POWERCO

Powerco Customised Price-Quality Path Briefing

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August 2017

Discussion Focus

- Introductions
- About Powerco
- Overview of Powerco's investment proposal
  - What are we proposing?
  - What's driving the investment?
  - Why now? Link to prior investment strategy?
- Powerco's regulatory framework – process and oversight of our revenue and investment
- Independent verification overview
- How our plans will impact on distribution charges?
- "Have your say" – our engagement and consultation with stakeholders and customers
- Commission Issues Paper

Powerco's CPP proposal - summary

1. The drivers for our CPP application are clear
2. We're targeting appropriate long term service standards
3. Consumer feedback supports our plan
4. We've tested our plan against alternative timing scenarios
5. We've challenged and moderated the plan following consultation
6. Affordability has been a key consideration (i.e. 79c week)
7. We have the right delivery mechanisms in place
8. We are committed to deliver efficiently and transparently
9. We are committed to supporting the Commission process

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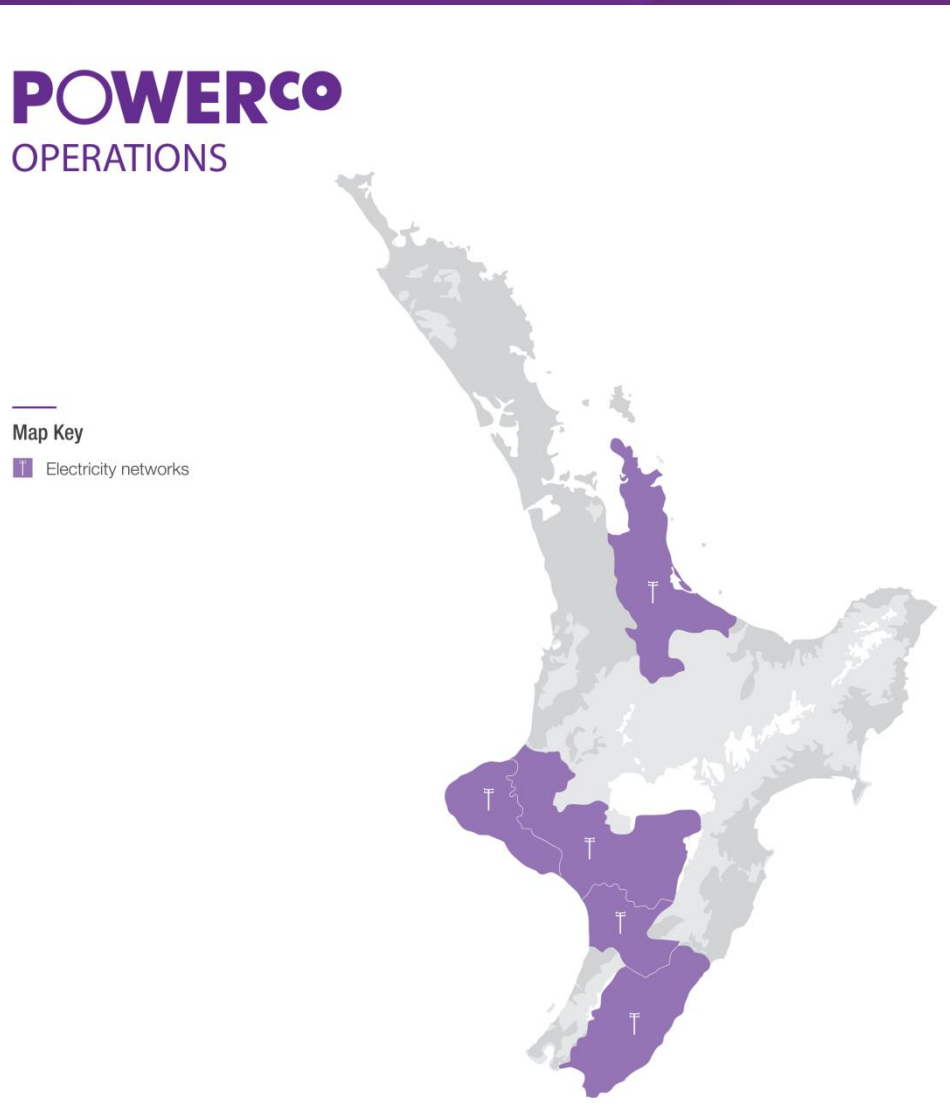
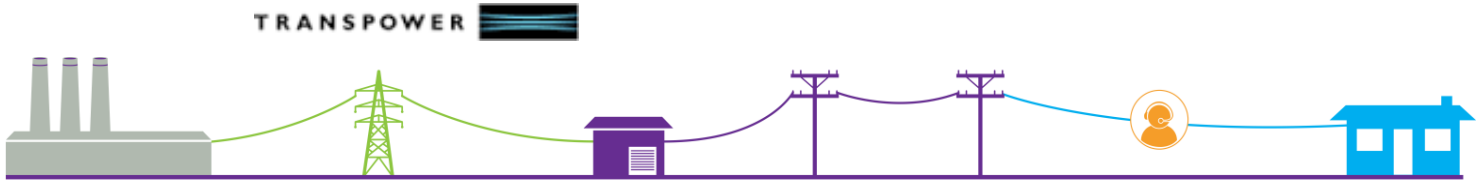
MEUG members on Powerco's electricity distribution footprint

Member
Business NZ
Cold Storage Nelson
Fonterra
Lion
New Zealand Steel
Norske Skog Tasman
Oceana Gold
Oji Fibre Solutions
Pacific Aluminium
Pan Pac Forest Products
Progressive Enterprises
Ravensdown Fertiliser
Refining NZ
Whakatane Mill
Winstone Pulp International
Wood Processors & Manufacturers Association



About Powerco

The NZ electricity industry is structurally separated with around 80% of generation from renewable sources



GENERATION
High voltage electricity is created using water, wind, geothermal, gas and coal.

TRANSMISSION
Pylons move the high voltage electricity in bulk.

DISTRIBUTION
Powerco substations reduce the high voltage electricity ready for customer use.

DISTRIBUTION
Powerco distributes the electricity via power lines and cables.

RETAILERS
Retailers sell delivered electricity to customers. They deal directly with the customer.

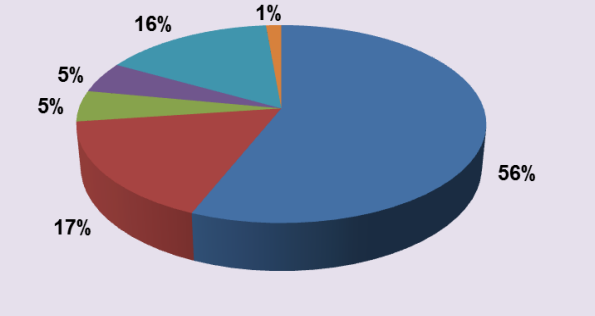
CUSTOMER

POWERCO

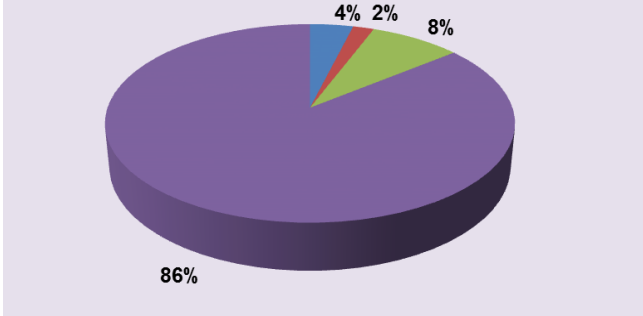
There are 29 electricity distributors in NZ each a natural monopoly

- **Vector**
- **Orion**
- **Unison**
- **Wellington Electricity**
- **etc**

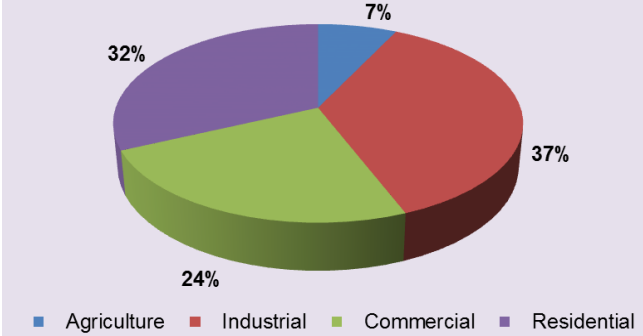
Generation
42,312 GWh net generation in the March 2015 year



Connections
1,984,097 customers at March 2015



Consumption
39,250 GWh in the March 2015 year



Who is Powerco, and what makes our network unique?

Regional provider – serve major regional centres and key industries

A balanced customer mix across residential, commercial and industrial sectors

Extensive asset base – the largest network in New Zealand with ~22,000km of line

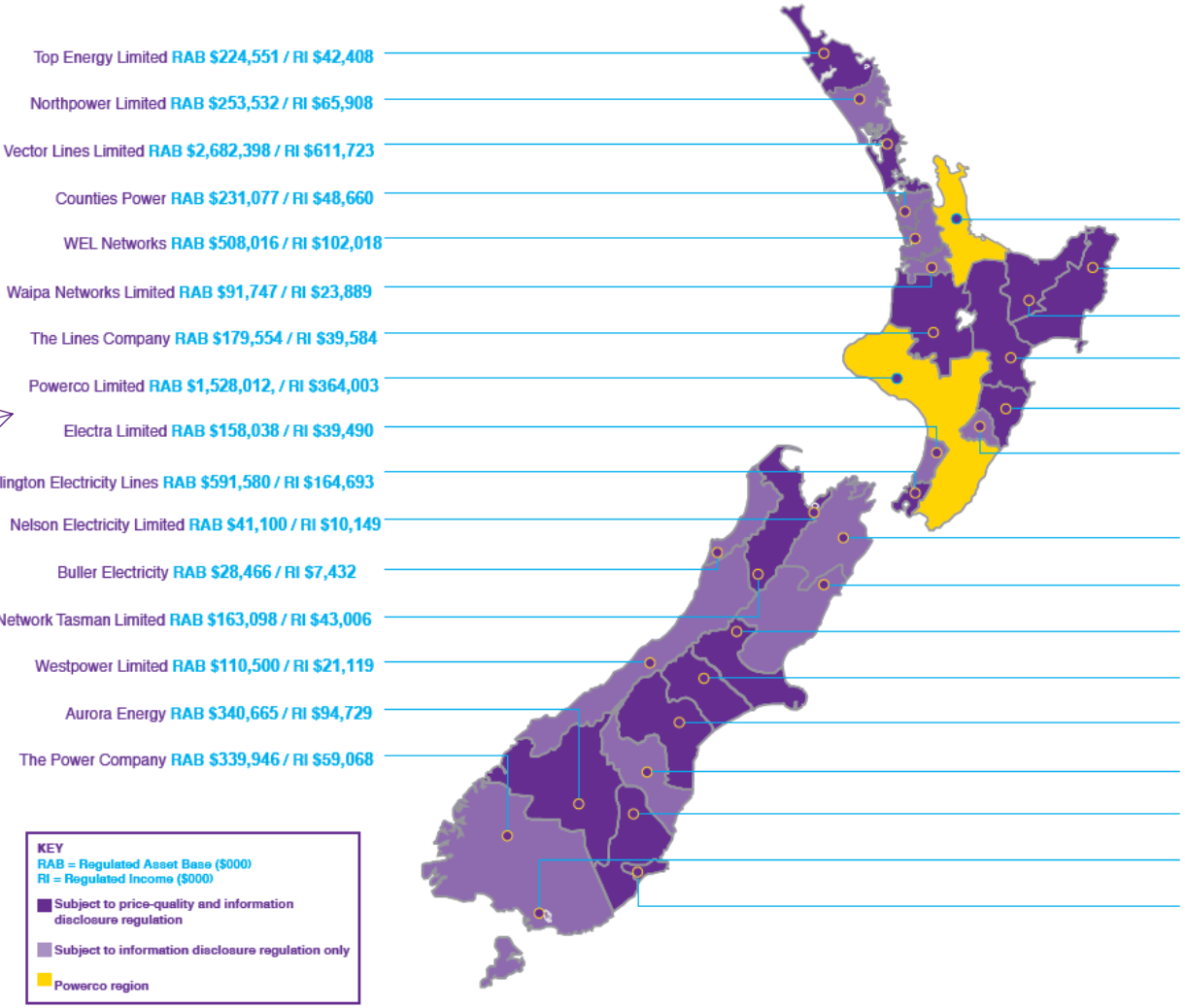
Quite distinct regional differences:

- Strong growth in the East has resulted in modern networks, with security pressures.
- Modest growth in the West has resulted in security 'pockets', with high renewal needs

Prudent operator – we like to stay on top of issues and act in appropriate time.

