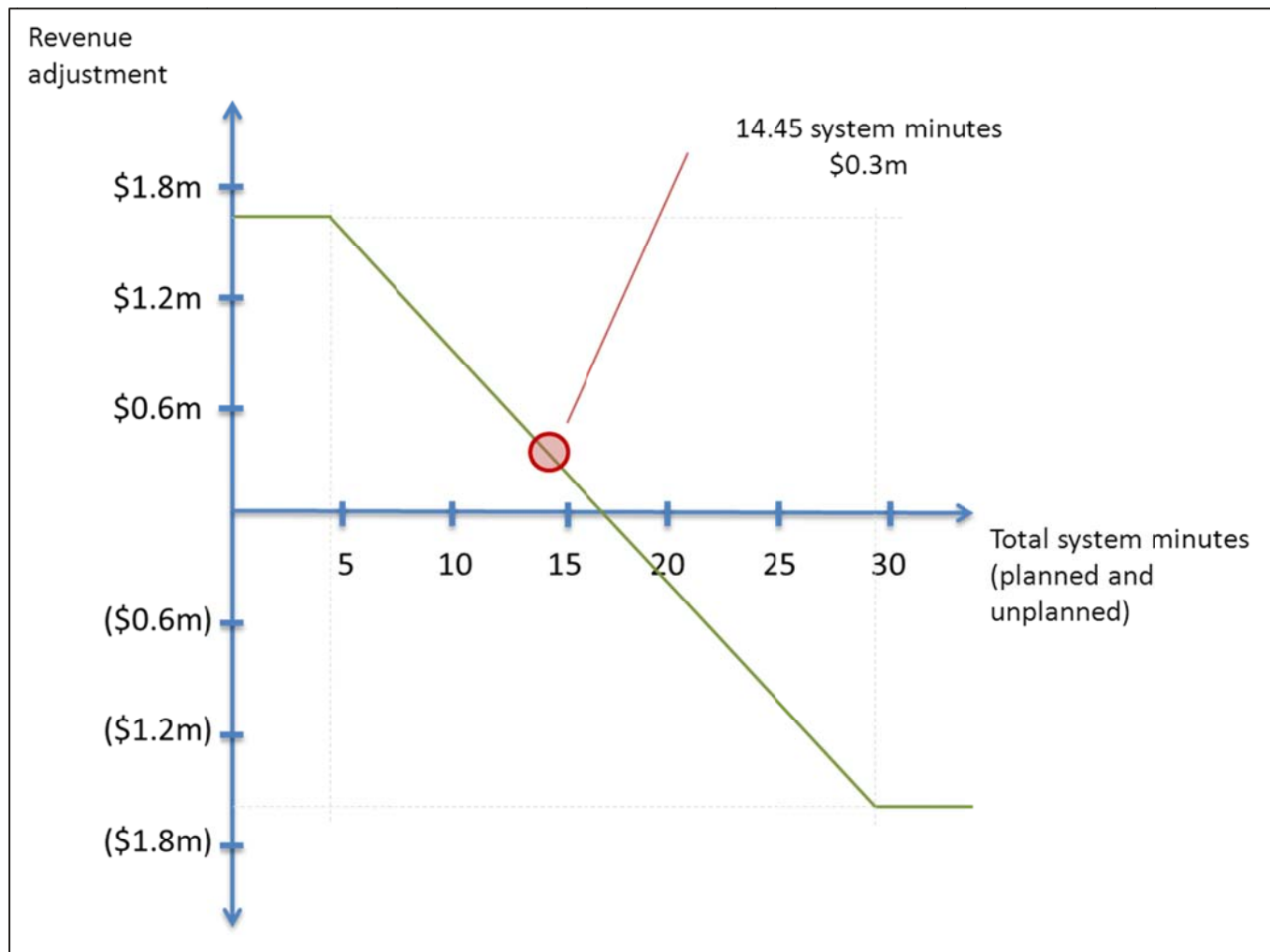


Figure 8: Quality incentive (total system minutes)



A.8 Directors' certificate

We, Mark Verbiest and Alastair Scott, being directors of Transpower New Zealand Limited (Transpower), certify that, having made all reasonable enquiries, to the best of our knowledge and belief, the attached *Annual Regulatory Report* (and associated information) for the period 1 July 2011 to 30 June 2012 and dated 18 October 2012 complies with the requirements of the Commerce Act (Transpower Individual Price-Quality Path) Determination 2010, and with the Commission's information requirements, which were issued by notice in writing to Transpower under section 53ZD of the Commerce Act 1986 on 23 February 2012.



