COMMERCE COMMISSION
NEW ZEALAND
Te Komihana Tauhokohoko

ISBN 978-1-869454-12-8
14.07/14118

Public version

Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020

Main policy paper

Date of publication: 28 November 2014

Associated documents

Publication date	Reference	Title
28 November 2014	ISSN 1178–2560	Electricity Distribution Services Default Price-Quality Path Determination 2015 [2015] NZCC 33
28 November 2014	ISBN 978-1-869454-12-5	Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020: Quality standards, targets, and incentives
28 November 2014	ISBN 978-1-869454-15-9	Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020: Low cost forecasting approaches
20 October 2014	ISSN 1178–2560	Electricity Distribution Services Default Price-Quality Path Draft Determination 2015
18 July 2014	ISSN 1178–2560	Electricity Distribution Services Default Price-Quality Path Draft Determination 2015
4 July 2014	ISBN 978-1-869453-86-4	Proposed Default Price-Quality Paths for Electricity Distributors from 1 April 2015

Regulation Branch, Commerce Commission
Wellington, NEW ZEALAND

Contents

[BLANK PAGE]

Executive Summary

Purpose of paper

X1 This paper outlines and explains the main components of the default price-quality paths applying to 16 electricity distributors from 1 April 2015 to 31 March 2020.

Alpine Energy	Horizon Energy	Powerco
Aurora Energy	The Lines Company	Top Energy
Centralines	Network Tasman	Unison Networks
Eastland Networks	Nelson Electricity	Vector
Electricity Ashburton	OtagoNet Joint Venture	Wellington Electricity
Electricity Invercargill		

X2 Orion New Zealand will remain subject to a customised price quality path until 31 March 2019.

Price-quality regulation of electricity distribution services

X3 17 electricity distributors are subject to price-quality regulation under Part 4 of the Commerce Act 1986. We are therefore required to set limits on maximum price, and minimum standards for service quality. These 'price-quality paths' remain in force for a period of time known as the 'regulatory period'.

Relatively low cost default price-quality path with option of a customised alternative

X4 The specific type of price-quality regulation that applies to the 17 electricity distributors is known as 'default/customised price-quality regulation'. Under this type of regulation, we set a default price-quality path for each distributor, but individual distributors may seek a customised price-quality path instead.

X5 The purpose of default/customised price-quality regulation is shown in Box X1.

Box X1: Purpose of default/customised price-quality regulation

The purpose of default/customised price-quality regulation is to provide a relatively low cost way of setting price-quality paths for suppliers of regulated goods and services, while allowing the opportunity for individual suppliers to have alternative price-quality paths that better meet their particular circumstances

X6 The implication is that relatively low cost approaches are to be adopted in determining default price quality paths. The biggest contributor to the costs of setting customised price quality paths are audit, verification, and approval processes. Consequently, alternative techniques should be used for default price quality paths.

Low cost approaches explained in this paper

X7 In this paper, we explain the low cost approaches we have used to determine each part of each default price-quality path. These approaches generally reflect incremental improvements on the approaches that we have relied on previously.

X8 The main components of the default price-quality paths that we have set are:[1]

X8.1 Price limits;

X8.2 Quality targets and incentives; and

X8.3 Other incentive mechanisms, eg, consistent with s 54Q of the Act.[2]

X9 Overall, we are satisfied that the approaches set out in this paper reflect the purpose and provisions of Part 4. Amongst other things, distributors must have incentives to invest, improve efficiency, and provide services at the quality that consumers demand. Limiting excessive profits is also important.

Price limits provide an incentive to economise on costs that can be controlled

X10 We provide an incentive for distributors to economise on the costs they can control by structuring the price limits in a certain way. In particular:

X10.1 Expressed net of costs that distributors have little or no control over, the price limits are fixed in advance.

X10.2 Separate allowances are provided for costs that distributors have little or no control over (referred to as 'pass through costs' and 'recoverable costs').[3]

X11 The price limits are then reset at periodic intervals, to share the benefits of any efficiency gains with consumers, and limit the ability of distributors to earn excessive profits.

---

1 Amongst other things, this paper also discusses: Treatment of Orion New Zealand (Attachment A); and Treatment of assets purchased from Transpower New Zealand (Attachment D).

2 Section 54Q states that the Commission must promote incentives, and avoid imposing disincentives, for distributors to invest in energy efficiency and demand side management, and to reduce energy losses.

3 In Chapter 5, we outline and explain a new approach to the recovery of pass through and recoverable costs that removes volume risk.

