

New Zealand Commerce Commission

Introduction to Economic Regulation applying to Transpower under Part 4 of the Commerce Act

Overview for John Harbord
Chair, Major Electricity Users' Group
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#2484184

Overview

- Reminder of earlier presentation
- Types of regulation applying to Transpower, and how they fit together
- Input methodologies: what we have set for Transpower, and how they are applied
- Information disclosure: key performance questions and information we require
- Individual price-quality regulation: our processes, key decisions for RCP2, and assessing capital
- Further information



Reminder of earlier presentation (22 March 2016 - #)

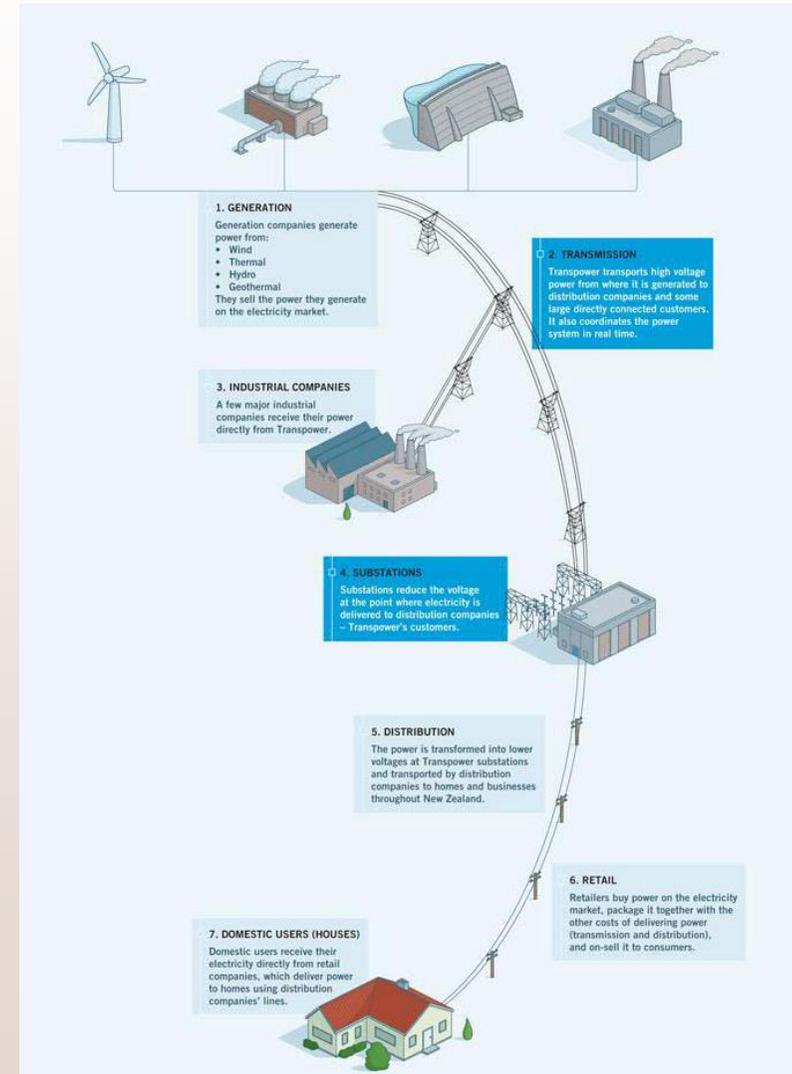
- Part 4 and the Commission's role
- Part 4: background, purpose and scope
- Part 4: comparison to telecommunications and dairy regimes
- Information disclosure regulation
- Price-quality regulation
- Input methodologies
- Merits appeals
- Key Part 4 decisions