Mark Verbiest
Chairman, Transpower New Zealand Limited



Alastair Scott
Director, Transpower New Zealand Limited

A.9 Independent assurance report

The following pages contain an independent assurance report from PricewaterhouseCoopers.



INDEPENDENT ASSURANCE REPORT – ANNUAL COMPLIANCE MONITORING STATEMENT

To the readers of the Annual Compliance Monitoring Statement (and associated information) of Transpower New Zealand Limited (Transpower) for the disclosure year ended 30 June 2012:

We have been engaged to provide an independent assurance report on the Annual Compliance Monitoring Statement (ACMS) (and associated information) in respect of the individual price-quality path prepared by Transpower for the year ended 30 June 2012 and dated 18 October 2012 for the purposes of Part 5 of the Commerce Act (Transpower Individual Price-Quality Path) Determination 2010 (the Determination).

Directors' and Auditor's Responsibilities

Transpower's directors are responsible for the preparation of the ACMS (and associated information) in accordance with the Determination and for such internal controls as the directors determine are necessary to enable the preparation of the ACMS (and associated information) that is free from material misstatement.

We are qualified as an auditor as defined in the Determination. Our responsibility is to express an independent opinion on whether Transpower's ACMS (and associated information) with respect to the individual price-quality path has been prepared in accordance with the Determination.

Basis of opinion

We have conducted an assurance engagement in accordance with the framework for Assurance Engagements and the Standard on Assurance Engagements 3100 (SAE 3100) issued by the External Reporting Board.

The objectives of an assurance engagement carried out under SAE 3100 are to:

- (1) Obtain assurance about whether, in all material respects, an entity has complied with requirements contained in legislation, regulation, agreements, contracts or similar, or internally imposed standards, codes or practices; and
- (2) Express a conclusion on that compliance in the form of an opinion.

The professional standards require that we comply with ethical requirements and plan and perform the assurance engagement to obtain reasonable assurance about whether the ACMS (and associated information) is free from material misstatement in respect of compliance with the Determination.

Considering materiality requires that we understand the factors that might influence the decisions of the intended users of the information contained in the ACMS (and associated information) when determining the nature and extent of our evidence-gathering procedures.



An assurance engagement involves performing procedures to obtain appropriate evidence about the amounts and disclosures in the ACMS (and associated information). The procedures selected depend on judgment, including the assessment of the risks of material misstatement, whether due to fraud, error or other reasons. In evaluating those risks we consider the internal controls that are relevant to Transpower's preparation of the ACMS (and associated information) in order to design assurance procedures that are appropriate in the circumstances. We do not express an opinion on the effectiveness of Transpower's internal controls.

An assurance engagement also includes evaluating the appropriateness of the calculations and the reasonableness of estimates made by Transpower in preparing the information that it is required to disclose in the ACMS (and associated information).

In relation to the information requirements in Part 5 that relate to the price path in Part 3, quality standards in Part 4 and quality incentive mechanism in Part 5 of the Determination, our assurance engagement included examination, on a test basis, of evidence relevant to the amounts and disclosures contained in the sections of the ACMS (and associated information) set out in Appendix A to this report.

The procedures we have undertaken in relation to the amounts and disclosures contained in the sections of the ACMS (and associated information) set out in Appendix A to this report included:

- (1) Examining, on a test basis, internally and externally generated documents and records;
- (2) Interviewing Transpower personnel;
- (3) Reviewing calculation methodologies and judgments used to derive the amounts and disclosures;
- (4) Testing the mathematical accuracy of the calculations;
- (5) Identifying key inputs to the calculations and reconciling or agreeing them to source documents and systems; and
- (6) Such other procedures as we considered necessary.

In performing our procedures we have placed reliance on Transpower's underlying systems and business records.

Our assurance engagement also included an assessment of the significant estimates and judgments, if any, made by Transpower in the preparation of the ACMS (and associated information) and an assessment of whether the basis of preparation with respect to the individual price-quality path has been adequately disclosed.

Opinion

We have obtained all the information and explanations we required to express our opinion.

In our opinion:



- (1) The forecast HVAC revenue and forecast HVDC revenue that Transpower used for the purpose of setting charges under the Transmission Pricing Methodology for the 2011/12 pricing year did not, in aggregate, exceed the forecast Maximum Allowable Revenue (MAR) of \$644 million.
- (2) The information included in Section 7 of the ACMS regarding the quality standards for the disclosure year ended 30 June 2012 has been prepared or calculated in accordance with the requirements of clause 4.3 (2) of Part 4 of the Determination.
- (3) The information included in Section 7 of the ACMS regarding the quality incentive mechanism for the disclosure year ended 30 June 2012 has been prepared or calculated in accordance with the requirements of clause 5.6 (2) of Part 5 of the Determination.
- (4) The disclosures included in the ACMS (and associated information) listed in Appendix A to this report prepared by Transpower for the disclosure year ended 30 June 2012 and dated 18 October 2012, have been prepared and presented, in all material respects, in accordance with the Determination.