Revenue expected net of pass through costs and recoverable costs

X12 Table X1 shows the amounts that we expect each distributor to earn during the next regulatory period, net of pass through costs and recoverable costs. Under the price limits, a distributor would earn more than the amounts shown if billed quantities grow faster than our assumptions, and vice-versa.

Table X1: Revenue expected during the regulatory period ($m)

Distributor	2016	2017	2018	2019	2020	Total (PV)
Alpine Energy	30.5	34.4	39.0	44.3	50.3	163.7
Aurora Energy	56.5	57.7	59.0	60.6	62.3	247.7
Centralines	10.0	10.8	11.7	12.7	13.7	48.8
Eastland	22.7	23.7	24.8	26.0	27.4	104.0
Electricity Ashburton	33.0	33.7	34.4	35.2	36.1	144.2
Electricity Invercargill	13.6	13.8	14.0	14.4	14.7	59.0
Horizon Energy	22.0	22.4	22.8	23.2	23.8	95.5
Nelson Electricity	6.8	7.0	7.1	7.3	7.5	29.9
Network Tasman	28.1	28.6	29.3	30.1	30.8	122.9
OtagoNet	24.8	25.2	25.8	26.4	27.1	108.1
Powerco	250.4	254.3	259.0	264.6	270.5	1,087.1
The Lines Company	34.7	35.1	35.5	36.1	36.7	149.1
Top Energy	34.2	37.1	40.3	43.9	47.9	168.7
Unison	100.1	101.9	104.0	106.5	109.2	436.5
Vector	395.2	405.6	417.3	430.8	444.9	1,749.9
Wellington Electricity	98.8	100.7	103.0	105.6	108.4	432.0

Additional amounts for certain distributors to compensate for shortfall in revenue

X13 In addition to the amounts shown in Table X1, for Alpine Energy, Top Energy, Centralines, and Unison Networks, we have also provided for:[4]

X13.1 The deferred recovery of the claw-back applied in November 2012 as a result of the delay to the reset under s 54K(3); and

X13.2 Additional revenue to address the impact of limiting price increases in the last two years of the current regulatory period to CPI+10% (where relevant).

X14 Table X2 provides an estimate of the combined impact of spreading these amounts equally (in present value terms) across each year of the upcoming regulatory period.

Table X2: Estimate of combined amounts to be applied each year ($m, PV as at 1 April 2015)

Distributor	2016	2017	2018	2019	2020
Alpine Energy	+ 5.0m	+ 5.3m	+ 5.6m	+ 6.0m	+ 6.3m
Top Energy	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.5m	+ 2.7m
Centralines	+ 0.6m	+ 0.7m	+ 0.7m	+ 0.7m	+ 0.8m
Unison	+ 2.0m	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.5m

[4] As explained in Chapter 5, we have not provided for recovery of claw-back in the next regulatory period for The Lines Company. This is because The Lines Company provided incorrect information in response to the information gathering request we issued ahead of the November 2012 reset.

Price changes implied by our decision

X15 Table X3 shows the adjustments implied by our decision, after taking into account transitional pricing arrangements arising under the November 2012 reset.

X15.1 9 distributors had revenue temporarily increased in the last year of the current regulatory period, as a result of claw-back being provided in that year through a recoverable cost term.

X15.2 2 distributors (Vector and Horizon) had revenue temporarily reduced in the last year of the current regulatory period, as a result of claw-back being provided in that year through a recoverable cost term.

X15.3 4 distributors are due additional revenue, as a result of the provision of claw-back being deferred, and—of these—3 distributors are due further uplifts as a result of price increases being limited to a maximum of CPI+10% in the current regulatory period.

X16 The industry average change in the price limit from 1 April 2014 to 1 April 2015 is expected to be a reduction of –1.1% in nominal terms after taking into account all transitional aspects of our November 2012 decision. The reduction will be greater in real terms provided general inflation is positive.

X17 Table X3 also shows that, to minimise price shocks for consumers on 1 April 2015, we have spread price increases over a number of years for the distributors denoted with an asterisk. As a consequence, the industry average change in the price limit in subsequent years is expected to be marginally above inflation.