Slides repeated from earlier presentation have been italicised

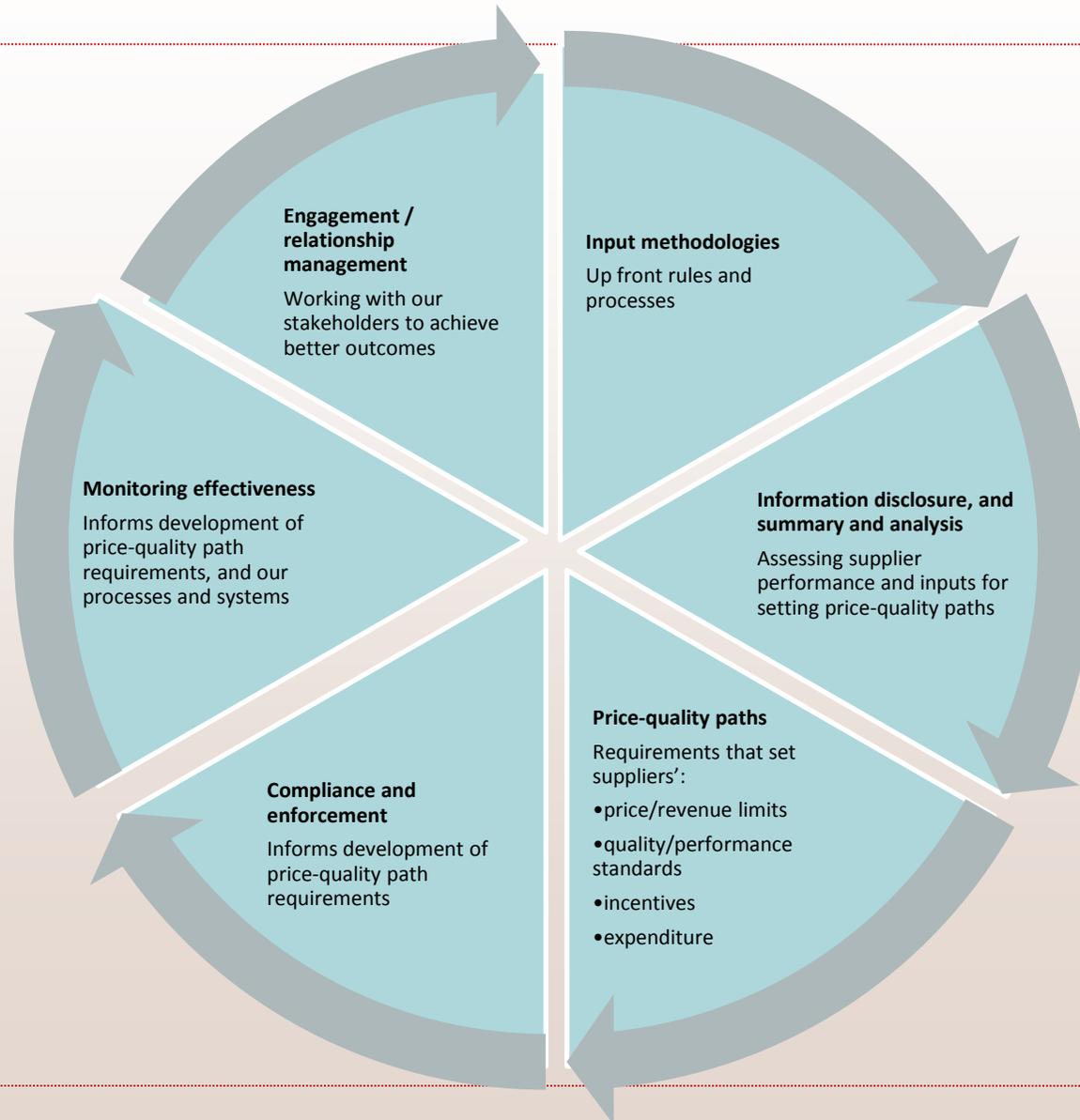


Types of regulation applying to Transpower

- Information disclosure
- Individual price-quality path



What we do and how it fits together



Input methodologies

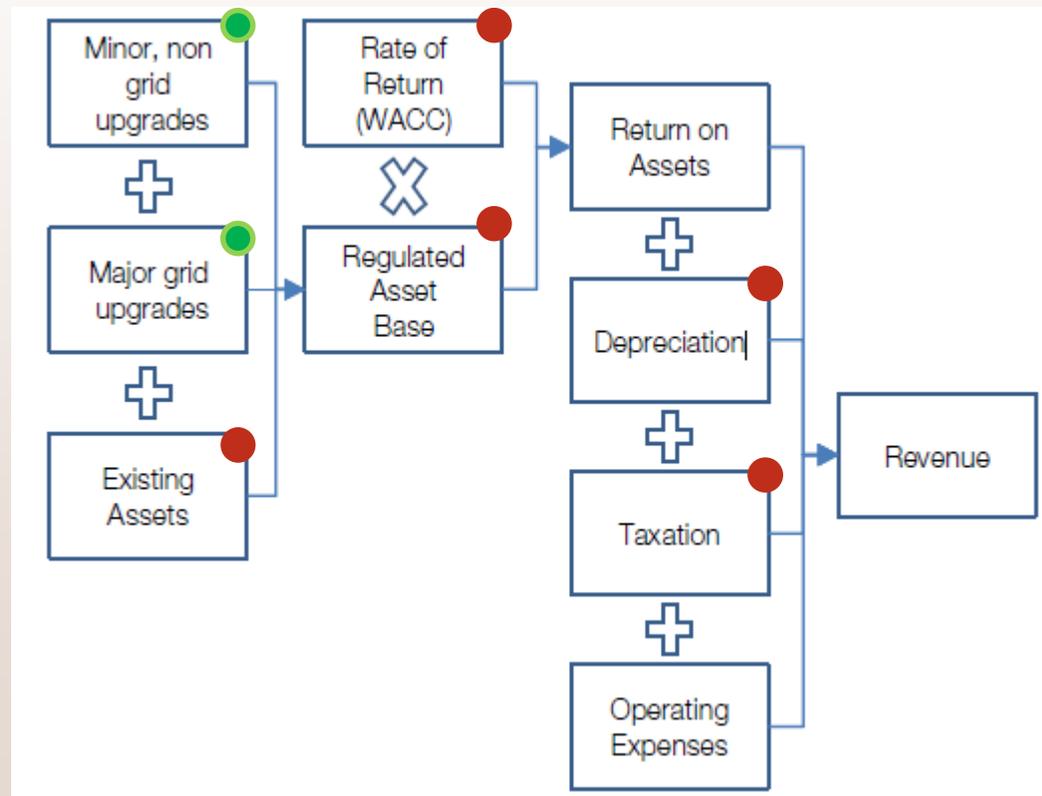
- **Purpose:** to promote certainty for suppliers and consumers in relation to rules, requirements, and processes of regulation
- Key methodologies underpin setting allowable revenue under price-quality regulation, or assessing returns under information disclosure
 - asset valuation, depreciation and revaluations
 - cost of capital and tax
 - allocation of common costs
- Pricing methodologies (not for EDBs or Transpower, given Electricity Authority's role)
- Regulatory processes and rules: form of control, re-opener provisions
- Customised price-quality path requirements and evaluation criteria
- Transpower capital expenditure assessments



Key methodologies underpin setting revenue, or assessing returns

How the building blocks are used to calculate revenue

- 2010 Input methodologies for Transpower
- 2012 Capital Expenditure Input methodology for Transpower



Capital Expenditure Input Methodology

- Sets out the information requirements, evaluation criteria, timeframes and processes for assessing capex proposals
- Determined in 2012 following Electricity Industry Reform Act
- Not in scope of the IM Review; considering reviewing in 2017

Processes

The process that Transpower must follow in developing capex proposals

The process the Commission must follow to assess Transpower's proposals

Process details relating to agreeing timeframes, transition provisions and processes for amending approved projects

Rules and requirements

Information that Transpower must develop, provide to the Commission, and/or publish

Requirements for Transpower and the Commission to consult with stakeholders

The incentive mechanisms that apply to approved capex and the delivery of outputs