Other matters

Our assurance procedures and the opinions included in this report relate to the specific disclosures set out in the ACMS that are required under Part 5 of the Determination (as set out in Appendix A to this report). There is other information in the ACMS that Transpower is not required to disclose under Part 5 of the Determination (including disclosures required by the Notice to Supply Information to the Commerce Commission under Section 53ZD of the Commerce Act 1986 dated 23 February 2012). Our assurance procedures have been undertaken only in relation to information that Transpower is required to disclose under the Determination. Accordingly we express no opinion on disclosures made in the ACMS that are not required by the Determination.

Independence

We have no relationship with, or interests in Transpower other than in our capacity as auditors of the ACMS and in the provision of other assurance, taxation and professional advisory services.

We are not aware of any relationships between our firm and Transpower that, in our professional judgment, impairs our independence.

Completion

Our independent assurance engagement was completed on 18 October 2012 and our opinion is expressed as at that date.

PricewaterhouseCoopers

PricewaterhouseCoopers
Chartered Accountants
Wellington



Appendix A Audited ACMS Disclosures

Section 1

- Tables 1-3

Section 2

- Tables 4-8
- The text associated with table 6

Section 3

- Tables 9-12
- The text in section 3.5

Section 4

- Sections 4.3, 4.4 and 4.5

Section 5

- Tables 21-24
- The text in section 5.3

Section 6

- Table 25

Section 7

- All text and tables in section 7

Section 8

- Tables 31-32
- Text associated with table 31

Appendices

- Appendix A2
- Appendix A3
- Appendix A4
- Appendix A5
- Appendix A6
- Appendix A7

A.10 Compliance checklist

This appendix shows how the information in this report demonstrates Transpower's compliance with each part of IPP Determinations and Section 53ZD Notice. It lists the clauses in Part 5 of the Determinations and Notice in order, with an explanation of which parts of the report demonstrate compliance with the clause.

The regulations shown in this appendix are as follows.

- Part 5 of the IPP Determination dated 22 December 2010
- Part 5 of the IPP Determination dated 1 November 2011
- Part 5 of the IPP Determination dated 31 January 2012
- Section 53ZD Notice

A.10.1 Part 5 of the IPP Determination dated 31 January 2012

Table 48: Compliance cross-referencing IPP Part 5

Clause	Information or action required	Demonstration of compliance
5.1	Requirement to provide annual compliance monitoring statement and associated information	-
5.1(1)	Transpower must provide to the Commission and publish on Transpower's website, no later than the close of business on the Friday of the third complete week of the month of October following the end of each disclosure year, an annual compliance monitoring statement that includes a statement in writing confirming whether or not Transpower has complied in respect of that disclosure year with the information requirements, including relevant calculations, specified in this Part 5 in relation to the price path in Part 3, the quality standards in Part 4 and the quality incentive mechanism referred to in clause 5.6	Appendix A.8
5.1(2)	The annual compliance monitoring statement provided under clause 5.1(1) must be accompanied by the associated information specified in this Part 5 for the disclosure year and for comparative years, and any further information necessary to fully support and explain Transpower's compliance with this determination.	-

Clause	Information or action required	Demonstration of compliance
5.2	Information requirements relating to price path	-
5.2(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.2 for Transpower's price path.	-
5.2(2)	Forecast MAR calculation model	-
5.2(2)(a)	any material variations made during the disclosure year to the forecast MAR calculation model	Section 3.5
5.2(3)	Revenues	-
5.2(3)(a)	For each disclosure year	-
5.2(3)(a)(i)	the forecast MAR for the relevant pricing year determined by the Commission in accordance with Part 3; and	Table 9
5.2(3)(a)(ii)	the MAR for the disclosure year calculated in accordance with clause 5.2(7) and Schedule E; and	Table 10
5.2(3)(a)(iii)	the update of any forecast MAR that is calculated at the end of the disclosure year in accordance with clause 5.4 and Schedule D; supported by sufficient detail to demonstrate that each forecast MAR, each MAR or each update of a forecast MAR has been calculated in accordance with the relevant requirements and definitions specified in this determination	Appendix A.5
5.2(3)(b)	For the relevant pricing year	-
5.2(3)(b)(i)	HVAC revenue	Table 12
5.2(3)(b)(ii)	HVDC revenue	Table 12
5.2(4)	Capital Expenditure	-
5.2(4)(a)	for each disclosure year, a list of base capital expenditure (broken down by each expenditure category in the definition of that term in Part 2) including	Table 4
5.2(4)(a)(i),	base capital expenditure that was commissioned during the disclosure year; and	Section 2.2