29 Distribution Companies

New Zealand Electricity Distributors 2016



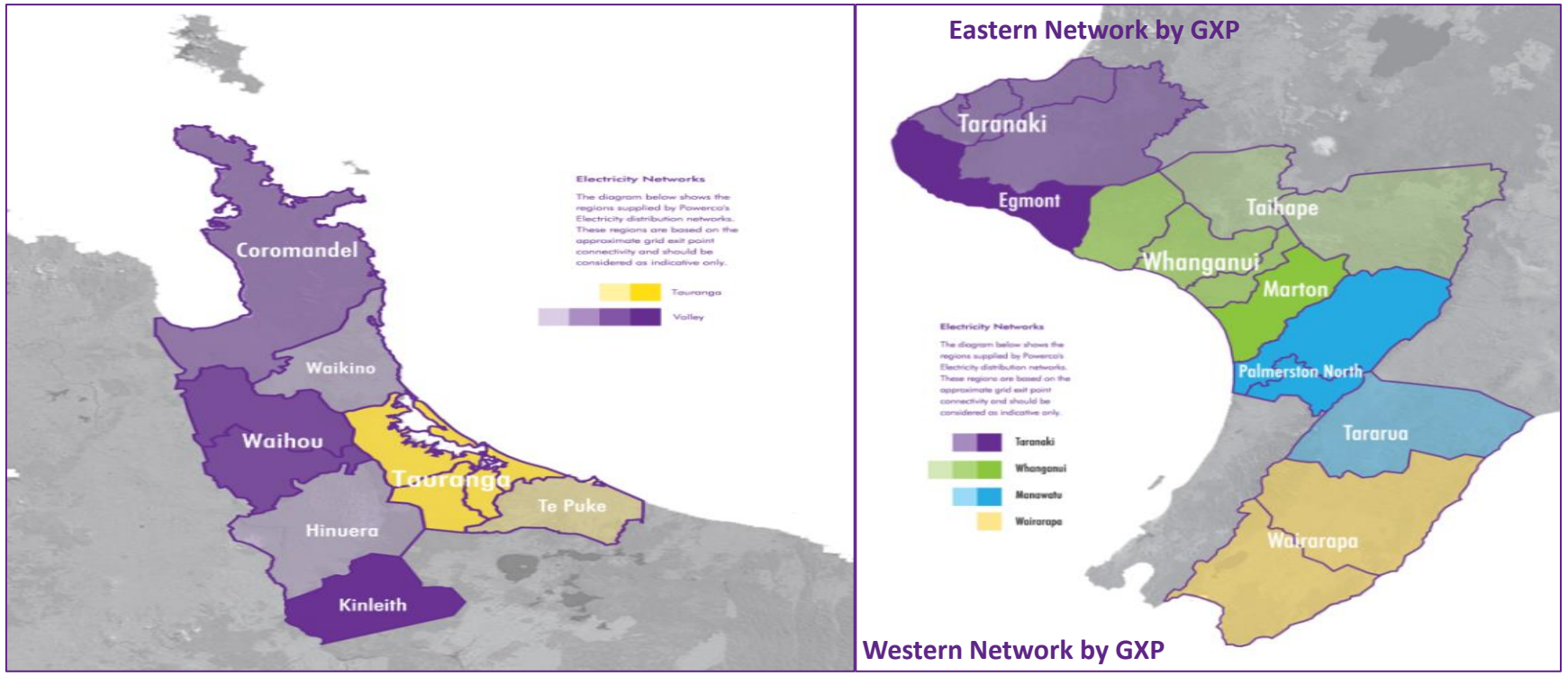
Top Energy Limited RAB $224,551 / RI $42,408
Northpower Limited RAB $253,532 / RI $65,908
Vector Lines Limited RAB $2,682,398 / RI $611,723
Counties Power RAB $231,077 / RI $48,660
WEL Networks RAB $508,016 / RI $102,018
Waipa Networks Limited RAB $91,747 / RI $23,889
The Lines Company RAB $179,554 / RI $39,584
Powerco Limited RAB $1,528,012, / RI $364,003
Electra Limited RAB $158,038 / RI $39,490
Wellington Electricity Lines RAB $591,580 / RI $164,693
Nelson Electricity Limited RAB $41,100 / RI $10,149
Buller Electricity RAB $28,466 / RI $7,432
Network Tasman Limited RAB $163,098 / RI $43,006
Westpower Limited RAB $110,500 / RI $21,119
Aurora Energy RAB $340,665 / RI $94,729
The Power Company RAB $339,946 / RI $59,068

Powerco Limited RAB $1,528,012 / RI $364,003
Eastland Network RAB $140,586 / RI $33,311
Horizon Energy Distribution RAB $114,857 / RI $31,074
Unison Networks RAB $547,998 / RI $145,999
Centralines Limited RAB $54,427 / RI $13,037
Scanpower Limited RAB $36,562 / RI $9,493
Marlborough Lines Limited RAB $221,244 / RI $35,747
Mainpower New Zealand RAB $247,342 / RI $57,111
Orion New Zealand RAB $986,595 / RI $248,340
EA Networks RAB $237,258 / RI $40,997
Alpine Energy Limited RAB $166,972 / RI $52,044
Network Waitaki Limited RAB $81,660 / RI $17,459
OtagoNet Joint Venture RAB $168,273 / RI $35,259
Electricity Invercargill RAB $77,667 / RI $20,076
Aurora Energy RAB $340,665 / RI $94,729

KEY
RAB = Regulated Asset Base ($000)
RI = Regulated Income ($000)
Subject to price-quality and information disclosure regulation
Subject to information disclosure regulation only
Powerco region

As at March 2016

Electricity network overview

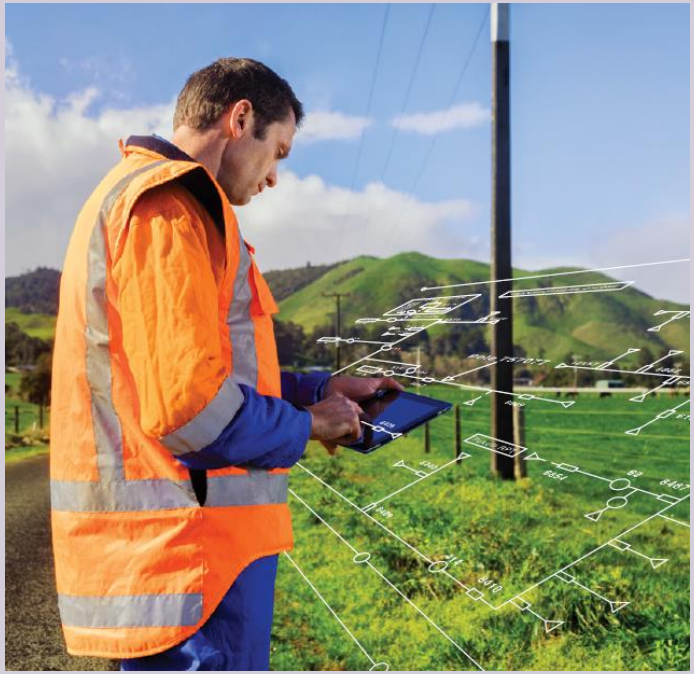
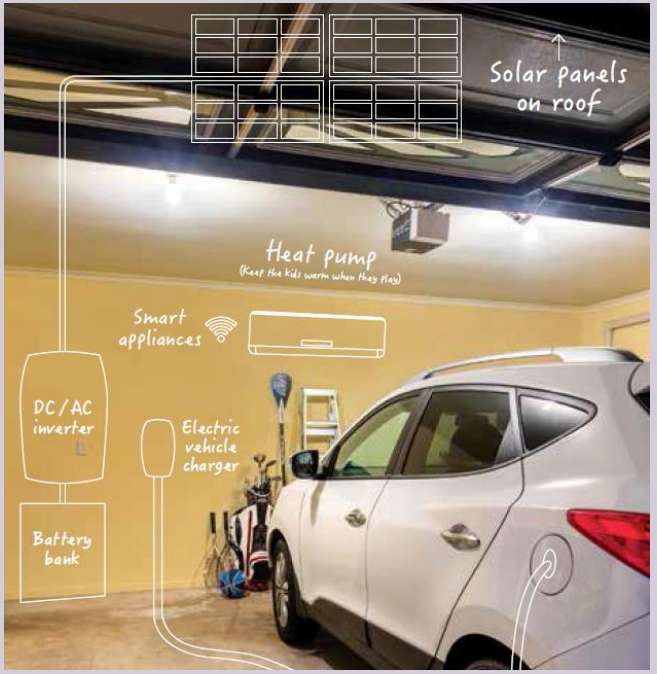


Key Network Statistics	Eastern	Western	Total
Number of customers (ICPs)	150,443	176,943	**327,386**
Circuit length (km)	10,383	17,449	**27,833**
Zone substations	47	68	**115**
Energy conveyed (GWh pa)	2,332	2,383	**4,715**
Peak demand (MW)	440	412	**860***

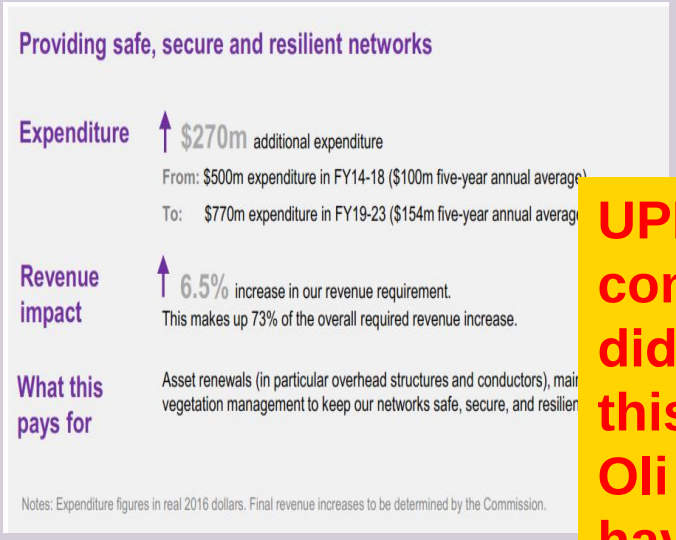
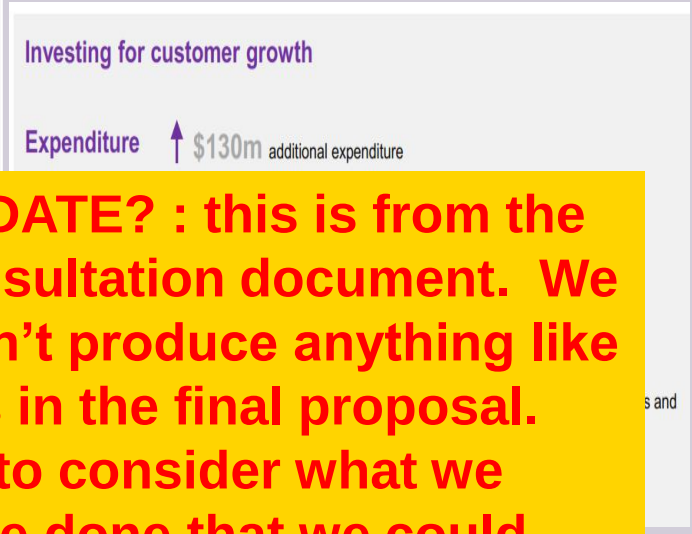
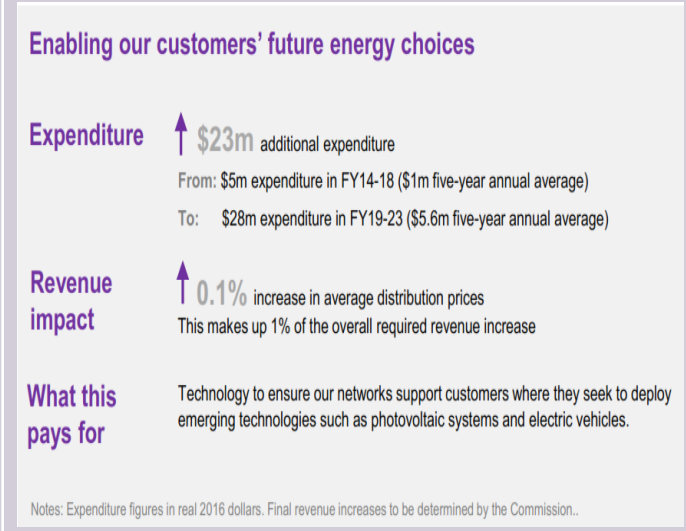
Source: Powerco 2015 Information Disclosures, Management Accounts,
* This is calculated and reported separately for each subnetwork as well as for the total business

Overview of our investment proposal

Overview of Proposal – what are we proposing?

1) Providing safe, secure and resilient networks	2) Investing in our communities	3) Understanding and leveraging new technology
		
Focusing on the underlying condition of our network, rather than on measures of reliability.	Facilitating economic growth by ensuring network capacity meets our customers' needs.	Positioning our network to meet a diverse range of possible futures, and provide value to our customers.