Table X3: Indicative adjustments to price limits[5]

Distributor	Estimate of initial change in price limit after transitional aspects of November 2012 decision are taken into account	Estimate of subsequent changes in price limit[6]
Alpine Energy *	+ 12.5%	CPI + 11%
Centralines *	+ 8.8%	CPI + 7%
Top Energy *	+ 8.3%	CPI + 7%
Horizon Energy	+ 6.8%	CPI
Eastland *	+ 6.7%	CPI + 3%
Electricity Ashburton	+ 5.7%	CPI
Vector	+ 0.8%	CPI
Powerco	+ 0.2%	CPI
Unison	- 0.1%	CPI
Electricity Invercargill	- 2.8%	CPI
Aurora Energy	- 4.3%	CPI
OtagoNet	- 6.9%	CPI
The Lines Company	- 7.2%	CPI
Nelson Electricity	- 9.0%	CPI
Wellington Electricity	- 13.7%	CPI
Network Tasman	- 14.0%	CPI

1. The 'initial change' represents our estimate of the change in the price limit from 1 April 2014 to 1 April 2015.
2. The initial change is expressed in nominal terms. It will be lower in real terms provided general inflation is positive.
3. Subsequent changes in the price limit will occur annually on 1 April.

5 Table X3 does not show the effect on price changes of changes in pass through or recoverable costs, eg, transmission charges.

6 These figures refer to the price increase net of pass through costs and recoverable costs, but changes of a broadly similar magnitude are generally expected after these amounts are included. An exception is for distributors that intend to purchase assets from Transpower New Zealand. Refer: Attachment D.

Limit on prices charged, on average, rather than for individual consumers

X18 The price limits that we determine constrain the maximum price that distributors can charge, on average, across all consumers. Therefore, changes in the price limits that we apply to electricity distributors are unlikely to translate directly into corresponding changes in prices for individual consumers.

X19 Reasons for differences between changes in our price limits, and changes in prices for individual consumers, include:

X19.1 Pass through costs and recoverable costs vary from year to year, eg, changes in transmission charges;[7]

X19.2 Electricity distributors may choose to rebalance their prices between different consumer groups, eg, residential, industrial, and commercial; and

X19.3 Electricity distributors may choose to rebalance the structure of their tariffs, eg, between fixed and variable charges.

X20 In addition, price changes will depend on the prices a distributor sets, relative to its existing prices, rather than the movement in the price limit. This is because the price limit sets a cap, and some distributors have previously chosen to set prices that are below the cap, eg, distributors with some degree of consumer-ownership.

X21 Similarly, because distribution is only one part of the electricity supply chain, changes in the price limits do not translate into corresponding changes in average electricity bills. The cost of electricity distribution explains approximately one third of consumer bills. Other components of electricity bills also vary, eg, the cost of electricity generation, and retail margins.

---

[7] We currently expect the transmission charges will remain broadly constant in real terms, on average, across the country once the reset of the individual price-quality path takes effect on 1 April 2015; however, the charges for specific regions may change as a result of any changes in pricing methodology employed by Transpower New Zealand.

Changes in price limits based on relatively low cost forecasts

X22 Consistent with the purpose of default/customised price-quality regulation, the changes in the price limits are based on forecasts that have been determined in a relatively low cost way.

X22.1 Our modelling of operating expenditure and revenue growth has relied on independent forecasts that in our view are free of systematic bias, in either direction; and

X22.2 Our modelling of capital expenditure has relied on distributor forecasts, plus an uplift for changes in the price of inputs, but with limits on the maximum increases allowed relative to historic levels.[8]

X23 The assumptions that we have settled on may not reflect the particular circumstances of all distributors. Individual distributors may consider a proposal for a customised price-quality path. The distributor's information can then be reviewed and used in place of our low cost assumptions.

X24 We have taken this relationship into account when we set the default price-quality path for each distributor. In particular, we recognise that customised price-quality paths are not costless. It is therefore appropriate to take into account the impact that our decision may have on the probability of a customised proposal.

X25 After weighing up the costs and benefits of including an additional allowance to account for forecasting uncertainty, we considered that a small additional allowance would be appropriate for three distributors:[9]

X25.1 Alpine Energy;

X25.2 OtagoNet; and

X25.3 The Lines Company.

---

8 The limit differs for network and non-network capital expenditure. For network capital expenditure, the limit is 120% of the historic average. For non-network capital expenditure, the limit is equivalent to 200% of the distributor's historic average, unless non-network capital expenditure represents more than 5% of capital expenditure. For those distributors who are forecasting non-network capital expenditure to be more than 5% of total capital expenditure, we have adopted a sliding scale approach to calculating the limit.

9 Attachment B provides further explanation of the logic that we relied on to determine that an additional allowance would not be appropriate. A mathematical explanation of our approach for calculating additional allowances can be found in Attachment H of the reasons paper we published in November 2012. Refer: Commerce Commission "Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012).