Clause	Information or action required	Demonstration of compliance
5.2(4)(a)(ii)	an explanation of any material variation between base capital expenditure that was forecast to be commissioned during the disclosure year and base capital expenditure that was commissioned during the disclosure year	Section 2.2
5.2(4)(b)	for each disclosure year, a list of base capital expenditure asset enhancement projects that ceased during the disclosure year to continue to meet the definition of base capital expenditure due to the total level of capital expenditure incurred on the project.	Section 2.3
5.2(4)(c)	for each disclosure year, a list of the base capital expenditure asset enhancement projects included in the approved base capital expenditure for which Transpower has submitted a major capex proposal to the Commission, and the result of reducing the approved base capital expenditure for the regulatory period for the amount of major capex.	Section 2.3
5.2(4)(d)	a forecast for each of the remaining disclosure years in the period from 1 July 2011 to 30 June 2015, calculated by providing base capital expenditure and major capital expenditure separately, including major capital expenditure approved by the Commission during the current disclosure year that will be commissioned during a subsequent disclosure year.	Table 8
5.2(4)(e)	in the last annual compliance monitoring statement for the period from 1 July 2011 to 30 June 2015, all relevant material necessary to assess any application within the annual compliance monitoring statement for ex-post approval of base capital expenditure in excess of the aggregate level of approved base capital expenditure, including a description in each instance, of why each relevant project or programme: (i) was unable to be reasonably foreseen by Transpower; (ii) is required to maintain the security of supply of the grid; and (iii) could not be reasonably deferred.	Not applicable for 2011/12 disclosure year
5.2(4)(f)	for each disclosure year, a list of assets determined by the Commission to be stranded assets.	3.5
5.2(5)	Operating expenditure for each disclosure year (broken down by each expenditure category in the definition of operating expenditure), including:	-
5.2(5)(a)	actual operating expenditure during the disclosure year; and	Table 31

Clause	Information or action required	Demonstration of compliance
5.2(5)(b)	an explanation of any material variation between operating expenditure that was forecast by Transpower for the disclosure year and actual operating expenditure during the disclosure year.	Section 8
5.2(6)	Ex-post economic gain or loss, HVAC ex-post economic gain or loss, and HVDC ex-post economic gain or loss for each disclosure year, including:	-
5.2(6)(a)	details of how each ex-post economic gain or loss has been calculated in accordance with the building blocks calculation in Schedule E; and	Appendix A.3
5.2(6)(b)	the allocation of the resulting EV account entry to each of the EV accounts for HVAC customers and HVDC customers; and	Table 33, Table 34
5.2(6)(c)	a reconciliation of the opening and closing balances of the EV accounts, including details of the calculation of interest and any other adjustments to the balances of the EV accounts; and	Table 44
5.2(6)(d)	details of any changes to Transpower's policy of hedging capital expenditure during the disclosure year; and	Section 3.5
5.2(6)(e)	details of all gains and losses in the disclosure year that are recorded in the EV accounts in respect of any instrument that ceases to be an effective hedge or in respect of any commodity instrument that is not an effective hedge.	Section 3.5
5.2(7)	MAR for the purposes of the calculation of the ex-post economic gain or loss:	Table 11
5.2(7)(a)	using applicable input methodologies;	-
5.2(7)(b)	using as the operating expenditure allowance: (i) for the disclosure year from 1 July 2011 to 30 June 2012, \$248.5 million; (ii) for the disclosure year from 1 July 2012 to 30 June 2013, \$279.8 million, adjusted for any disparity between the forecast CPI and the actual CPI; (iii) for the disclosure year from 1 July 2013 to 30 June 2014, \$281.2 million, adjusted for any disparity between the forecast CPI and the actual CPI; (iv) for the disclosure year from 1 July 2014 to 30 June 2015, \$287.9 million, adjusted for any disparity between the forecast CPI and the actual CPI;	-