Overview of our Proposal – Investment Implications

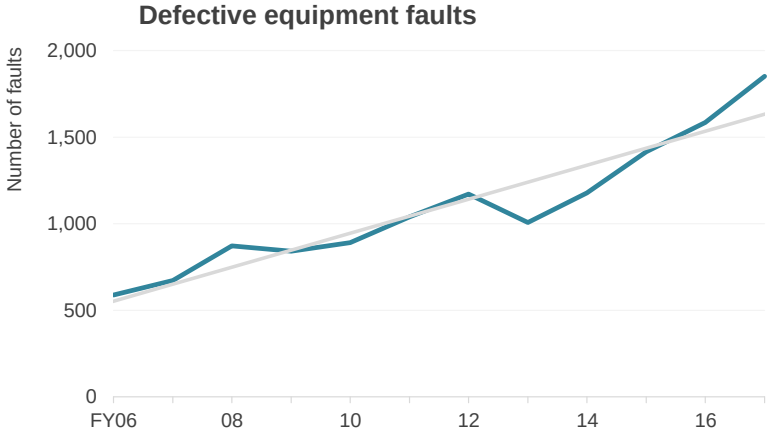
1) Providing safe, secure and resilient networks	2) Investing in our communities	3) Understanding and leveraging new technology
		
Focusing on the underlying condition of our network, rather than on measures of reliabili		Positioning our network to meet a diverse range of possible futures, and provide value to our customers.

UPDATE? : this is from the consultation document. We didn't produce anything like this in the final proposal. Oli to consider what we have done that we could use instead

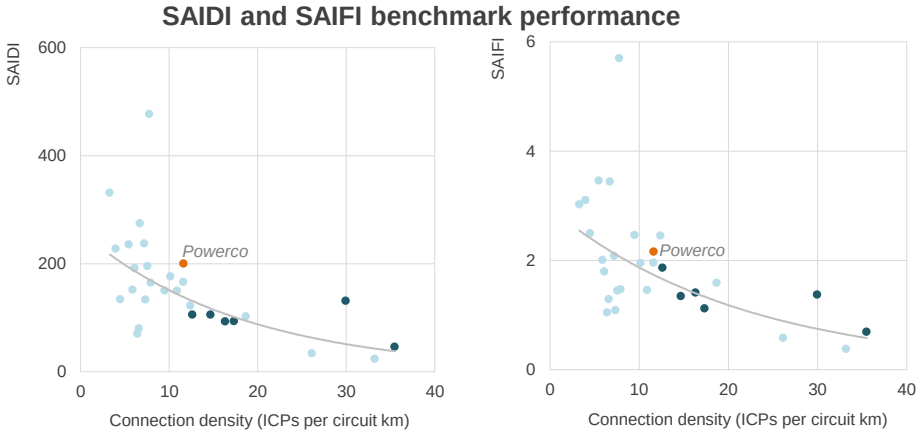
Our proposal is driven by the need to ensure we provide a safe, secure and resilient network for our customers that meets future demands and expectations

Delivering a safe and resilient network

The number of assets failing in service has approximately tripled during the past decade.

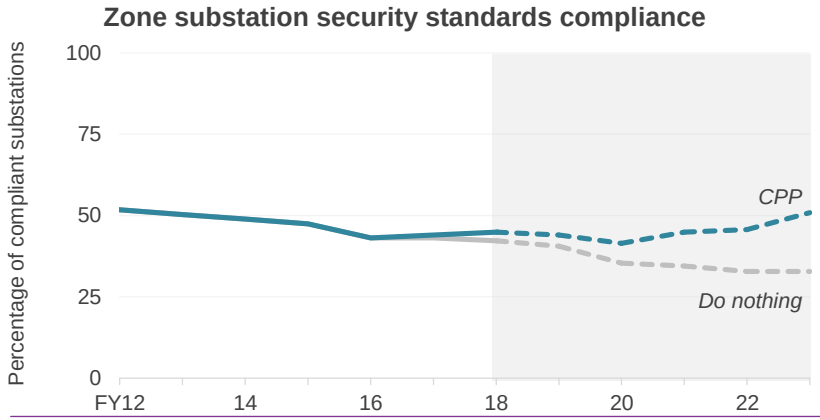


Our network reliability is an outlier, especially in terms of high SAIDI, both against the New Zealand average, and against a peer group of larger utilities.



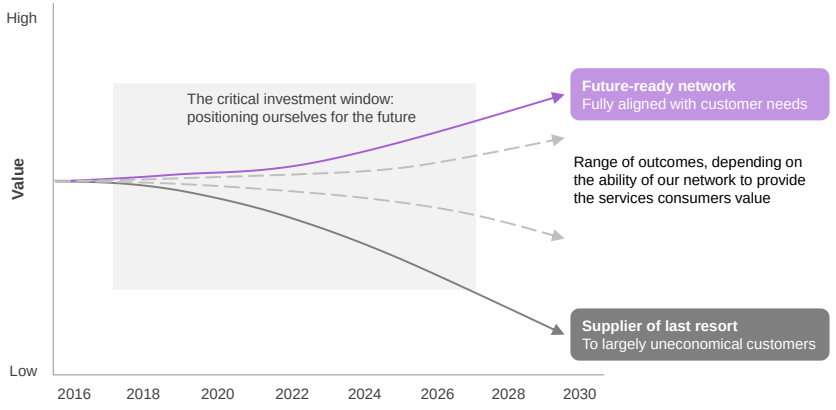
Supporting communities

Compliance with our security standards has been falling since FY12. The consistent and sustained pattern of load growth we are experiencing means we must continually invest to provide adequate network capacity and to avoid further deterioration to our security position.



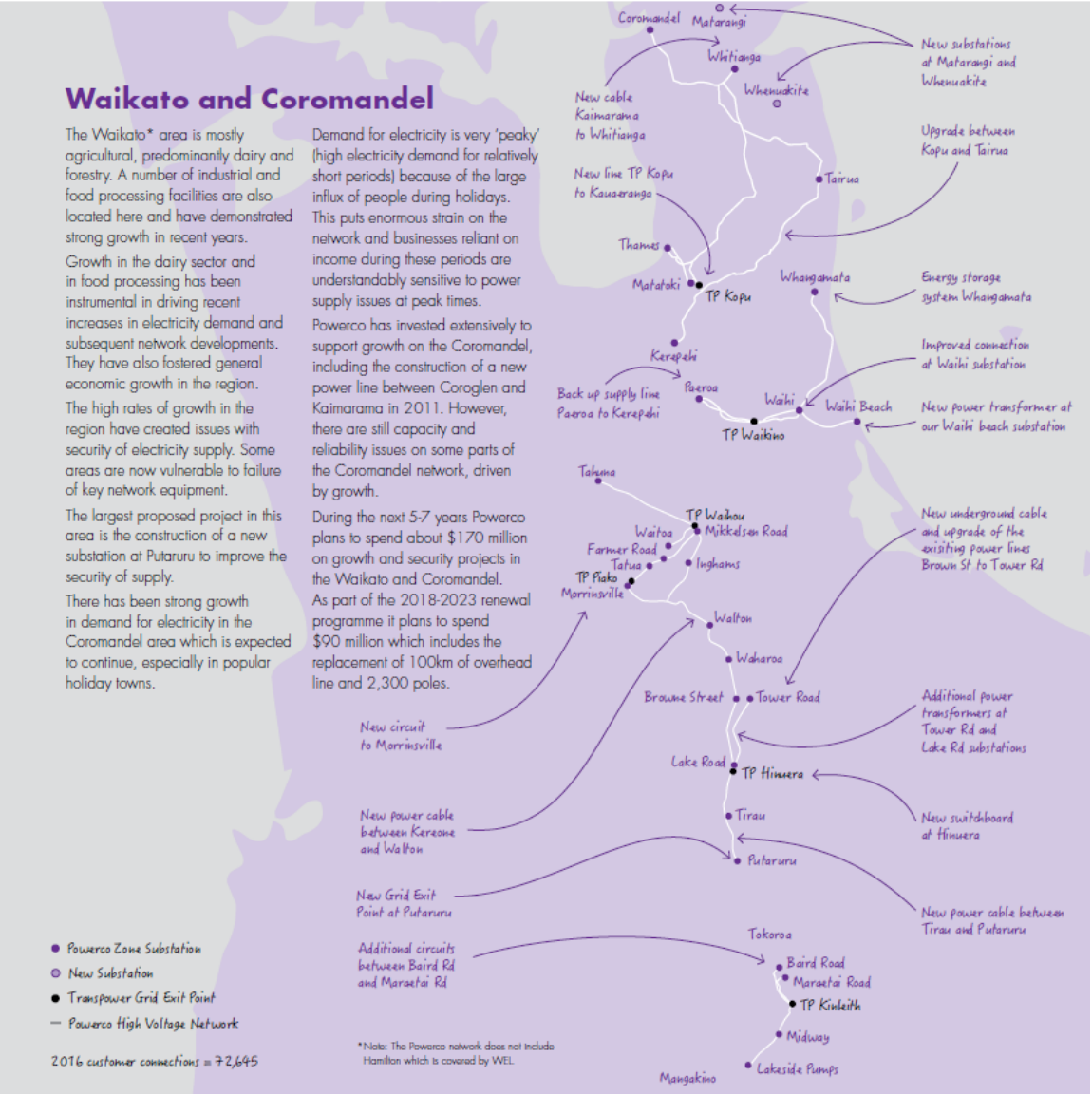
Evolving our network for the future

We are committed to supporting our customers by providing them the stable, open-access platform over which to transact, and providing flexibility in how they make their energy supply and consumption decisions. We will focus on being ready for the changes in the sector as they emerge, and develop our network in a way that will accommodate these changes while remaining stable, safe and reliable.



Supporting growth in regional New Zealand

- We need to look ahead to ensure we have the capacity to meet our existing customers' demand growth and connect new customers.
- We forecast these future requirements by using the best available information and fit for purpose models.
- Demand growth on our network has been increasing and we need to continue to invest to provide the capacity needed in the future.
- We have provided maps showing where new investment is planned to meet growth. As an example, the major projects in the Waikato and Coromandel are shown opposite.

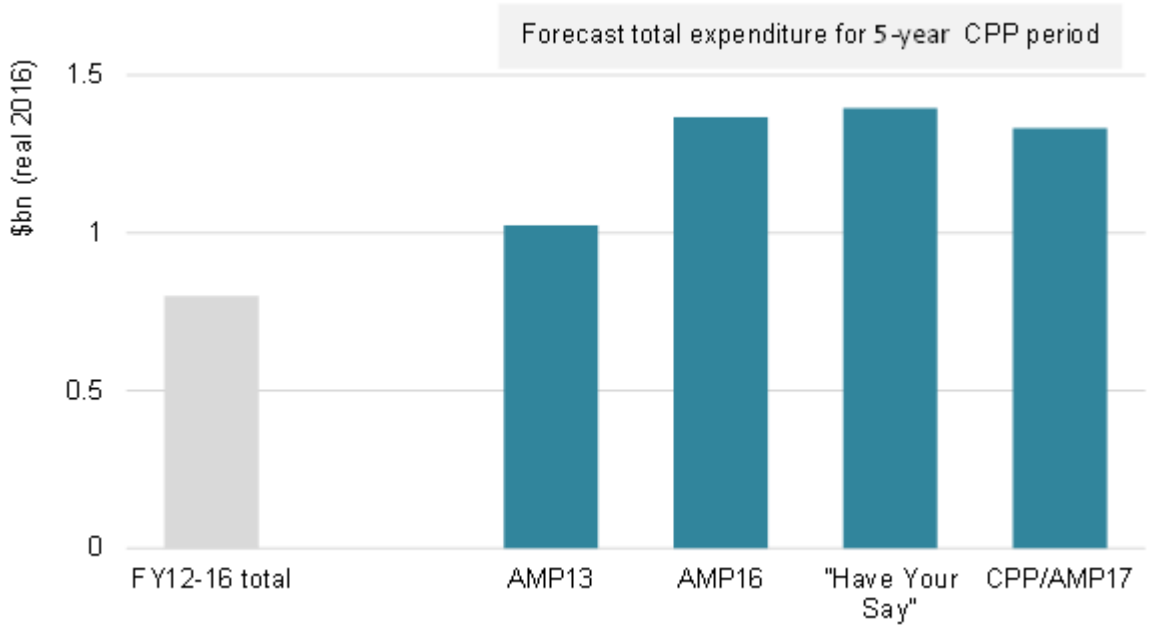


Our forecasts since 2012 have consistently signalled an uplift in expenditure

AMP2013

AMP2016

CPP/AMP2017



Overview of regulatory framework and oversight

Powerco's activities are regulated by the Commerce Commission

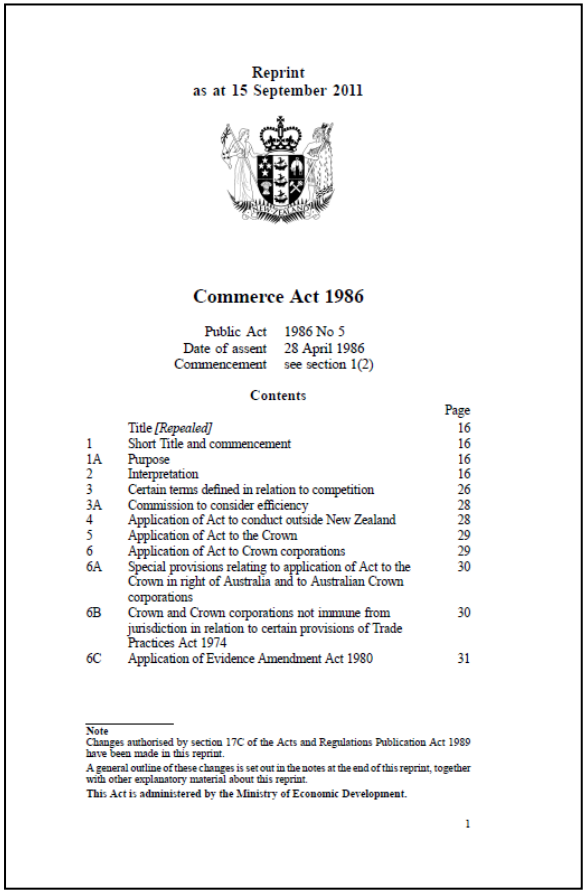
Commerce Act 1986: Part 4

52A Purpose of Part 4

(1) The purpose of this Part is to promote the long-term benefit of consumers …. by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—

- (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and
- (b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and
- (c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and
- (d) are limited in their ability to extract excessive profits.