Main changes since our draft decision

X26 In reaching our decisions, we are grateful for submissions that have assisted in identifying incremental improvements to the low cost forecasting approaches we proposed in our draft decision. The most material changes since our draft decision have been:

X26.1 For operating expenditure, the initial level of operating expenditure has been based on an average of 2013 and 2014 data, rather than relying solely on 2013 data, and we have included an assumption of declining partial productivity for operating expenditure of -0.25% per annum;

X26.2 For capital expenditure, the limit applied to network capital expenditure is now a 20% increase relative to historic levels for all distributors, rather than applying a lower limit to distributors that have demonstrated poor reliability with forecasting in the past; and

X26.3 For revenue growth, we have updated our assumption about future changes in electricity use per residential users, and we have reduced our assumption about the elasticity of revenue from industrial and commercial users to GDP.

X27 In addition, the cost of capital used in the July 2014 draft decision was 7.60%, and the cost of capital used in our final decision was 7.19%. This change reflects a more up-to-date and lower estimate of the cost of capital, as well as the use of a 67th percentile estimate (instead of a 75th percentile estimate) following an amendment to input methodologies.

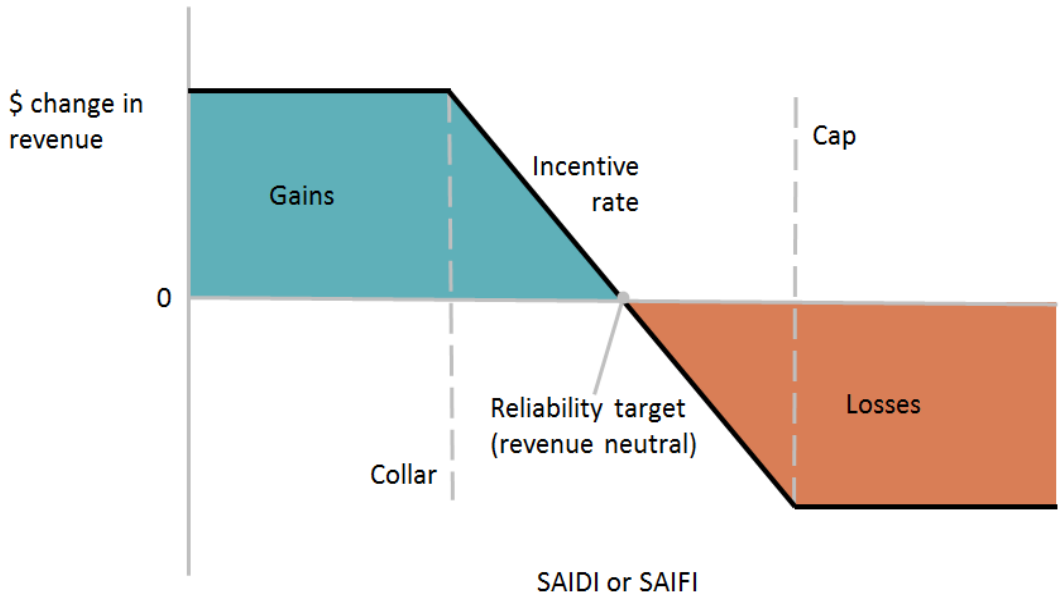
Revenue linked to average reliability of network

X28 One of the more notable changes introduced at this reset is a more sophisticated approach to regulate quality. In particular, we have developed an incentive scheme to complement the existing 'pass/fail' limit on network reliability. Under this scheme, revenue is automatically linked to the average reliability of the network.[10]

X29 As shown in Figure X1, under the incentive scheme, a distributor's revenue is dependent on the average reliability of the network. If reliability is better than the target, then future revenues will be increased. Likewise, if reliability is worse than the target, then future revenue will be reduced.

[10] Measured in terms of System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).

Figure X1: Example of an incentive scheme that links revenue to network reliability



X30 The revenue a distributor receives as a reward for outperforming the reliability target increases up to a maximum reliability level known as the 'collar'. The maximum penalty a distributor receives from under-performing the reliability target is also subject to a limit that corresponds to a level of reliability known as the 'cap'.[11]

X31 The size of the revenue reward or penalty is determined by how much the distributor departs from the reliability target. The 'incentive rate' is the change in revenue resulting from a unit change in reliability.

X31.1 A higher incentive rate, ie, a steeper slope in the incentive rate line, leads to larger changes in revenue from a given change in reliability.

X31.2 The incentive rate beyond the cap or collar on reliability is zero, ie, there are no additional automatic rewards or penalties for reliability exceeding either the cap or collar.[12]

---

11 There is no revenue reward or penalty when a distributor's reliability is equal to the target.

12 In exceptional circumstances we may still seek pecuniary penalties under s 87 or criminal sanctions under s 87B of the Commerce Act for underperformance that breaches the quality standards. We will not take enforcement action where a distributor's underperformance is between the target and the collar.