Rules for classifying capex as either base capex or major capex

The criteria the Commission must apply when assessing each type of capex

Capex is classified as either ‘base capex’ or ‘major capex’

Base capex

Major capex

When approved

- Proposed, assessed and approved before the start of each regulatory period
 - Exception is ‘listed projects’ – large reconductoring projects – which are proposed, assessed and approved separately during the regulatory period
- Consulted on, assessed and approved separately during the regulatory period
 - Separate amendment process for approvals

Threshold for projects

- No threshold, ie, all non-major capex
- >\$20m for RCP2

Characteristics of projects

- Replacement and refurbishment projects
 - Small capacity projects
- Large enhancement and development projects
 - Non-transmission alternatives

Key assessment criteria

- Expenditure assessment – ‘prudent and efficient operator’ (same criteria used for assessing opex)
- Investment test – ‘net benefit test’
 - +ve for economic investments, least negative for security investments

Characteristics of expenditure

- Pool of expenditure – Transpower can reprioritise
 - Subject to base capex incentives
- Expenditure ring-fenced for project
 - Subject to approval conditions, eg, allowance, outputs, expiry date
 - Subject to major capex incentives

Information disclosure regulation

- **Purpose:** to ensure sufficient information is readily available to interested persons to assess whether the Part 4 purpose is being met
- Suppliers may be required to disclose a range of information
 - eg, financial statements, asset valuation reports, financial and non-financial performance measures, prices and pricing methodologies, quality measures, forecasts, contract terms, asset management plans etc
- Commission must undertake a summary and analysis of disclosed information to promote a greater understanding of supplier relative performance and changes in performance over time
- Applies to all regulated suppliers
- Only type of regulation applying to 12 ‘consumer-owned’ EDBs
- Potential court action for breaches of disclosure requirements



Overview of information disclosure for Transpower

- Requirements set out in the *Transpower Information Disclosure Determination 2014, NZCC 5*
- Supersede 2004 requirements
- Apply to electricity transmission services and system operator functions provided by Transpower
- First apply to the 2015 disclosure year (the year ending 30 June 2015)
- Information will primarily be disclosed in two reports:
 - the Annual Regulatory Report
 - the Integrated Transmission Plan
- Transpower must disclose some information in template form.