Clause	Information or action required	Demonstration of compliance
5.2(7)(c)	excluding pass-through costs and recoverable costs;	-
5.2(7)(d)	using actual base capital expenditure that was commissioned in the disclosure year;	Table 36
5.2(7)(e)	using actual major capital expenditure that was commissioned in the disclosure year; and	Table 36
5.2(7)(f)	using, for all other building blocks, actual costs for the disclosure year.	Table 11
5.2(8)	Pass-through costs and recoverable costs for each disclosure year, including:	-
5.2(8)(a)	the pass-through costs and recoverable costs incurred by Transpower during the disclosure year;	Table 21
5.2(8)(b)	the pass-through costs and recoverable costs recovered by Transpower from customers as part of its revenue for the relevant pricing year; and	Table 21
5.2(8)(c)	the allocation of adjustment amounts arising from the differences between the amounts in subclauses (a) and (b) above, applied in the forecast of pass-through costs and recoverable costs in the setting of transmission charges under the TPM in the next relevant pricing year.	Table 21
5.2(9)	Major capex adjustments for each disclosure year, calculated where applicable using the major capex incentive rate of 33%.	Table 42
5.3	Information requirements and calculations relating to EV adjustments	-
5.3(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.3 for calculating EV adjustments.	-
5.3(2)	For the purposes of calculating the forecast MAR for each pricing year of the remainder period, the EV account balances are: (a) the opening EV account balances; less (b) EV adjustments applied to the forecast MAR for the transition year; plus (c) forecast interest on the opening EV account balances, for each disclosure year in the period 1 July 2012 to 30 June 2015 plus five additional years, applying the WACC and applying the EV adjustment calculation requirement in subclause (4)(a) below.	Appendix A.2 Appendix A.3

Clause	Information or action required	Demonstration of compliance
5.3(3)	For the purposes of calculating an update of a forecast MAR for a disclosure year of the remainder period, the EV account balances are: (a) the EV account balances, excluding the balances calculated under subclause (2); plus (b) forecast interest for each disclosure year of the remainder period on the EV account balances in subclause (3)(a), in accordance with the interest rate specified in the definition of EV account.	Table 44
5.3(4)	Transpower must:	-
5.3(4)(a)	calculate EV adjustments that attribute one-eighth of the balances calculated in subclause (2) to the forecast MAR for each disclosure year in the remainder period;	Appendix A.2
5.3(4)(b)	at the end of each disclosure year, calculate EV adjustments that attribute the balances calculated in subclause (3) to the update of the forecast MAR for the next pricing year commencing after the time of calculation;	Appendix A.3
5.3(4)(c)	gross up the EV adjustments applied to the forecast MAR for each disclosure year in terms of subclauses (4)(a) or (4)(b) to a forecast pre-tax input to the forecast MAR calculation using the corporate tax rate; and	Appendix A.2 Appendix A.3
5.3(4)(d)	for base capital expenditure in excess of aggregate approved base capital expenditure for the regulatory period or any base capital expenditure that has not been fully subject to Transpower's internal approval processes, make each EV account entry sufficient to fully offset the revenue impact of such capital expenditure over the life of the applicable assets, in the disclosure year that ends on 30 June 2015; and	Section 2.3
5.3(4)(e)	make an EV account entry for the major capex adjustments, as applicable to the disclosure year, on an annual basis.	Appendix A.5
5.3(5)	Where Transpower applies for, and the Commission provides, ex-post approval of base capital expenditure after the regulatory period, Transpower must make an EV account entry at the time of that approval to adjust the EV account entry in clause 5.3(4)(d) to fully offset the revenue impact of that adjustment, with such adjustment to exclude the revenue impact over the regulatory period.	n/a

Clause	Information or action required	Demonstration of compliance
5.3(6)	The approved base capital expenditure for the purposes of clause 5.3(4)(d) is the aggregate of: (a) for the disclosure year from 1 July 2011 to 30 June 2012, \$208.6 million; and (b) for the disclosure year from 1 July 2012 to 30 June 2013, \$301.9 million, adjusted for any disparity between the forecast CPI and the actual CPI; and (c) for the disclosure year from 1 July 2013 to 30 June 2014, \$244.9 million, adjusted for any disparity between the forecast CPI and the actual CPI; and (d) for the disclosure year from 1 July 2014 to 30 June 2015, \$278.4 million, adjusted for any disparity between the forecast CPI and the actual CPI.	n/a
5.4	Information requirements relating to forecast MAR updates	-
5.4(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.4 for Transpower's forecast MAR updates.	-
5.4(2)	Transition year: No forecast MAR updates apply.	-
5.4(3)	Remainder period:	-
5.4(3)(a)	an update to each of the future forecast MARs in the remainder period in Schedule F, calculated in accordance with the building blocks in Schedule D and the forecast MAR calculation model in order to reflect the revenue impact of major capital expenditure approved by the Commission; and	Appendix A.5
5.4(3)(b)	for each update under subclause (a):	-
5.4(3)(b)(i)	identification of each major capital expenditure project approved by the Commission in the disclosure year if the project is forecast to be commissioned during the period from 1 July 2012 to 30 June 2015; and	Section 4.3
5.4(3)(b)(ii)	for each such project, separately detailing the forecast date that the project will be commissioned and the incremental revenue impact of the project on each applicable future forecast MAR.	Section 4.3