- Defines regulatory regime
  - Information Disclosure
  - DPP/CPP



Reprint
as at 15 September 2011

Commerce Act 1986

Public Act 1986 No 5
Date of assent 28 April 1986
Commencement see section 1(2)

Contents

Note
Changes authorised by section 17C of the Acts and Regulations Publication Act 1989 have been made in this reprint.
A general outline of these changes is set out in the notes at the end of this reprint, together with other explanatory material about this reprint.
This Act is administered by the Ministry of Economic Development.

1

Powerco operates within an economic regulatory framework that has three main strands

Default Price / Quality Path (DPP)

- DPP regime based on a partial building blocks approach to forecast future profitability.
- Some assumptions apply industry wide across 17 of 29 lines companies (hence default)
- Input methododologies define some of the financial rules the Commission must apply - RAB / WACC / Tax / allocation
- Quality standards based on maintaining average historicial peformance (SAIDI / SAIFI) with some adjustments

Customised Price / Quality Path (CPP)

- CPP revenue forecast based on a full building blocks methodology (orthodox)
- CPP is a bespoke price path (alternative to a DPP)
- CPP requires a robust understanding of:
  - network assets;
  - network performance;
  - future expenditure drivers;
  - efficiency of cost structure;
  - network outputs; and
  - network risks

Information Disclosure (ID)

- ID underpins both DPP and CPP mechanisms – new requirements in place 2012
- Increased financial reporting to enable the Commission to determine historic profitability
- Increased information reporting on network data / performance / expenditure / drivers – Extended AMPs
- New Pricing disclosures
- ID will be used by the Commission to produce annual summary and analysis reports comparing key data and metrics for EDBs

Relevant CPP evaluation criteria are

a) Whether the proposal is consistent with the IMs

b) The extent to which our proposal would promote outcomes that are consistent with outcomes produced in competitive markets (incentives to invest and improve efficiency, share benefits of efficiency gains with consumers and are limited in ability to extract excessive profits)

c) Whether the data, analysis and assumptions underpinning the proposal are fit for purpose including considerations as to the accuracy and reliability of data and reasonableness of assumptions

d) Whether capex and opex meets **the expenditure objective**

e) Whether we have consulted with consumers and whether the proposal is supported by consumers, where relevant.

The expenditure objective is:

"that expenditure reflects the efficient costs that a prudent EDB would require to meet or manage expected demand at appropriate service standards over the CPP regulatory period and over the longer term and comply with applicable regulatory obligations".

Pre-submission oversight of our plans and expenditure has been extensive…….

Powerco

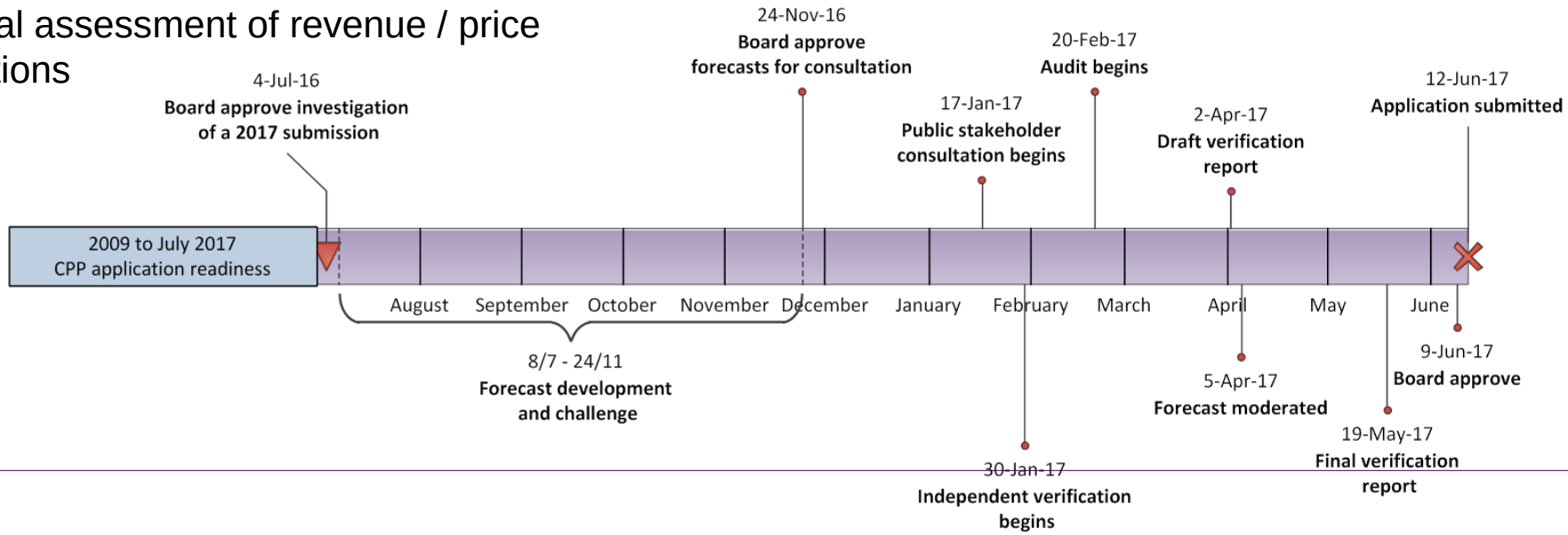
- Internal checks and control
- Board governance and challenge.
- Independent expert reviews

Commission (pre application)

- Annual Information Disclosure / AMPs
- Independent verifier – pre application
  - Technical challenge of expenditure proposal
- Independent auditor
  - Financial assessment of revenue / price calculations

Stakeholders / customers (pre application)

- BAU engagement with Powerco
- Customer surveys
- Core consultation
  - 1 on 1 / Forums / Online / Media / Surveys /Mail



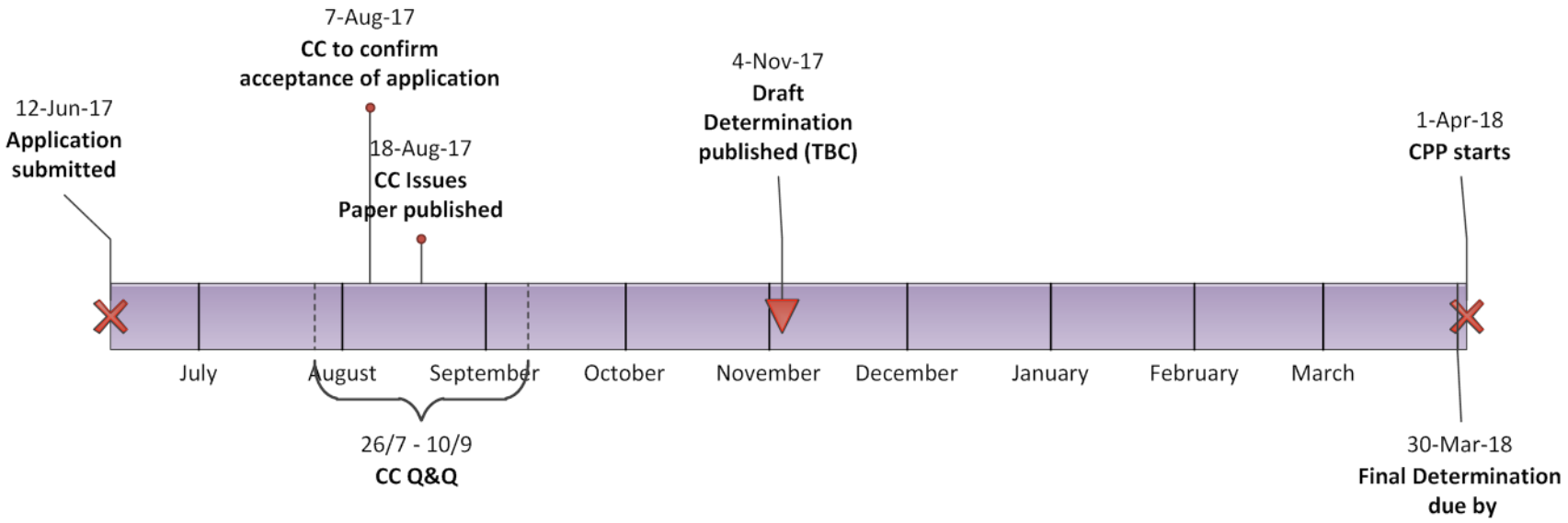
….and continues to be rigorously challenged.

Commission (post application) – 190 days

- Commission staff technical review of proposal
- Commission engaged - Independent experts

Stakeholders / customers (Post application)

- Input to Commission's consultation on initial views
- Input to Commission's consultation on final determination



Independent verification was conducted of our proposal against the IM expenditure objectives

VERIFICATION: Selection process

- Appointment process specified by the Commission (IMs)
- Verifier's scope of work and terms of reference specified by the Commission (IMs)
- Designed as a pre-application assessment – ie forms part the Commission's review
- Verifier's duty of care is to the Commission – independent of Powerco (deed)
- Open tender process conducted by Powerco (RFI / RFP)
- NZ and International search (long list to short list)
- Final selection narrowed to Australian companies (experience / track record / independence)
- Credentials of FS / WSP

VERIFICATION: Farrier Swier and WSP: International, independent experts with credible and relevant experience in revenue setting process for monopoly utilities

Farrier Swier Consulting

Category	Experience
FSC	
General	FSC provides expert advisory and management consulting services to businesses, governments and regulators in the utility and infrastructure sectors in Australia and the Asia Pacific region.
Working on behalf of regulators	FSC has extensive experience working for energy regulators in Australia and New Zealand and has a deep understanding of their requirements and the current policy issues they face. Relevant energy regulators that the FSC team has worked for include the Australian Energy Regulator (AER), the Australian Energy Market Commission (AEMC), the Australian Energy Market Operator (AEMO), the Victorian Essential Services Commission (ESC), the Commission (in NZ), and the NZ Electricity Commission. Some FSC team members have also worked as energy regulators and market operators directly, including for the AER, VENCorp (which eventually formed part of AEMO), Western Australian Independent Market Operator, and the ESC.
Expenditure reviews	FSC has extensive experience undertaking, procuring and assessing expenditure reviews. The FSC team also has extensive experience being directly involved in expenditure decision making, including as directors and managers. For regulated businesses FSC has supported Jemena (gas and electricity), United Energy, Multinet Gas, Power and Water Corporation, ActewAGL, Australian Gas Networks, Ergon, Western Power and AusNet Services.
NZ electricity sector	Although Melbourne based, FSC and its team has broad experience with the NZ electricity sector, having previously advised various NZ energy networks and gentailers, the NZ Energy Networks Association, the Commission and the NZ Electricity Commission. Geoff Swier is currently a director of Trustpower in NZ.
Other	FSC specialises in corporate governance, with its team holding current or previous senior and Board positions within large energy related businesses and regulators. This experience involves managing and being a part of expenditure and other governance processes. FSC's team also has extensive experience initiating, contributing to, reviewing, and advising on customer engagement by energy and other networks, including Jemena, SA Power Networks, ActewAGL, and Multinet. We recognise that this is an increasingly important part of a regulated energy networks operations.