Key performance questions to assess if the Part 4 purpose is being met

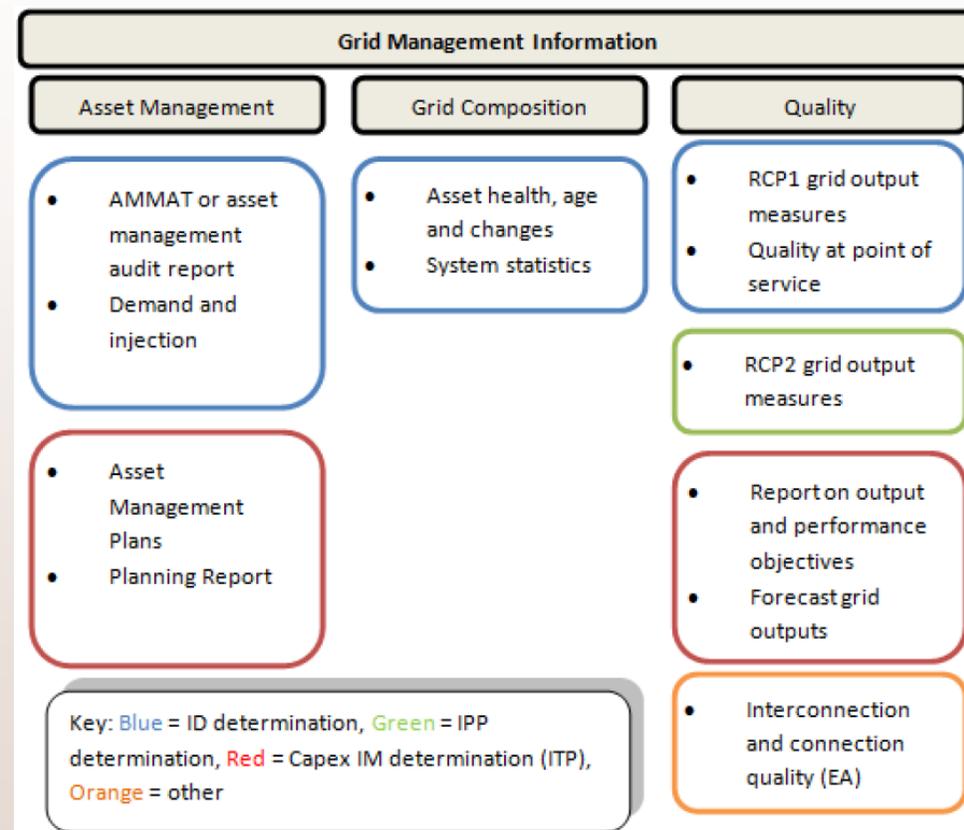
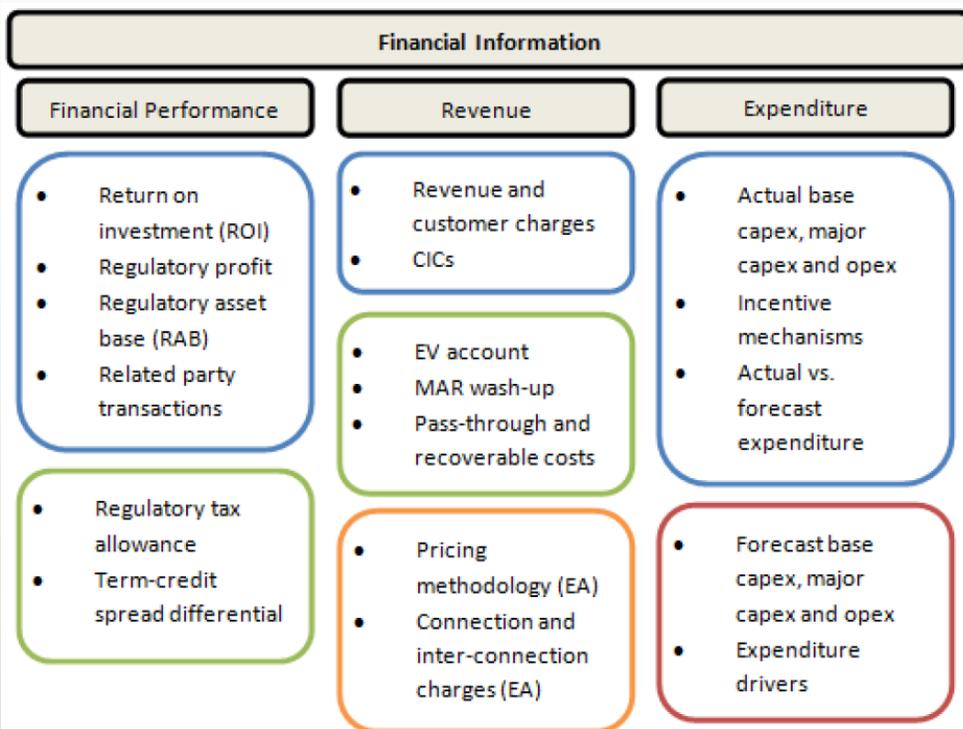


- Is Transpower operating and investing in its assets efficiently?
- Is Transpower innovating where appropriate?
- Is Transpower providing services at a quality that reflects consumer demands?
- Is Transpower sharing the benefits of efficiency gains with consumers, including through lower prices?
- Do the prices set by Transpower promote efficiency?
- Is Transpower earning an appropriate economic return over time?