Clause	Information or action required	Demonstration of compliance
5.4(3)(c)	for each update under subclause (a), use as the operating expenditure allowance: (i) for the pricing year from 1 April 2013 to 31 March 2014, \$281.2 million; and (ii) for the pricing year from 1 April 2014 to 31 March 2015, \$287.9 million; and	Appendix A.5
5.4(3)(d)	for each update under subclause (a), use for each relevant pricing year the approved base capital expenditure: (i) for the disclosure year from 1 July 2011 to 30 June 2012, \$208.6 million; and (ii) for the disclosure year from 1 July 2012 to 30 June 2013, \$301.9 million; and (iii) for the disclosure year from 1 July 2013 to 30 June 2014, \$244.9 million; and (iv) for the disclosure year from 1 July 2014 to 30 June 2015, \$278.4 million.	Appendix A.5
5.5	Information requirements relating to quality measures and targets	-
5.5(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.5 for Transpower's quality measures and targets.	-
5.5(2)	Disclosure year from 1 July 2011 to 30 June 2012: (a) actual performance for each of the quality measures in clauses 4.1(1)(a)-(d); (b) reasons for any failure to meet the quality targets specified in clauses 4.2(1)(a)-(c); (c) for all interruptions over 1 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.	Table 26 Table 27 Table 28 Appendix A.6

Clause	Information or action required	Demonstration of compliance
5.5(3)	Disclosure years in the period 1 July 2012 to 30 June 2015: (a) actual performance for each of the quality measures in clauses 4.1(1)(a)-(d); (b) reasons for any failure to meet the quality targets to be specified in clause 4.2(2); (c) for all interruptions over 1 system minute, provide a report that sets out: (i) the reason or reasons for the interruption; and (ii) Transpower's response to the interruption; and (iii) any change to Transpower's policies as a result of the interruption; and (iv) the impact of the interruption in system minutes.	n/a
5.6	Information requirements relating to quality incentive mechanism	-
5.6(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.6 for Transpower's quality incentive mechanism.	-
5.6(2)	Disclosure year from 1 July 2011 to 30 June 2012: (a) the impact that Transpower's actual performance would have had on Transpower's forecast MAR under the quality incentive mechanism outlined in clause 5.6(2)(b), had that quality incentive mechanism applied to Transpower's forecast MAR in the relevant pricing year; (b) Transpower must use the targets, caps, collars and weightings for each quality measure as set out in the following table: [...]	Appendix A.7 Table 30 Appendix A.7 Figure 5 Appendix A.7 Figure 6 Appendix A.7 Figure 7 Appendix A.7 Figure 8

Clause	Information or action required	Demonstration of compliance
5.6(3)	<p>Disclosure years in the period 1 July 2012 to 30 June 2015:</p> <p>(a) the impact that Transpower's actual performance would have had on Transpower's forecast MAR under the quality incentive mechanism outlined in clause 5.6(2)(b), had that quality incentive mechanism applied to Transpower's forecast MAR in the relevant pricing year;</p> <p>(b) Transpower must use the targets, caps, collars and weightings for each quality measure as set out in the following table:</p> <p>[...]</p>	n/a
5.7	Information requirements relating to comparative years	-
5.7(1)	The information requirements referred to in clause 5.1 are as specified in this clause 5.7 for comparative years.	-
5.7(2)	Historical information, as specified under this clause 5.7(4), for the disclosure year and the prior four years	-
5.7(3)	Forecast information, as specified under this clause 5.7(4), for the remaining disclosure years in the regulatory period.	-
5.7(4)	Including information of the types set out in:	-
5.7(4)(a)	clause 5.2(3)(b)(i) and (ii), being both the historical and forecast information;	Table 12
5.7(4)(b)	clause 5.2(4)(a)(i), being the historical information only;	Table 7
5.7(4)(c)	clause 5.2(4)(d), being the forecast information only;	Table 8
5.7(4)(d)	clause 5.2(5)(a), being both the historical and forecast information;	Table 32
5.7(4)(e)	clause 5.2(6), being the historical information only;	Table 41
5.7(4)(f)	clause 5.2(8)(a) to (c), being the historical information only; and	Table 24
5.7(4)(g)	clause 5.5(2)(a), clause 5.5(3)(a) and clause 4.1(1)(a) to (d), being both the historical and forecast information.	Section 7.3