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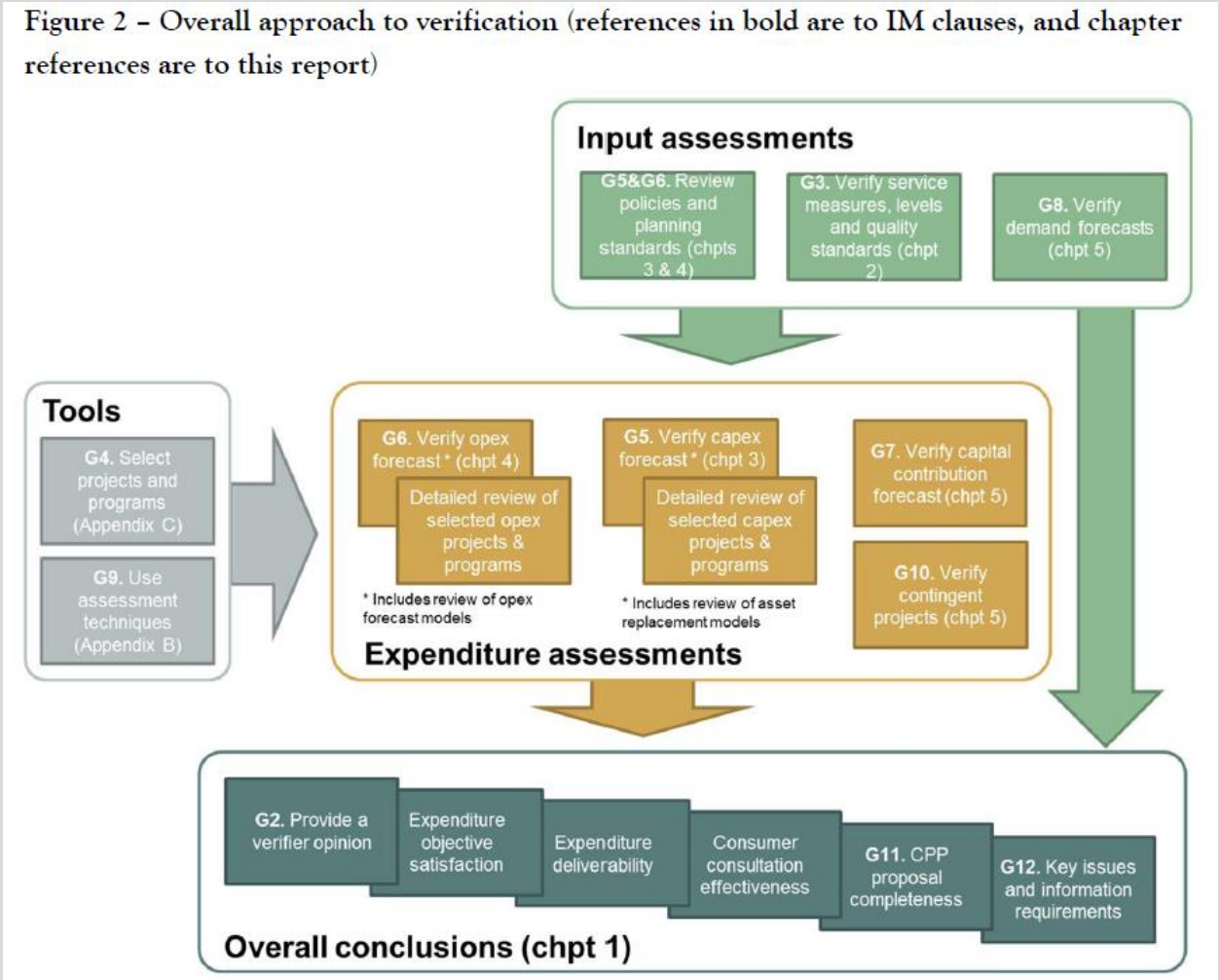
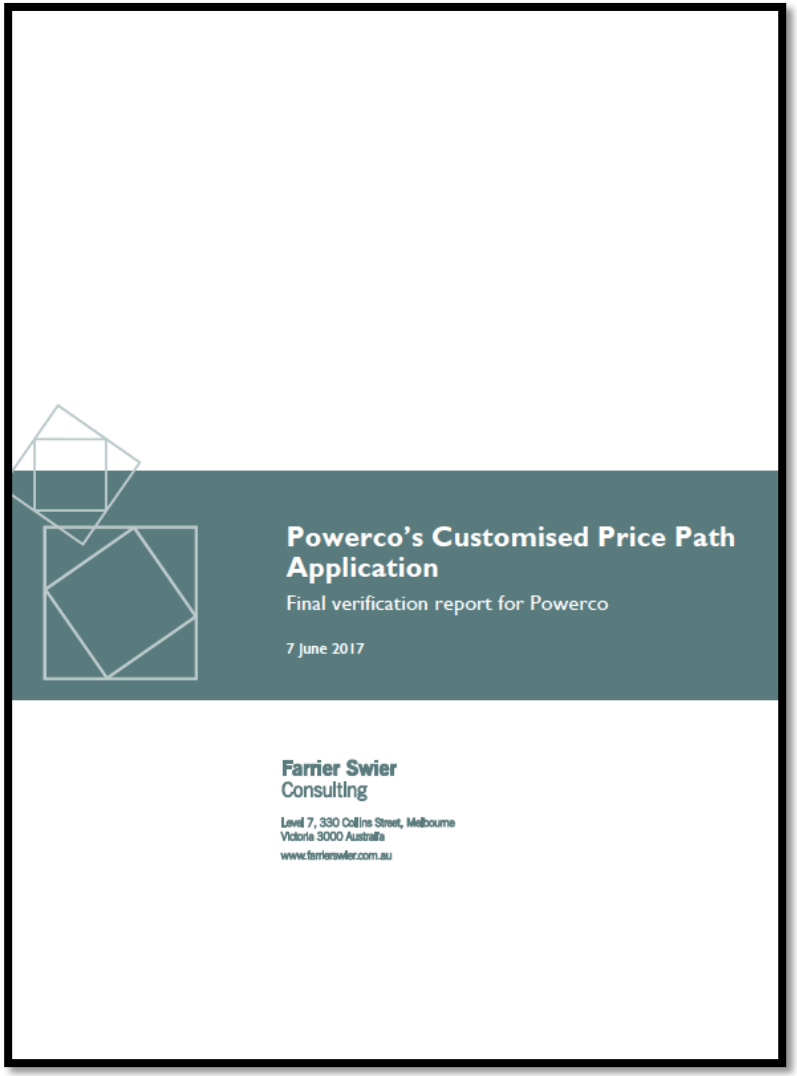
WSP-PB	
General	WSP-PB's team have extensive experience in providing regulatory, economic and technical services for a range of transmission and distribution network service providers, including regulatory authorities in Australia and New Zealand.
Working on behalf of regulators	WSP-PB's experience and understanding of the regulated energy market is extensive, having worked for the AER, Utilities Commission (NT), the AEMC, and the ESC of Victoria amongst others. This includes undertaking discrete pieces of regulatory or technical work, working on pricing determinations, and undertaking independent audits.
Expenditure reviews	WSP-PB's recent work for regulators on expenditure reviews includes working for IPART (NSW) on two water reviews; and for the Utilities Commission of the Northern Territory reviewing proposed expenditure by Power and Water Corporation. For regulated businesses WSP-PB has supported United Energy, Jemena (electricity and gas), Essential Energy and Ergon with their regulatory submissions and responding to draft and final pricing determinations. This has included being embedded within the business in developing strategies or expenditure forecasts, as Rebecca Quinlan did with United Energy in 2015 developing the Future Networks strategy paper.
NZ electricity sector	WSP-PB's business in New Zealand dates back to 1970 which in turn had previously acquired Design Power (NZ) through the NZED deregulation in 1990s and early 2000s. Since this time WSP-PB has worked for many existing and erstwhile EBDs, Generators, Transpower and the Regulator in New Zealand. Our services have broadly included technical advisory, feasibility studies, engineering, design, project and construction management for a variety of clients throughout New Zealand.
Other	WSP-PB's provide services to transform the built environment and restore the natural environment, and our expertise ranges from environmental remediation to urban planning, from engineering iconic buildings to designing sustainable transport networks, and from developing the energy sources of the future to enabling new ways of extracting essential resources.

VERIFICATION: Verifier focus was the capex and opex reflect the efficient costs that a prudent EDB would meet the expected service demands, at appropriate standards over the CPP and long term

The verifier agreed with the Powerco CPP needs case and verified 91% of the expenditure against the expenditure objective

Figure 2 – Overall approach to verification (references in bold are to IM clauses, and chapter references are to this report)

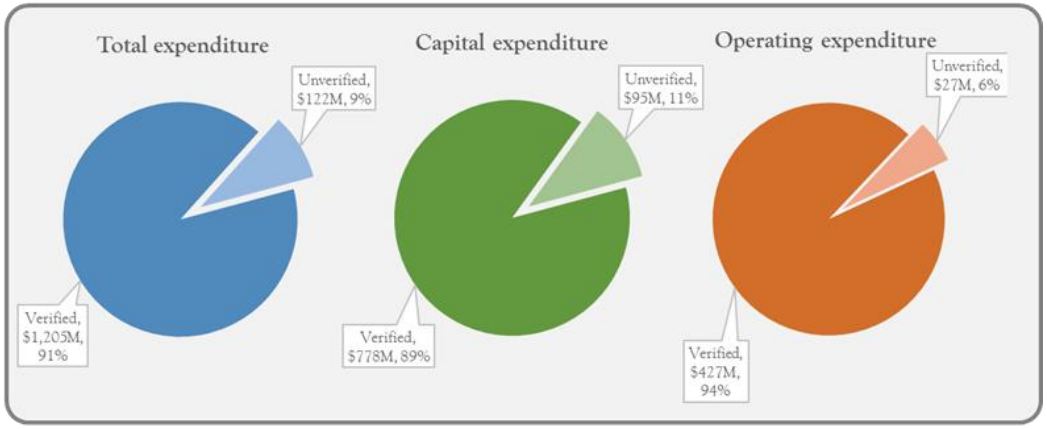




The verifier recommended the CC focus on a number of specific areas

Farrier Swier Consulting

WSP PARSONS BRINCKERHOFF



Forecast component	Suggested additional information or line of inquiry
Overhead conductors renewals capex	Undertake suitable investigation/analysis to assess the risks posed by distribution conductors failing, and hence the number of faults that can be expected on the network of a prudent EDB.
Overhead structures renewals capex	Construct new survivor curves excluding green defects. Revise the overhead structures forecast to reflect any changes to the overhead conductor renewals capex.
Zone substation renewal capex	Confirm with Powerco that its proposed replacement of transformers is prudent in light of our findings.
Growth and renewals capex	Assess the value of lost load associated with each of the major projects and a sample of the minor works.
Reliability capex	Evaluate forecast reliability performance with the reliability program included to determine the level of expenditure required on reliability specific programs.
Network evolution capex	Engage with Powerco on its business cases for its network evolution initiatives, including on whether the expected benefits of each initiative are likely to outweigh the costs and the alternative options available.
System operation and network support opex	Engage with Powerco on its business case for its strategy-driven step changes or initiatives, including on whether the expected benefits of each initiative are likely to outweigh the costs and the alternative options available.
Corporate opex	Engage with Powerco on the business cases for the FTE increases, including on the expected benefits from and proposed salaries for the extra staff.
Cost escalators	The Commission may wish to procure its own cost escalator forecasts from a sufficiently qualified and independent third party to compare to those proposed by Powerco.
Quality standard variation	The Commission may wish to undertake its own analysis of the likely reliability benefits arising from the proposed capex and opex programs, or engage with Powerco to have its models refined.
Customer engagement	The Commission may wish to investigate the price impact of the CPP application on Powerco's customers at a more granular level to identify whether any customers are likely to receive unpalatable price increases.