Summary of required information

Information category	Information disclosure requirements
Financial information	<p>Financial performance: Return on investment, regulatory profit, regulatory asset base, related party transactions</p> <p>Expenditure: Operating expenditure, base capital expenditure, major capital expenditure, incentive mechanisms</p> <p>Revenues: Total revenue, customer charges, investment contracts</p>
Grid management information	<p>Quality: Grid outputs, interconnection quality</p> <p>Asset management information: Asset management maturity assessment tool, grid demand and capacity, additional disclosures in the Integrated Transmission Plan</p> <p>Grid composition information: System statistics, asset health, age and changes</p>
System operator information	<p>Financial performance: return on investment, regulatory profit, fixed assets</p> <p>Expenditure: Operating expenditure, capital expenditure, forecast expenditure</p> <p>Revenue: System Operator Service Provide Agreement revenue, Technical Advisory Services Contract revenue</p>

Reported information and source of requirement



Individual price-quality path regulation

- *Limits maximum allowable revenue for Transpower*
- *Quality standards (frequency and duration of interruptions , availability of circuits) and some asset/grid performance and asset health measures – some linked to revenue*
- *We approve an allowance for all of Transpower’s capital expenditure in accordance with capital expenditure input methodology*
 - *Electricity Commission’s role in approving major grid upgrades transferred to us from November 2010*
 - *An allowance for base capital expenditure is set for regulatory period*
 - *We approve major capital expenditure projects throughout regulatory period*



Activities concerning Transpower's individual price-quality path

Nature of decision

Timing

Setting of individual price-quality path

- Maximum allowable revenue
- Expenditure allowances (base capex and opex)
- Incentives
- Output measures and quality standards
- Compliance requirements

- Before each regulatory period

Assessments of capital investments

- Major capex proposals and amendments
- Listed project proposals

- During the regulatory period

Path administration

- Yearly maximum allowable revenue updates
- Re-openers

- During the regulatory period



The process of setting of individual price-quality path

- Transpower submits a proposal for its expenditure (opex and base capex) and output measures
 - Informed by stakeholders, particularly output measures
 - Next proposal due Nov 2018
- Commission (with expert consultants) assess proposal and make decisions on:
 - Expenditure allowances (opex and base capex)
 - Output measures and quality standards
- Commission then determines Transpower's path, including:
 - Forecast maximum allowable revenue
 - Incentives
 - Compliance requirements, including how the path operates during the regulatory period
 - Next determination due Nov 2019, to apply from Apr 2020



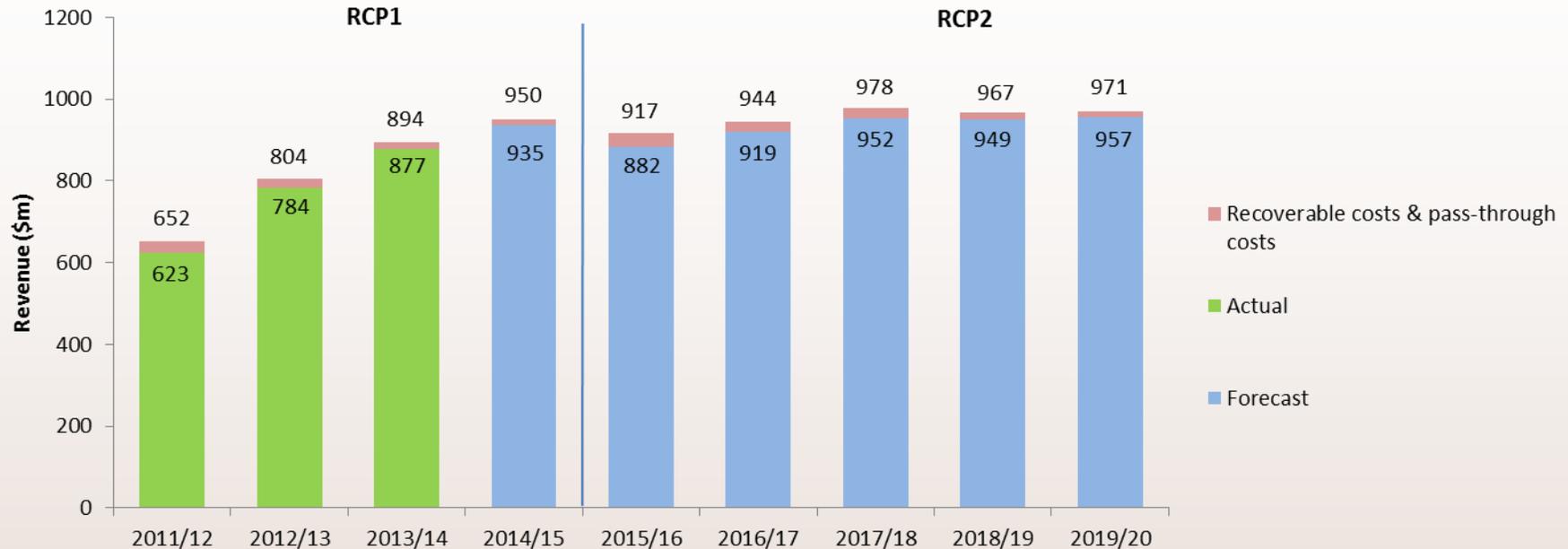
Characteristics of Transpower's revenue path