X32 Revenue will increase and decrease by the same amount for the given reliability change—ie, the scheme is symmetric. We have also limited the amount of 'revenue at risk' to 1%—ie, the maximum amount by which a suppliers' revenue can go up or down depending on its performance.

X33 In addition, a distributor will deemed to be non-compliant with the quality standards if they exceed the SAIDI or SAIFI limit in two-out-of-three consecutive years.[13] The SAIDI and SAIFI limits are set at one standard deviation above the historical average, which following consultation is now the same as the SAIDI and SAIFI caps under the quality incentive scheme.

X34 In Chapter 6, we provide more detail on our approach to setting quality standards, target and incentives. We have also published a companion paper on this topic.

Incentives to control expenditure

X35 Through a recent amendment to input methodologies, we have put in place an incentive to control capital and operating expenditure that has a constant strength in each year of the default price-quality path.[14] Amongst other things, applying a 'time consistent' incentive means that:

X35.1 Distributors are no longer exposed to the full cost of responding to external events that have a temporary impact on expenditure, eg, storms; and

X35.2 Distributors will be unable to boost profits by concentrating costs in a particular year.

X36 For this reset, we have set a retention factor of 15% for capital expenditure following submissions that 20% was too high, ie, distributors will retain 15% of each dollar of capital expenditure they save. A constant 15% retention factor is broadly in line with the current average retention factor for capital expenditure, ie, under a price path without any additional capital expenditure incentive mechanism.

X37 For operating expenditure, the retention factor is approximately equal to 35%. This retention factor is based on distributors being exposed to the benefits of any efficiency gains for 5 years from the date the gain is made.

---

13 A thorough explanation of how the two out of three year rule works in different scenarios will be provided in the Compliance Requirements Paper. This includes explanation of how limit exceedances in the two years prior to the regulatory period are considered so that the two out of three year rule works in the first and second years of the regulatory period.

14 The amendment is outlined and explained in a separate paper. It is worth noting that the incentive scheme we have introduced to control expenditure would only have an impact on allowable revenue in the following regulatory period, ie, 2020 to 2025.

Incentives for energy efficiency and demand side management

X38 Following constructive engagement with an ENA Working Group on energy efficiency and demand side management, and the reduction of losses, we have:

X38.1 Introduced a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives; and

X38.2 Neutralised the incentive to commission assets based on expected asset life, ie, ensuring distributors are not penalised for investing in short-life assets if that is a more efficient outcome than investing in longer life assets.

X39 We have also reduced the difference in the strength of the incentive to economise on operating and capital expenditure.

X39.1 The introduction of a constant strength capital expenditure incentive and a constant strength operating expenditure incentive results in an incentive strength for each type of expenditure that is consistent throughout the regulatory period.

X39.2 Setting a retention factor for capital expenditure at 15% reduces the maximum differences between capital and operating expenditure incentives that have existed in the current regulatory period.

X40 The incentives on operating and capital expenditure are important because they affect the trade-off between different options for meeting demand. For example, large differences in the incentive strength may mean that capital intensive solutions (such as expanding substation capacity) would be preferred over more economical operational solutions (such as contracting for demand-side response).

X41 We also intend to monitor and report on the performance of distributors through information disclosure regulation. Increased transparency will improve incentives for distributors to invest in energy efficiency and demand side management, and the reduction of losses.

1. Introduction

Purpose of this paper

1.1 This paper outlines and explains the main components of the default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020.

Resetting the current default price-quality paths

1.2 We are required to reset the default price-quality paths that currently apply to electricity distributors that are subject to price-quality regulation under Part 4 of the Commerce Act 1986. 'Part 4' provides for regulation in markets in which there is little or no competition, and little or no likelihood of a substantial increase in competition.

1.3 The default price-quality paths that currently apply to 16 electricity distributors were last reset in November 2012.[15] Each of these paths specify the maximum prices, and quality standards, that a supplier must comply with during the current regulatory period, ie, 1 April 2010 to 31 March 2015.

1.4 From 1 April 2015 until 31 March 2020, 16 electricity distributors will be subject to new requirements set out in the amended default price-quality path determination. However, Orion New Zealand will remain subject to a customised price-quality path until 31 March 2019.

Consultation on default price-quality paths for the next regulatory period

1.5 We have now reached the end of 18 months of consultation on the default price-quality paths that will apply in the next regulatory period. The first step in the consultation process was the release of a 'Process Paper' in September 2013.[16] A subsequent 'Process and Issues' paper was published in March 2014.[17]

---

15 Refer: Commerce Commission "Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012).

16 Commerce Commission "Proposed process – Default price-quality paths from 2015" (6 September 2013).

17 Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014).