Clause	Information or action required	Demonstration of compliance
5.8	Independent assurance reports and certification requirements Transpower must provide to the Commission, at the same time it provides its annual compliance monitoring statement and associated information under this Part 5:	Appendices A.7, A.8
5.8(a)	a directors' certificate in respect of the annual compliance monitoring statement (and associated information) in the form specified in Schedule B; and	Appendix A.7
5.8(b)	an independent assurance report in respect of the annual compliance monitoring statement (and associated information) in the form specified in Schedule C, which may be qualified only if: <ul style="list-style-type: none"> (i) the auditor considers that the annual compliance monitoring statement or associated information fails to have been prepared, in any material respect, in accordance with this determination; and (ii) the independent assurance report explains with full reasons the respects in which the annual compliance monitoring statement or associated information so fails. 	Appendix A.8

A.11 Section 53ZD Notice

A.11.1 Major capex annual information requirements

Table 49: Compliance cross-referencing under Section 53ZD notice

Clause	Information/Action Required	Demonstration of Compliance
(1)	a list of the base capital expenditure asset enhancement projects for which Transpower has submitted a major capex proposal to the Commission in the 2011/12 disclosure year, and the reduction in the approved base capital expenditure for RCP1 made in respect of the amount of major capex.	Section 2.3
(2)	for each approved major capex project where the last asset to be delivered by the project is not yet commissioned or, in the case of non-transmission solutions, the project has not yet reached its completion date as at 30 June 2012:	-
	a) for transmission investments, actual major capex commissioned in the 2011/12 disclosure year and an explanation for any material variance from the major capex that was forecast in the setting of the 2011/12 forecast MAR to be commissioned on the project during the 2011/12 disclosure year; and	Section 4.1
	b) for non-transmission solutions, actual costs in the 2011/12 disclosure year that are intended to be recoverable costs and an explanation for any material variance from the forecast recoverable costs on the project that were used in setting Transpower's pricing for the 2011/12 disclosure year.	Section 5.3
(3)	for each major capex project that was commissioned in the 2011/12 disclosure year:	Section 4.2
	a) commissioning date for assets commissioned under the project;	Section 4.2
	b) for transmission investments, actual major capex;	Section 4.2
	c) for non-transmission solutions, actual costs intended to be recoverable costs; and	Section 5.3
	d) major capex project outputs achieved by the project.	Section 4.2

Clause	Information/Action Required	Demonstration of Compliance
(4)	for each major capex project that was commissioned in the 2011/12 disclosure year, where there was a material variation in any of the components of the major capex project of the types listed in clause 3.3.3(5) of the Capex IM Determination:	Section 4.2
	a) explanations for any material variances between the actual commissioning dates of assets associated with the project and the forecast commissioning dates specified in the major capex project approval;	Section 4.2
	b) for transmission investments, an explanation for any material variance from the major capex that was forecast to be commissioned;	Section 4.2
	c) for non-transmission solutions, an explanation for any material variance from the forecast recoverable costs;	Section 5.3
	d) an explanation of any variance from the approved major capex project outputs;	Section 4.2
	e) a summary of lessons learned during and after completion of the project; and	Section 4.2
	f) an assessment of the amount of any cost efficiencies that Transpower considers it has achieved in the course of the project and explanations of the assumptions made in that assessment	Section 4.2
(5)	for each major capex project for which the major capex overspend adjustment in clause 3.3.7(1)(a) of the Capex IM Determination applies in the 2011/12 disclosure year:	Section 4.2
	a) Transpower's calculation of the major capex overspend adjustment for the project, calculated in accordance with clause B4(1) of Schedule B of the Capex IM Determination;	Appendix A.4
	b) the 'excess amount' for the project, as defined in clause B4(3)(a) of Schedule B of the Capex IM Determination;	Appendix A.4
	c) the adjusted major capex allowance for the project, as calculated in accordance with clause B4(4) of Schedule B of the Capex IM Determination; and	n/a
	d) the amounts for each project, as defined in terms <i>o</i> , <i>p</i> , <i>q</i> , and <i>r</i> in clause B4(4) of Schedule B of the Capex IM Determination;	n/a
	e) a narrative explanation for the overspend; and	n/a

Clause	Information/Action Required	Demonstration of Compliance
	f) a narrative explanation for any amount that Transpower considers should not be included in the major capex overspend adjustment, being item <i>r</i> in clause B4(4) of Schedule B of the Capex IM Determination, with the extent of narrative being appropriate to the amount of the overspend.	n/a
(6)	for each major capex project for which the major capex overspend adjustment in clause 3.3.7(1)(b) of the Capex IM Determination applies in the 2011/12 disclosure year:	Section 4.4
	a) Transpower's calculation of the major capex overspend adjustment for the project, calculated in accordance with clause B4(1) of Schedule B of the Capex IM Determination;	n/a
	b) the 'excess amount' for the project, as defined in clause B4(3)(b) of Schedule B of the Capex IM Determination; and	n/a
	c) a narrative explanation for the overspend, with the extent of narrative being appropriate to the amount of the overspend.	n/a
(7)	for each major capex project for which the major capex project output adjustment in clause 3.3.7(2) of the Capex IM Determination applies in the 2011/12 disclosure year:	Section 4.2
	a) Transpower's calculation of the major capex project output adjustment for the project, calculated in accordance with the calculation in clause B5(1) of Schedule B of the Capex 1M Determination;	n/a
	b) Transpower's calculation of the capital expenditure amount for each project where the approved major capex project outputs were not met, in accordance with the definition in term <i>t</i> in clause B5(2) of Schedule B of the Capex IM Determination; and	n/a
	c) a narrative explanation of the reasons why the approved major capex project outputs were not met.	n/a