How our plans will impact distribution charges

Estimated impact of 5.7% P0 on average customer – high level

as defined by MBIE using 8,000 kWh per annum

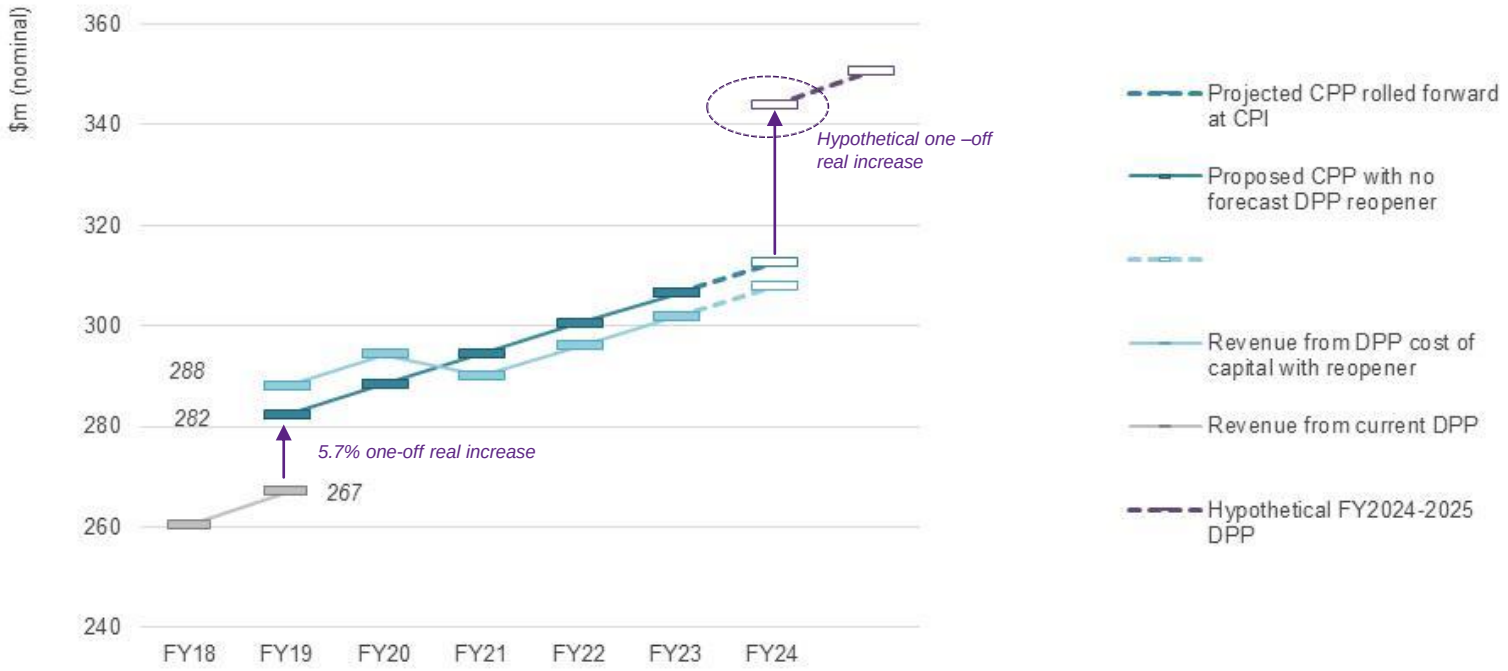
We are asking the Commerce Commission to allow us to increase customers electricity prices by less than a dollar per week for the average consumer from 1 April 2018 our five year investment plan:

- Annual increase determined by applying an 5.7% uplift to the distribution component only.
- Assuming that transmission costs remain flat this will translate to a 4.0% uplift in network charges.
- This corresponds to an increase of $40 per year (determined by subtracting the inflated charges from the current charges)
- This equates to approx. $3.36 per month (dividing the annual figure by 12 being the expected number of months),
- This results in an average increase of **$0.78 per week** (dividing the annual figure by 52 (being the expected number of weeks).

May 2017 data	Average Annual cost (based on 8,000 kWh/annum)	Current Charges	New Charges	Increase %	Estimated Annual increase	Estimated Monthly increase	Estimated Weekly increase
	Overall price (Energy + Line)	$2,493.71	$2,533.99	1.61%	$40.27	$3.36	$0.78
	Powerco (Distribution + Transmission)	$1,016.46	$1,056.73	3.96%	$40.27	$3.36	$0.78
	Powerco (Distribution only)	$706.51	$746.79	5.70%	$40.27	$3.36	$0.78
	Transmission	$309.94	$309.94	0.00%			
	Energy (Generation + Retail incl metering)	$1,477.26	$1,477.26	0.00%			

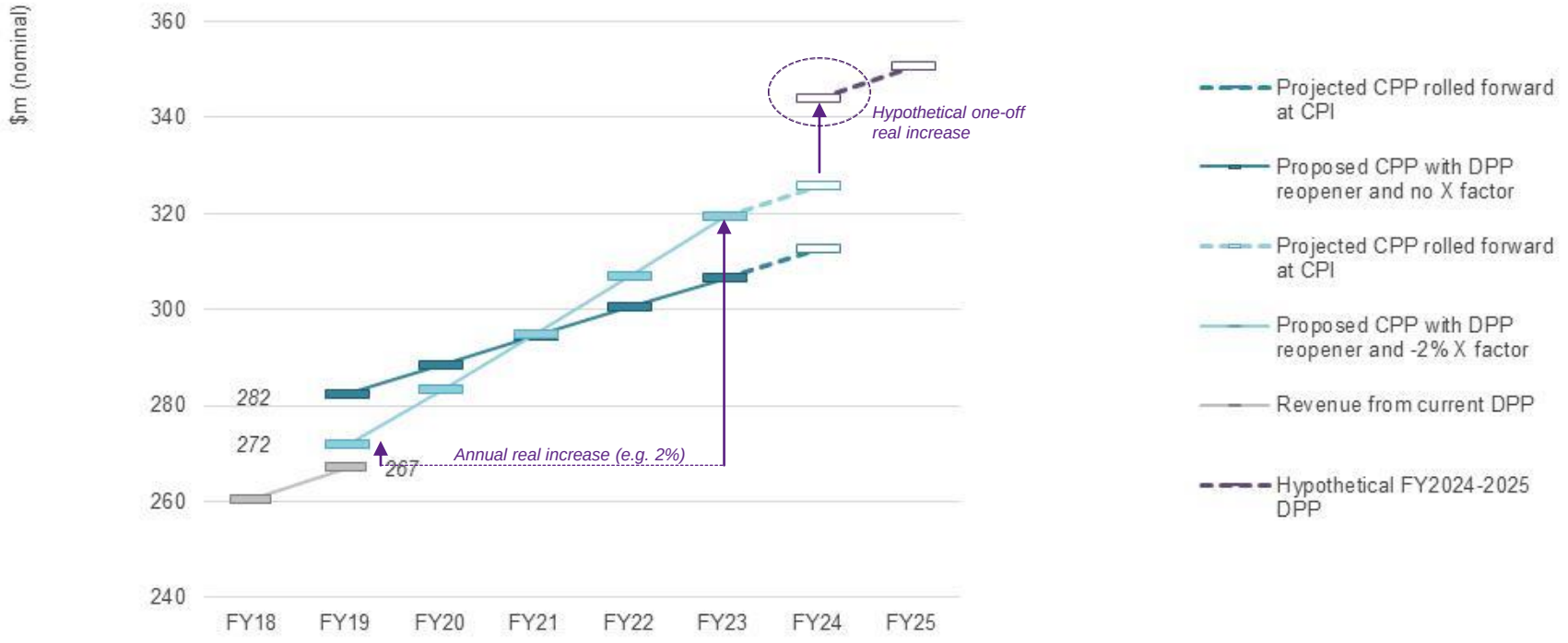
Moderating the price impact over the CPP regulatory period (1)

- We have proposed to forecast the DPP WACC decrease in FY2021 which reduces price volatility in the CPP regulatory period.
- This also reduces any potential price increases in the subsequent regulatory period



Moderating the price impact over the CPP regulatory period (2)

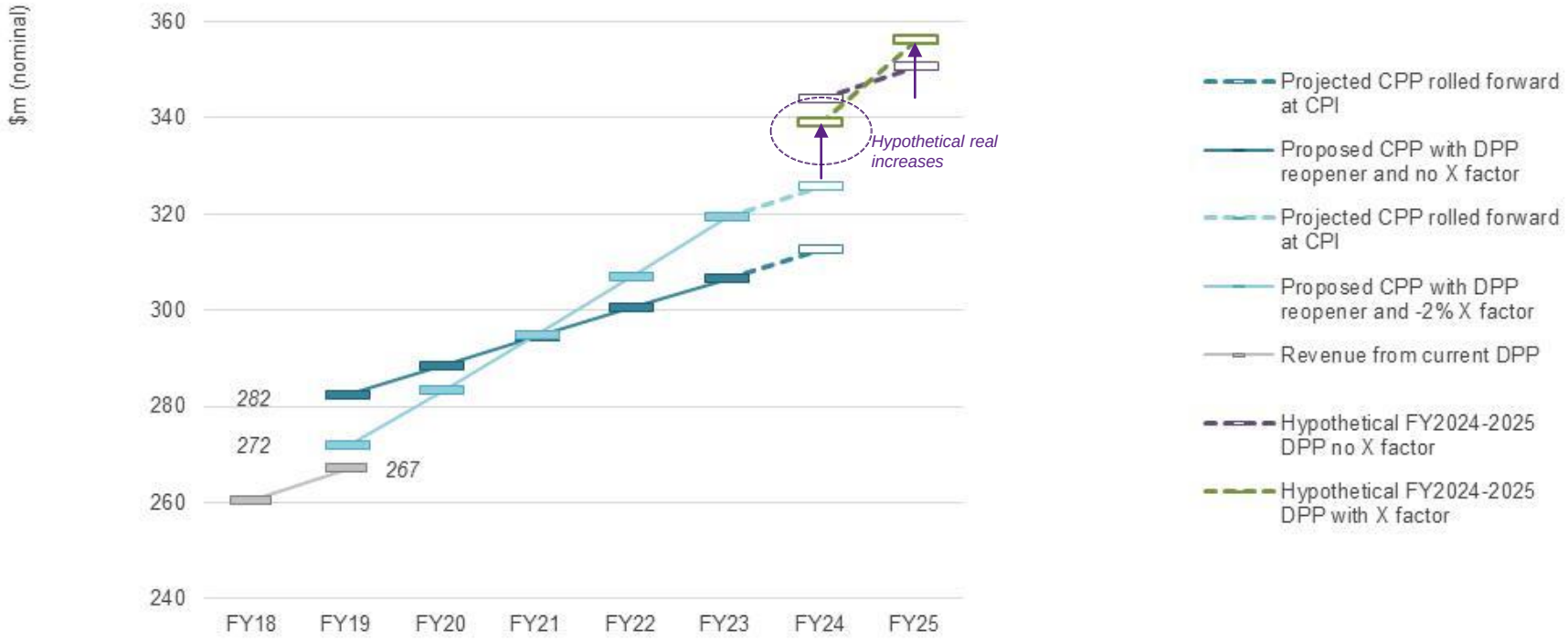
- We can apply an X factor to further spread the real price change over the CPP period.
- This will result in a lower initial price increase and potentially lower price increase stepping onto the next regulatory period.



Moderating the price impact post the CPP period **

- The Commission can apply an X factor when determining the next regulatory reset to reduce the initial price impact of that reset and spread it over the years in the next regulatory period.

- This a hypothetical – uncertain factors 7 years out - (CPP or DPP / future regulatory rules / forecast input assumptions i.e. Interest rates / WACC etc.)



Extensive customer and stakeholder consultation has occurred

Five stages of our consultation approach

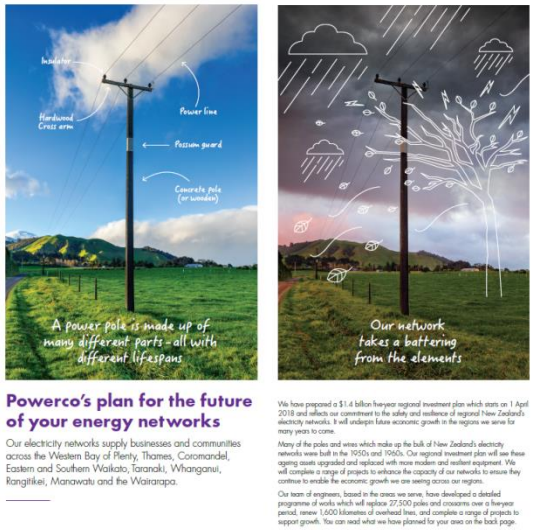
1. Awareness and invitation to engage: ‘BAU+’
2. Customer research on ‘Willingness to Pay’:
   - Qualitative research
   - Quantitative survey

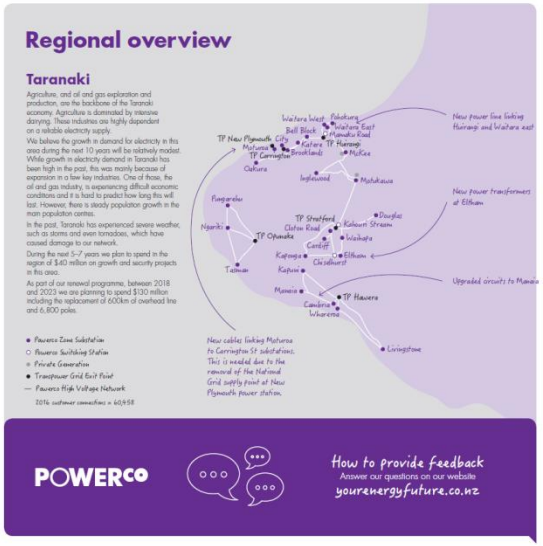
3. Core engagement on future network investment (draft CPP plan)
4. Pre-submission: final notification of CPP proposals
5. Post submission: stakeholder/media ongoing engagement

6. Post submission: Commerce Commission customer consultation (4 months)

A consumer led process

- Consultation plan informed by previous annual engagements
- CPP stakeholder engagement was extensive and genuine
- Customer feedback on price / quality largely at an holistic level
- Our final plan has been moderated to reflect feedback
- Affordability has been a focus for us (p0 8.7% to 5.7%)
- We will maintain and ongoing dialogue with our customers





CONSULTATION: A number of MEUG members engaged in core CPP engagement & reflected what we has heard in prior consultation