1.6 In July 2014, we published a suite of draft decision documents that included:

1.6.1 A paper that outlined and explained the default price-quality paths that we proposed to put in place ('Main Policy Proposals Paper');[18]

1.6.2 A paper that provided greater detail on the proposed quality targets and incentives, with reasons ('Proposed Quality Targets and Incentives Paper');[19]

1.6.3 A paper that provided greater detail on the low cost forecasting approaches that we proposed to rely on to set profitability-based prices, with reasons ('Proposed Low Cost Forecasting Approaches'); [20] and

1.6.4 Proposed drafting for the default price-quality path determination ('Draft Determination').[21]

1.7 More recently, in October 2014, we sought feedback on a small number of matters as part of a final round of consultation.[22] The main purpose of that round of consultation was to seek feedback on the drafting of the determination, but feedback was also sought on other matters too.

---

18 Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014).

19 Commerce Commission "Proposed Quality Targets and Incentives for Default Price-Quality Paths From 1 April 2015" (18 July 2014).

20 Commerce Commission "Low cost forecasting approaches for default price-quality paths" (4 July 2014).

21 Commerce Commission "Electricity Distribution Services Default Price-Quality Path Draft Determination 2015" (18 July 2014).

22 Commerce Commission "Electricity Distribution Services Default Price-Quality Path Draft Determination 2015" (20 October 2014); Commerce Commission "How we propose to implement default price-quality paths for electricity distributors from 1 April 2015" (20 October 2014).

Parallel consultation on up-front rules, requirements, and processes of regulation

1.8 In parallel with our consultation on default price-quality paths, we consulted on amendments to the up-front rules, requirements and processes of regulation, which are collectively referred to as 'input methodologies.[23] These input methodology amendments affect:

1.8.1 Aspects of the approach used to set starting prices based on the current and projected profitability of each distributor;[24] and

1.8.2 The Incremental Rolling Incentive Scheme (IRIS), which will affect the incentives that distributors have to control expenditure.[25]

1.9 We have also consulted on amendments to input methodologies that affect other aspects of default price-quality paths, eg, to give effect to the proposed incentive scheme for quality of service.[26]

---

23 *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26.

24 Commerce Commission "Proposed amendments to input methodologies for electricity distribution services: Consultation paper" (24 June 2014); Commerce Commission "Proposed electricity distribution input methodology amendments 2014" (18 July 2014); Commerce Commission "Draft Electricity Distribution Input Methodology Amendments Determination 2014" (20 October 2014); Commerce Commission "How we propose to implement amendments to input methodologies for electricity distribution services: First and second type" (20 October 2014).

25 Commerce Commission "Draft Incremental Rolling Incentive Scheme Input Methodology Amendments 2014" (18 July 2014); Commerce Commission "Proposed amendments to input methodologies: Incremental Rolling Incentive Scheme" (18 July 2014); Commerce Commission "Draft Incremental Rolling Incentive Scheme Input Methodology Amendments Determination 2014" (20 October 2014); Commerce Commission "How we propose to implement amendments to input methodologies for electricity lines businesses subject to price-quality regulation: Incremental Rolling Incentive Scheme (IRIS)" (20 October 2014).

26 Commerce Commission "Proposed amendments to input methodologies for electricity distribution services: Consultation paper" (18 July 2014); Commerce Commission "Proposed electricity distribution input methodology amendments 2014" (18 July 2014); Commerce Commission "Draft Electricity Distribution Input Methodology Amendments Determination 2014" (20 October 2014); Commerce Commission "How we propose to implement amendments to input methodologies for electricity distribution services: First and second type" (20 October 2014).

Final decisions informed by a range of responses from a variety of stakeholders

1.10 Our final decisions on the default price-quality paths have been informed by a range of responses from a variety of stakeholders. The majority of respondents were the businesses most directly affected by the default price-quality path the distributors themselves. A small number of responses were provided by other stakeholders. We are grateful to all respondents that engaged in our processes.

1.11 In reaching our decision on the default price-quality paths we have also taken into account all relevant submissions received in relation to the proposed amendments to the input methodologies.

Incremental improvements on our existing approaches

1.12 As explained in this paper, the approaches that we have relied on for this reset generally reflect incremental improvements on the approaches used previously. Our approaches are therefore very similar to in the past, not least because we are required to re-apply input methodologies.

1.13 In addition, and consistent with our view in the Process and Issues Paper, we found that there was little reason to depart from existing analytical approaches, except where new issues had become apparent, or new information was available. The approaches were tested through consultation, and remain familiar to stakeholders.