A.11.1.1 Update of forecast MAR for 2013/14 and 2014/15 pricing years

Table 50: Compliance cross-referencing for update of forecast MAR

Information / Action Required	Demonstration of Compliance
Transpower must calculate an update of the forecast MAR for the 2013/14 and 2014/15 pricing years in accordance with clause 5.4(3)(a) of the IPP Determination.	Appendix A.5
An update of a forecast MAR is not intended to be a full recalculation of the forecast MAR.	Appendix A.5
Transpower must demonstrate the incremental revenue impact of the additional approved major capex and the EV adjustment, calculated for the affected building blocks on a consistent basis with the calculation of the forecast MAR as determined on 1 November 2011.	Section 6
The calculation is to be carried out on a basis that is consistent with the Commission's notice of 15 July 2011 and subsequent necessary amendments and clarifications.	-
The forecast opening RAB value at 1 July 2012 that is to be used in the applicable 2013/14 and 2014/15 building block calculations is the previous forecast opening RAB value and this is not required to be updated to the actual closing RAB value that will separately be used in the calculation of the 2011/12 MAR wash-up.	Appendix A.5
No other amendments to the forecast MAR may be made apart from approved major capex and the EV adjustment relating to the 2011/12 MAR wash up.	Section 6
The calculation must update the 2013/14 and 2014/15 forecast MAR for the following major capex amounts up to 30 June 2012:	-
(1) new approved major capex proposals that were not included in the calculation of the forecast MAR set on 1 November 2011;	Appendix A.5
(2) amendments approved to the major capex allowance of an existing approved project included in the calculation of the forecast MAR set on 1 November 2011; and	n/a
(3) amendments approved to the commissioning date assumption of an existing approved project included in the forecast MAR set on 1 November 2011.	Appendix A.5

Information / Action Required	Demonstration of Compliance
The incremental revenue adjustments in the update of the forecast MAR for major capex must cover the forecasts of the capital charge, depreciation and the regulatory tax allowance.	Appendix A.5
No adjustments are to be made in the update of the forecast MAR for changes in the timing assumptions for base capital expenditure.	-
No adjustments are to be made to the forecast MAR for any other forecast MAR building block.	-

A.11.1.2 Certification and supporting information

Information / Action Required	Demonstration of Compliance
Transpower must provide the Commission with a directors' certificate for the information provided in response to this notice in the format set out in Appendix 1, to be completed and signed by a minimum of two directors of Transpower. If the information required by this notice is provided in Transpower's annual compliance monitoring statement, this information requirement may be satisfied by inclusion of the relevant certification within an appropriately amended form of directors' certificate provided under clause 5.8(a) of the IPP Determination.	Appendix A.8
Transpower must provide copies of supporting work papers in respect of each of the calculations in the information, showing how the numbers have been calculated, identifying any significant adjustments to the numbers, referencing the sources of the data used, and identifying any material judgments or estimates made in applying the data with particular reference to any variations from standard policies or processes.	-

A.11.1.3 References

Information / Action Required	Demonstration of Compliance
If Transpower uses any reference material other than that specified in this notice in its calculations, it must provide the Commission with a list of such reference material.	No other reference material used

A.11.1.4 Format

Information / Action Required	Demonstration of Compliance
The numerical information requested in this notice is to be provided in electronic form in MS Excel file format with every formula intact, apart from cross-references to the TM1 database. The narrative information is to be provided in Adobe PDF format.	-
Transpower may elect to provide the information requested in this notice as part of its 2011/12 annual compliance monitoring statement. If the information is provided on this combined basis, the directors' certificate may be combined in suitable amended form with the applicable certification provided under the IPP Determination.	-

A.11.1.5 Date and place of response

Information / Action Required	Demonstration of Compliance
Transpower must supply the specified information to the Commission's Wellington office at 44 The Terrace, Wellington (Attention: Alex Sim) by no later than 5pm on 19 October 2012.	-