- Revenues specified as forecast maximum allowable revenue (forecast MAR), which does not include:
 - forecast voluntary revenue reductions
 - forecast pass through costs, or forecast recoverable costs
 - revenue for system operator activities
- Forecast MAR updated yearly to reflect:
 - forecast major capex and listed project base capex we have approved
 - Economic Value (EV) adjustments
- EV adjustment is recalculated to reflect:
 - the MAR wash-up—forecast values replaced with actual values, ie, Regulatory Asset Base (RAB), depreciation, tax and the term credit, spread differential (TCSD); and for the opex allowance, the original allowance adjusted for actual rather than forecast CPI
 - incentive mechanisms



Regulated revenue for RCP2



RCP1 WACC = 8.05% (75th)

RCP2 WACC = 7.19% (67th)

Notes

- Figures in nominal terms
- Total maximum allowable revenue for RCP2: \$4,658.3m
- Excludes system operator expenditure

Observations

- Revenue is flattening off – completed significant capital programme
- Compared with previous model, revenues are \$413m lower for RCP2
- Forecast impact on the typical consumer electricity bill is flat

Expenditure for RCP2

	Transpower's proposal (\$m)	Our adjustments (\$m)	Final decision (\$m)
Opex	1309.3	-20.0	1,289.3
Base Capex	1188.7	-56.5	1,132.2

Figures in 2012/13 constant prices



Output measures and quality standards for RCP2

- Set revenue-linked output measures
 - Asset performance (AP) measures
 - Grid performance (GP) measures: each have five categories that represent different points of service
 - Asset health measures (AH): volumetric output targets
 - Revenue at risk ~\$13m each year
- Additional AH reporting measures and other performance measures under development—considering whether appropriate for RCP3
 - Improving links between expenditure and service performance
 - Improving asset criticality framework
 - Developing a better understanding of the economic impact from interruptions
 - Response to events

Output measures and quality standards for RCP2 (2)

Grid output measure	Point of service category	Quality standard	Grid output target	Cap	Collar	Incentive rate (\$000 per unit from target)
Asset performance measures						
Availability of circuits (%)	AP1: HVDC	98.5	98.5	99.5	97.5	1,000
	AP2: HVAC	99.6	99.6	100	99.2	2,500
Grid performance measures						
GP1: Number of unplanned interruptions (each year)	High Priority	2	2	0	4	606
	Important	9	9	4	14	242
	Standard	26	26	21	31	133
	Generator	11	11	6	16	133
	N-security	56	56	38	74	10
GP2: Average duration of unplanned interruptions (each year in minutes)	High Priority	70	70	30	110	15
	Important	100	100	30	170	9
	Standard	65	65	0	130	5
	Generator	130	130	50	210	4
	N-security	80	80	45	115	3
GP3: Duration of the 90 th percentile duration of unplanned interruptions (each year in minutes)	High Priority	120	120	80	160	15
	Important	240	240	170	310	9
	Standard	130	130	60	200	5
	Generator	350	350	260	440	4
	N-security	215	215	170	260	3