1.14 One of the more notable changes introduced at this reset is a more sophisticated approach to regulate quality. In particular, we have developed an incentive scheme to complement the existing 'pass/fail' limit on network reliability. Under this scheme, revenue will be automatically linked to the average reliability of the network.

1.15 Our treatment of Orion New Zealand is set out separately in Attachment A. Orion New Zealand will only be subject to the default price-quality path for the final year of the upcoming regulatory period.

Material released alongside this paper

1.16 Material published alongside this paper includes:

1.16.1 Companion papers that outline and explain more detailed components of our final decisions;

1.16.2 Reports from independent experts on productivity and econometrics;

1.16.3 Models used in determining the proposed starting prices, and standards, targets and incentives for service quality; and

1.16.4 The determination that sets out the default price-quality paths that will apply to electricity distributors from 1 April 2015.[27]

1.17 Companion papers published alongside this paper will provide greater detail, and provide reasons, for:

1.17.1 The quality targets and incentives ('Quality Targets and Incentives Paper');[28]

1.17.2 The low cost forecasting approaches that we have relied on to set profitability-based prices ('Low Cost Forecasting Approaches');[29] and

1.17.3 The requirements for demonstrating compliance with the default price-quality path determination ('Compliance Requirements Paper').

---

27 Electricity Distribution Services Default Price-Quality Path Determination 2015 [2015] NZCC 33.

28 Commerce Commission "Quality targets and incentives for default price-quality paths for electricity distributors from 1 April 2015" (28 November 2014).

29 Commerce Commission "Low-cost forecasting approaches for default price-quality paths for electricity distributors from 1 April 2015" (28 November 2014).

2. Regulation of price and quality

Purpose of chapter

2.1 This chapter provides an overview of:

2.1.1 Default/customised price-quality regulation; and

2.1.2 Other regulatory influences on price and quality.

2.2 This overview is important because our decisions must be consistent with the purpose and provisions of Part 4.

Overview of default/customised price-quality regulation

2.3 The type of price-quality regulation that applies to the distributors shown in Table 2.1 is 'default/customised price-quality regulation'. Under this type of regulation, we set a default price-quality path for each distributor, but individual distributors may seek a customised price-quality path instead.[30]

Table 2.1: Distributors subject to price-quality regulation

Alpine Energy	Horizon Energy	Powerco
Aurora Energy	The Lines Company	Top Energy
Centralines	Network Tasman	Unison Networks
Eastland Networks	Nelson Electricity	Vector
Electricity Ashburton	Orion New Zealand	Wellington Electricity
Electricity Invercargill	OtagoNet Joint Venture	

2.4 In this section, we provide an overview of default/customised price-quality regulation. In particular, we explain:

2.4.1 The purpose of default/customised price-quality regulation; and

2.4.2 How default price-quality paths promote the purpose of Part 4.

2.5 We also explain the role of a customised price-quality path.

[30] Refer: s 52B(2)(c)(i) of the Act.

Purpose of default/customised price-quality regulation

2.6 The purpose of default/customised price-quality regulation is shown in Box 1.[31]

Box 1: Purpose of default/customised price-quality regulation

The purpose of default/customised price-quality regulation is to provide a relatively low cost way of setting price-quality paths for suppliers of regulated goods and services, while allowing the opportunity for individual suppliers to have alternative price-quality paths that better meet their particular circumstances

2.7 We have taken this purpose to mean that:

2.7.1 Default price-quality paths are to be set in a relatively low cost way, and are not intended to meet all the circumstances that a distributor may face;[32] and

2.7.2 Customised price-quality paths are intended to be tailored to meet the particular circumstances of an individual distributor.

2.8 The implication is that relatively low cost approaches are to be adopted in determining default price-quality paths. The biggest contributor to the costs of setting customised price-quality paths are audit, verification, and approval processes. Consequently, alternative techniques should be used for default price-quality paths.

---

31 Refer: s 53K of the Act.

32 A variety of constraints apply to the way that default price-quality paths are set. Refer: s 53P of the Act.

Default price-quality paths promote the purpose of Part 4

2.9 Default price-quality paths promote the purpose of Part 4. The 'Part 4 purpose' is:[33]

> ...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.

2.10 Default price-quality paths promote the Part 4 purpose by providing an incentive for distributors to economise on expenditure. In particular, the price limit produces pressures that are similar to those in competitive markets. This pressure arises because profits depend on the distributor's ability to manage costs.

2.11 In the medium to long-term, the benefits of any efficiency gains can be shared with consumers when the price limit is reset, which limits the ability of distributors to extract excessive profits. The expected rate of sharing affects the strength of the incentive that distributors have to control expenditure.