We collated customer feedback from three main sources

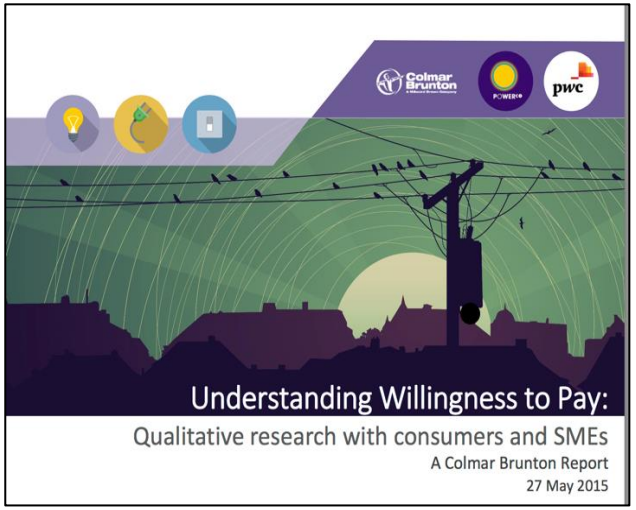
Ongoing customer feedback
- Annual consultations
- Customer complaints

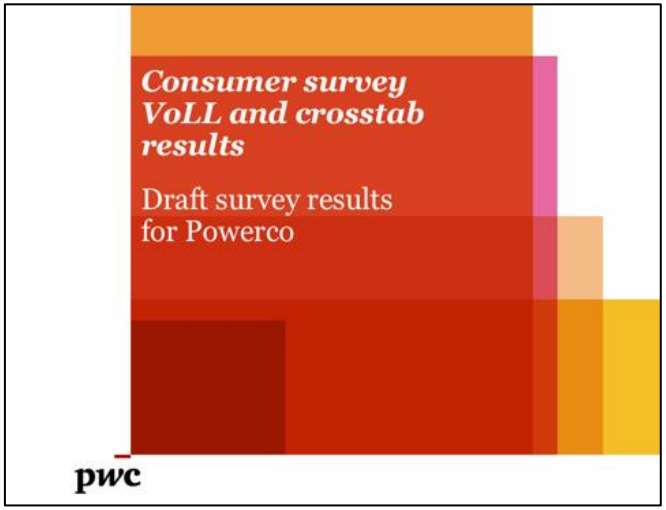
PwC/Colmar Brunton research
- Insights from qualitative survey
- Insights from quantitative survey

CPP core consultation
- Multi-channel engagement targeting all stakeholders

Group	Meeting date	Feedback themes
MEUG	14 February, Wellington	MEUG and members provided feedback on the following themes: • Price sensitivity • Avoiding price shocks • Value placed on network reliability • Effective outage communication • Our high level priorities
MEUG member – Fonterra	1 March, Hamilton	
MEUG member – Oceana Gold	1 March, Hamilton	
MEUG member – Oji Fibre	2 March, Tauranga	
Federated Farmers	28 March, Wellington	Federated Farmers provided feedback on the following themes: • Effective outage communication • Alternative investment/output options • Expectation that the CPP proposal will be appropriately assessed by the Commerce Commission
Consumer NZ	3 March, Wellington	Oli to add

Preliminary Customer Survey Reports





Colmar Brunton

- Summary of findings from qualitative interviews and group sessions
- May 2015

PWC

- Initial results from the quantitative Willingness to Pay Survey
- November 2015

PWC

- Further analysis from the quantitative survey focused on VoLL
- January 2016

Our approach to core engagement used communication channels that reflect customer segment preferences

Our Plan Story → Stakeholder Identification → Channels → Materials → Schedule

Dear Dennis

RE: Powerco's $1.4 billion regional investment plan for our electricity networks

The reason for my letter is to give you a 'heads up' on the release of our $1.4 billion regional investment proposal (commencing 1 April 2018) and to invite Contact Energy to provide feedback on the same. One of our Commercial Team will be in touch with a member of your team to discuss setting up a meeting to run through what this means for your business and inviting them to attend one of a series of forums that we are holding. A number of senior Powerco staff would attend the meeting to ensure that we have the right people to answer your questions.

By way of an elevator pitch, there are three main objectives / drivers underlying our proposal:

- Keeping our electricity networks safe and resilient
- Ensuring our electricity networks are secure and able to manage and enable economic growth
- Future proofing our electricity networks to enable customers to take up the benefits from a range of emerging smart grid technologies

Our $1.4 billion regional investment proposal represents our view of the prudent and efficient level of investment to maintain the level of safety, security and resilience of our networks over the longer term and develop our networks to enable integration with a range of emerging smart technologies. In addition, our proposal is our commitment to regional New Zealand and will underpin future economic growth in regional New Zealand for many years to come.

While this letter is not intended to delve into detail, there is one area where I would like to, that being safety. As a fellow CEO you will appreciate safety comes first. Just like your organisation, Powerco is committed to keeping the public and our contractors safe. For us, particularly as a lot of our assets, like overhead power lines, are in the public domain, safety is integrally linked with the health / condition of our assets. Failure of a pole or cross-arm resulting in a power line lying on the ground exposes the public to the risk of electrocution. Our plan has been specifically formulated to effectively manage the safety of the public and everyone that works on and around our networks in the longer term.

In terms of next steps, we are seeking yours and other customers and stakeholders feedback on our plans before finalising our proposal and submitting it to the Commerce Commission later this year. It is the Commerce Commission who will ultimately determine how much we are compensated for and then what you will pay for our service in the future. As part of the Commission's process of considering our proposal there will be another round of consultation.

The attachment to this letter provides detail on how to find out more information and have your say on our proposal.

If you have any questions or would like to discuss the matter further please do not hesitate to contact either myself, Andrew McLeod (GM Electricity) Andrew.McLeod@powerco.co.nz or 021 612 268 or Richard Fletcher (GM Regulatory and Corporate Affairs) Richard.Fletcher@powerco.co.nz or 021 730 348.

Yours sincerely,

Nigel Barbour
Chief Executive, Powerco
Nigel.Barbour@powerco.co.nz
06 759 6288

Overview document
Summary of our investment proposal

Have your say document
Detail of our investment proposal including alternatives and considered options

Website and video
Provides access to all key documents and a link for providing feedback

Activities

One-on-one conversations

CEO letter

Advertising insert

Group forums

How to find out more information and provide feedback

There are many ways you can find out more information and have your say:

- Visit the website www.yourenergyfuture.co.nz . This has a wide range of information on the proposal, a video, survey and details on other ways to provide feedback.
- Read the overview document "Summary of Our Investment Proposal", and the more detailed "Have your say" document.
- Attend one of our engagement forums.

Overview of the process to approve our plan

There are a number of steps to take before we can carry out our investment plan:

Step one (Current Stage)
This consultation on our proposal runs until 3 March 2017. We want to hear what you think about our plans.

Step two
After considering your feedback, we will finalise our investment proposal.

Step three
In mid-April 2017 we will notify you of our final proposal, and how we have taken your views into account.

Step four
In mid-June 2017 we plan to submit our proposal to the Commerce Commission.

Step five
The Commerce Commission has 40 days to decide if our proposal is compliant with the rules and if it will consider the application. If the Commission proceeds with its review, it is also likely to consult with Powerco's customers and stakeholders.

Step six
The Commission must make a final decision on Powerco's proposal by 1 April 2018

Consultation materials

Overview document
Summary of our investment proposal

Have your say document
Detail of our investment proposal including alternatives and considered options

Website and video
Provides access to all key documents and a link for providing feedback

CEO letter

Advertising insert

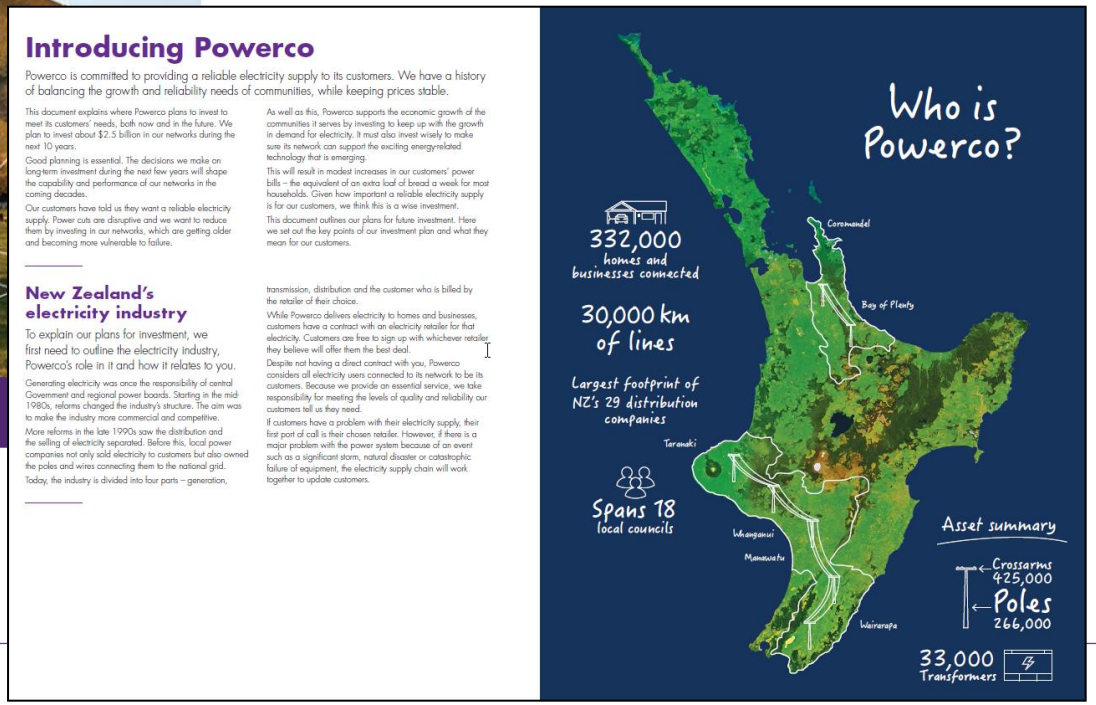
Consultation activities

One-on-one conversations

Group forums

Key consultation material development: Main Overview Document

The core document for “mass” market customers provided context and detail about Powerco and our investment needs case.



Introducing Powerco

Powerco is committed to providing a reliable electricity supply to its customers. We have a history of balancing the growth and reliability needs of communities, while keeping prices stable.

This document explains where Powerco plans to invest to meet its customers' needs, both now and in the future. We plan to invest about $2.5 billion in our networks during the next 10 years.

Good planning is essential. The decisions we make on long-term investment during the next few years will shape the capability and performance of our networks in the coming decades.

Our customers have told us they want a reliable electricity supply. Power cuts are disruptive and we want to reduce them by investing in our networks, which are getting older and becoming more vulnerable to failure.

As well as this, Powerco supports the economic growth of the communities it serves by investing to keep up with the growth in demand for electricity. It must also invest wisely to make sure its network can support the exciting energy-related technology that is emerging.

This will result in modest increases in our customers' power bills – the equivalent of an extra loaf of bread a week for most households. Given how important a reliable electricity supply is for our customers, we think this is a wise investment.

This document outlines our plans for future investment. Here we set out the key points of our investment plan and what they mean for our customers.

New Zealand's electricity industry

To explain our plans for investment, we first need to outline the electricity industry, Powerco's role in it and how it relates to you.

Generating electricity was once the responsibility of central Government and regional power boards. Starting in the mid-1980s, reforms changed the industry's structure. The aim was to make the industry more commercial and competitive.

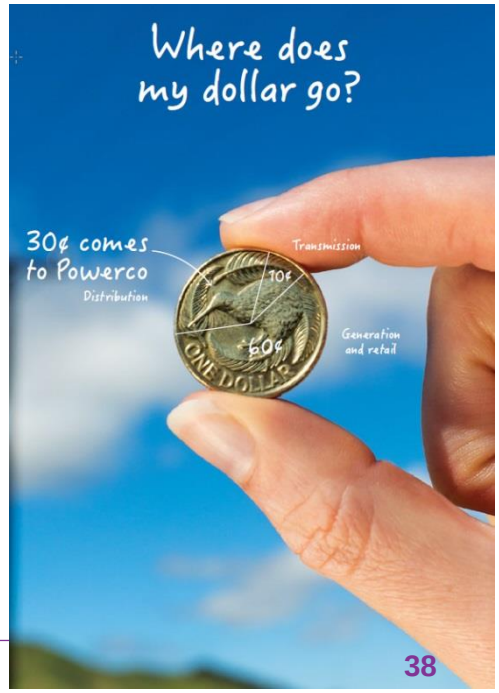
More reforms in the late 1990s saw the distribution and the selling of electricity separated. Before this, local power companies not only sold electricity to customers but also owned the poles and wires connecting them to the national grid.

Today, the industry is divided into four parts – generation, transmission, distribution and the customer who is billed by the retailer of their choice.