Grid output measure	Disclosure year	Quality standard	Grid output target	Cap	Collar	Incentive rate (\$000 per unit from target)
AH1: Number of towers painted	2015/16	451	451	489	413	29.7
	2016/17	529	529	567	491	29.7
	2017/18	531	531	569	493	29.7
	2018/19	553	553	591	515	29.7
	2019/20	564	564	602	526	29.7
AH2: Number of grillages commissioned	2015/16	408	408	438	378	10.2
	2016/17	408	408	438	378	10.2
	2017/18	408	408	438	378	10.2
	2018/19	409	409	439	379	10.2
	2019/20	409	409	439	379	10.2
AH3: Number of insulators commissioned	2015/16	1,526	1,526	1,630	1,422	2.1
	2016/17	1,466	1,466	1,570	1,362	2.1
	2017/18	1,402	1,402	1,506	1,298	2.1
	2018/19	1,315	1,315	1,419	1,211	2.1
	2019/20	1,380	1,380	1,484	1,276	2.1
AH4: Number of outdoor circuit breakers commissioned	2015-20	155	155	166	144	51.8
AH5: Number of transformers commissioned	2015-20	26	26	28	24	1,370
AH6: Number of outdoor to indoor conversions commissioned	2015-20	16	16	17	15	2,710

Note: All 'commissioned' quantities refer to assets commissioned due to replacement or refurbishment capex.

Recommendations we made to Transpower for RCP2

- Following our review, we made recommendations concerning Transpower's business processes
 - Improve processes, polices and data maturity that underpin expenditure forecasts
 - Improve the cost estimating processes
 - Undertake economic evaluation of policies
 - Undertake strategies to mitigate resource availability risks
- Set requirement to report on Initiatives Plan

Assessment of capital investments

- Responsibilities transferred from Electricity Commission in 2012
- Relatively few approvals following Transpower's major capital programme, eg:
 - Bunnythorpe to Haywards reconductoring
 - Upper South Island Grid Upgrade Stage 1
- Some complex amendment applications, eg:
 - North Island Grid Upgrade
 - Upper North Island demand response
 - Upper South Island Grid Upgrade Stage 1
- Limited stakeholder interest in capital investment approval process to date; potentially greater interest if changes to Transmission Pricing Methodology proceed
- No listed projects to date
 - 5 listed projects, indicative total project costs of \$275m
 - Central Park to Wilton reconductoring expected late 2016

Path administration

- Completed first yearly forecast MAR update in Oct 2015
 - Slight adjustments to forecast MAR and total estimated revenues
 - Next update due Oct 2016
- No re-openers to date
- Electricity Authority can request us to reconsider our decisions for certain circumstances—potential to re-open for:
 - System to support transmission pricing
 - Proposed treatment of avoided costs of transmission payments to distributed generators

Further information

Commerce Commission

Transpower

General

- [Website for Transpower matters](#)
- [Website](#)

Input methodologies

- [2010 Building Block IMs](#)
- [2012 Capex IM](#)
- [Website for IM Review](#)

Information disclosure

- [ID determination](#)
- [ID reasons paper](#)
- [Annual Regulatory Report](#)
- [Integrated Transmission Plan](#)

Individual price-quality path

- [RCP2 decision \(Aug 2014\)](#)
- [RCP2 decision \(Nov 2014\)](#)
- [RCP2 determination](#)
- [MAR update companion paper](#)
- [RCP2 proposal](#)
- [Initiatives plan](#)
- [Asset Health Framework](#)
- [Asset Health - Criticality Framework](#)
- [Revenue and Pricing information](#)

Capital investments

- [NIGU decision](#)
- [Bunnythorpe decision](#)