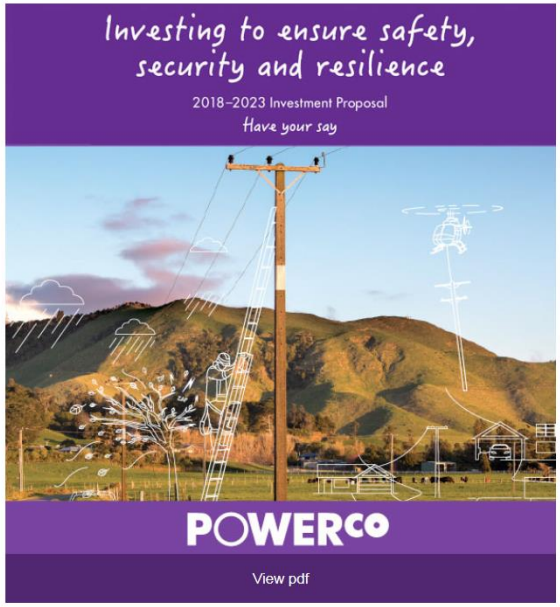
While Powerco delivers electricity to homes and businesses, customers have a contract with an electricity retailer for that electricity. Customers are free to sign up with whichever retailer they believe will offer them the best deal.

Despite not having a direct contract with you, Powerco considers all electricity users connected to its network to be its customers. Because we provide an essential service, we take responsibility for meeting the levels of quality and reliability our customers tell us they need.

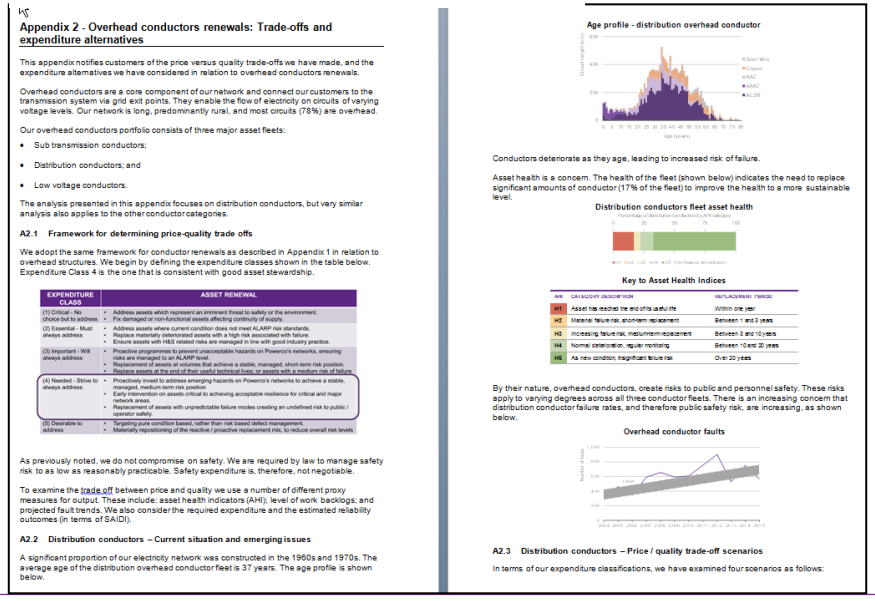
If customers have a problem with their electricity supply, their first port of call is their chosen retailer. However, if there is a major problem with the power system because of an event such as a significant storm, natural disaster or catastrophic failure of equipment, the electricity supply chain will work together to update customers.



Key consultation material development: CPP Investment Proposal – Have your say



The ‘Have you say’ document was developed for informed stakeholders and describes our investment proposal in more detail while outlining the alternatives considered and requested feedback on options.



Appendix 2 - Overhead conductors renewals: Trade-offs and expenditure alternatives

This appendix notifies customers of the price versus quality trade-offs we have made, and the expenditure alternatives we have considered in relation to overhead conductors renewals.

Overhead conductors are a core component of our network and connect our customers to the transmission system via grid exit points. They enable the flow of electricity on circuits of varying voltage levels. Our network is long, predominantly rural, and most circuits (78%) are overhead.

Our overhead conductors portfolio consists of three major asset fleets:

- Sub transmission conductors;
- Distribution conductors; and
- Low voltage conductors.

The analysis presented in this appendix focuses on distribution conductors, but very similar analysis also applies to the other conductor categories.

A2.1 Framework for determining price-quality trade offs

We adopt the same framework for conductor renewals as described in Appendix 1 in relation to overhead structures. We begin by defining the expenditure classes shown in the table below. Expenditure Class 4 is the one that is consistent with good asset stewardship.

EXPENDITURE CLASS	ASSET RENEWAL
(1) Critical - No choice but to address	• Address assets which represent an imminent threat to safety or the environment. • Fix damaged or non-functional assets affecting continuity of supply.
(2) Essential - Must always address	• Address assets where current condition does not meet ALARP risk standards. • Replace materially deteriorated assets with a high risk associated with failure. • Ensure assets with H&S related risks are managed in line with good industry practice.
(3) Important - Will always address	• Proactive programmes to prevent unacceptable hazards on Powerco's networks, ensuring risks are managed to an ALARP level. • Replacement of assets at volumes that achieve a stable, managed, short-term risk position. • Replace assets at the end of their useful technical lives, or assets with a medium risk of failure.
(4) Needed - Strive to always address	• Proactively invest to address emerging hazards on Powerco's networks to achieve a stable, managed, medium-term risk position. • Early intervention on assets critical to achieving acceptable resilience for critical and major network areas. • Replacement of assets with unpredictable failure modes creating an undefined risk to public / operator safety.
(5) Desirable to address	• Targeting pure condition based, rather than risk based defect management. • Materially repositioning of the reactive / proactive replacement mix, to reduce overall risk levels

As previously noted, we do not compromise on safety. We are required by law to manage safety risk to as low as reasonably practicable. Safety expenditure is, therefore, not negotiable.

To examine the trade off between price and quality we use a number of different proxy measures for output. These include: asset health indicators (AHI); level of work backlogs; and projected fault trends. We also consider the required expenditure and the estimated reliability outcomes (in terms of SAIDI).

A2.2 Distribution conductors – Current situation and emerging issues

A significant proportion of our electricity network was constructed in the 1960s and 1970s. The average age of the distribution overhead conductor fleet is 37 years. The age profile is shown below.

Age profile - distribution overhead conductor

Conductors deteriorate as they age, leading to increased risk of failure.

Asset health is a concern. The health of the fleet (shown below) indicates the need to replace significant amounts of conductor (17% of the fleet) to improve the health to a more sustainable level.

Distribution conductors fleet asset health

Key to Asset Health Indices

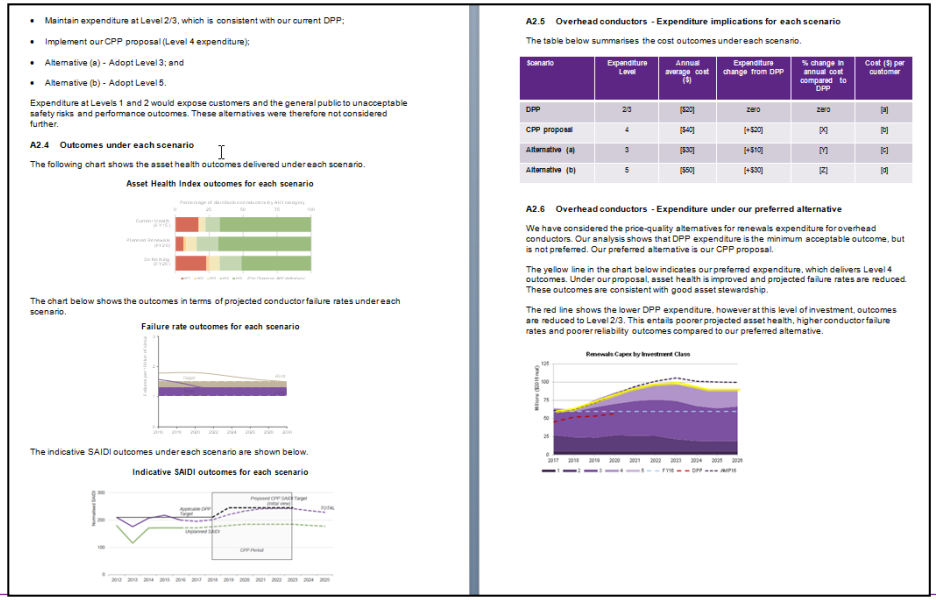
AHI	CATEGORY DESCRIPTION	REPLACEMENT PERIOD
H1	Asset has reached the end of its useful life	Within one year
H2	Material failure risk, short-term replacement	Between 1 and 5 years
H3	Increasing failure risk, medium-term replacement	Between 5 and 10 years
H4	Normal deterioration, regular monitoring	Between 10 and 20 years
H5	As new condition, insignificant failure risk	Over 20 years

By their nature, overhead conductors, create risks to public and personnel safety. These risks apply to varying degrees across all three conductor fleets. There is an increasing concern that distribution conductor failure rates, and therefore public safety risk, are increasing, as shown below.

Overhead conductor faults

A2.3 Distribution conductors – Price / quality trade-off scenarios

In terms of our expenditure classifications, we have examined four scenarios as follows:



- Maintain expenditure at Level 2/3, which is consistent with our current DPP;
- Implement our CPP proposal (Level 4 expenditure);
- Alternative (a) - Adopt Level 3; and
- Alternative (b) - Adopt Level 5.

Expenditure at Levels 1 and 2 would expose customers and the general public to unacceptable safety risks and performance outcomes. These alternatives were therefore not considered further.

A2.4 Outcomes under each scenario

The following chart shows the asset health outcomes delivered under each scenario.

Asset Health Index outcomes for each scenario

The chart below shows the outcomes in terms of projected conductor failure rates under each scenario.

Failure rate outcomes for each scenario

The indicative SAIDI outcomes under each scenario are shown below.

Indicative SAIDI outcomes for each scenario

A2.5 Overhead conductors - Expenditure implications for each scenario

The table below summarises the cost outcomes under each scenario.

Scenario	Expenditure Level	Annual average cost ($)	Expenditure change from DPP	% change in annual cost compared to DPP	Cost ($) per customer
DPP	2/3	[$20]	zero	zero	[$]
CPP proposal	4	[$40]	[+$20]	[X]	[$]
Alternative (a)	3	[$30]	[+$10]	[Y]	[£]
Alternative (b)	5	[$50]	[+$30]	[Z]	[$]

A2.6 Overhead conductors - Expenditure under our preferred alternative

We have considered the price-quality alternatives for renewals expenditure for overhead conductors. Our analysis shows that DPP expenditure is the minimum acceptable outcome, but is not preferred. Our preferred alternative is our CPP proposal.

The yellow line in the chart below indicates our preferred expenditure, which delivers Level 4 outcomes. Under our proposal, asset health is improved and projected failure rates are reduced. These outcomes are consistent with good asset stewardship.

The red line shows the lower DPP expenditure, however at this level of investment, outcomes are reduced to Level 2/3. This entails poorer projected asset health, higher conductor failure rates and poorer reliability outcomes compared to our preferred alternative.

Renewals Capex by Investment Class

Commission Issues Paper

The Commissions Issues Paper has been written to guide stakeholders in submitting their views on our CPP proposal

The Issues Paper (page 17) outlines focus areas of the Commissions aligned to the verifier report

How we decided on the issues that we would request feedback on

64 In developing this issues paper we have focused on the areas of concern identified by the verifier, and particularly on the issues that we think stakeholders can provide helpful feedback to us.

65 The issues discussed below ***are not*** an exhaustive list of what we are considering, and we are following up with Powerco on a number of matters. We are interested in your views on any aspect of Powerco's CPP proposal or the verification report.

66 We have grouped potential issues into the following chapters:

Chapter 1: Quality – issues relating to Powerco's proposed quality measures and standards

Chapter 2: Long term pricing impact of Powerco's CPP proposal

Chapter 3: Potential price volatility from WACC change during the CPP period

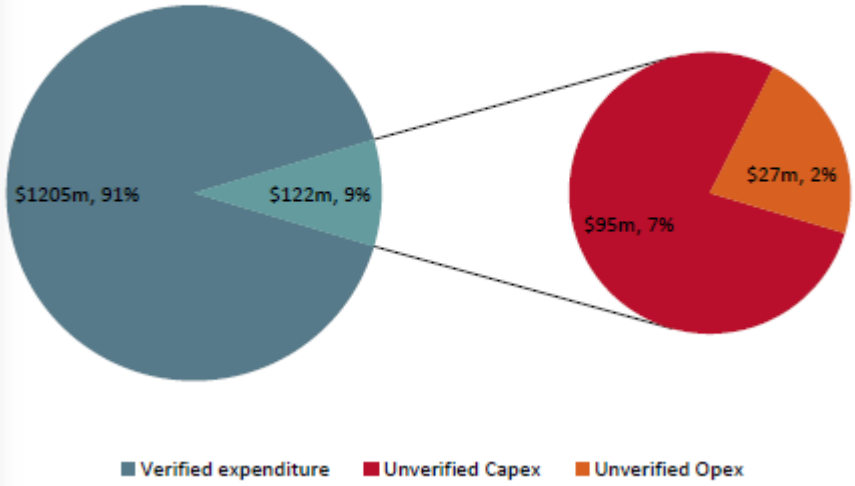
Chapter 4: Asset health and criticality and its impact on capex forecasts

Chapter 5: Network evolution capex

Chapter 6: Opex forecasts

Chapter 7: Deliverability risk of Powerco's CPP proposal

Figure 1.3 Proportion of unverified expenditure of total expenditure



Thank you for your time