2.12 Minimum standards, targets and incentives for service quality are important too, because they mitigate the risk that distributors will cut their costs by compromising quality. Distributors will therefore be more likely to provide services at a quality that reflects consumer demands.

2.13 In this paper, we explain the approaches we have used to determine each part of the default price-quality paths. For instance, we explain how and why we have set starting prices based on the current and projected profitability of each distributor, rather than rolling over existing prices.

---

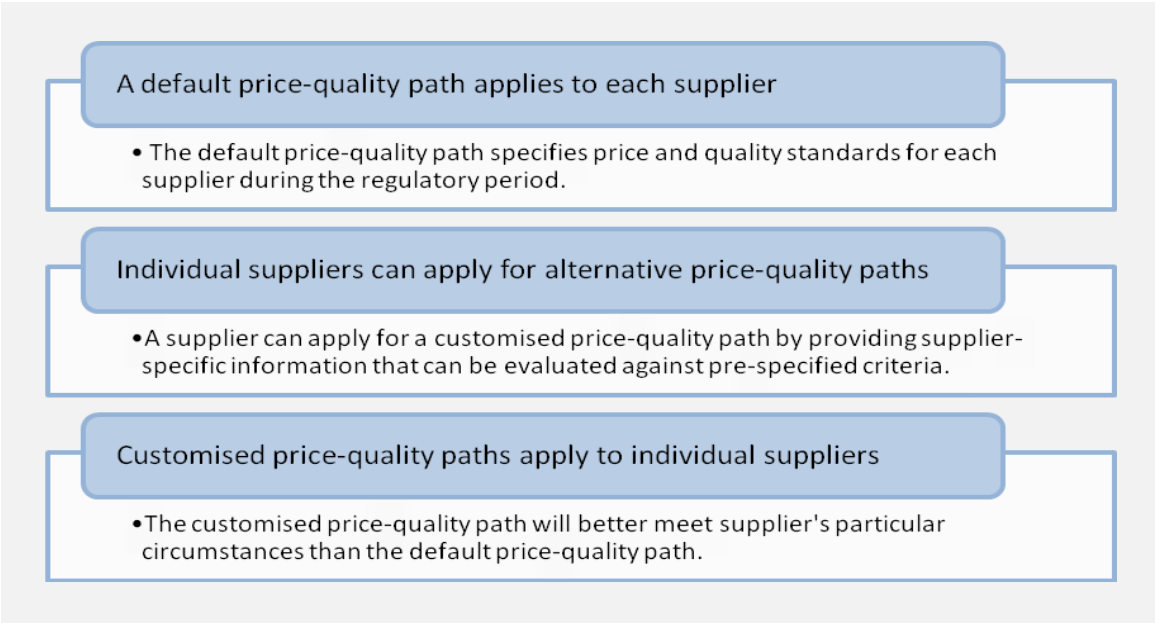
[33] Refer: s 52A(1) of the Act. For a full discussion of the way in which price-quality paths promote the Part 4 Purpose, please refer to: Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010), Chapter 2.

2.14 We also explain in this paper how we have met our obligations under s 54Q of the Act. Section 54Q states that the Commission must promote incentives, and avoid imposing disincentives, for distributors to invest in energy efficiency and demand side management, and to reduce energy losses.

A customised price-quality path is an alternative option for distributors

2.15 A customised price-quality path is an option for a distributor that considers that an alternative price-quality path would better meet its particular circumstances.[34] Figure 2.1 provides an overview of the proposal process.

Figure 2.1: Overview of default/customised price-quality regulation



2.16 Amongst other things, the proposal process protects consumers against the risk of investment being deterred if distributors expect to earn less than a normal return under the default price-quality path. This is because distributors can apply for a customised price-quality path if they consider that higher prices are required.

2.17 However, a customised price-quality path is not a 'one-way bet' for distributors. A distributor is only able to make one proposal in each regulatory period, and we may set a higher or a lower price after considering the application.[35]

---

[34] A distributor can propose a customised price-quality path at any time except during the final year of the regulatory period.

[35] Further discussion of the role of a customised price-quality path can be found in: Refer: Commerce Commission "Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012), Chapter 5.

2.18 The legislative framework also includes substantial safeguards for distributors. The input methodologies set out the rules, requirements and processes for a customised proposal in advance. In addition, each distributor has a form of 'merit' appeal to the High Court for input methodology and customised price-quality path determinations.

2.19 A customised price-quality path is therefore a valuable option that is not available to consumers if price limits under the default price-quality path are set too high. We explain in Chapter 4 and Attachment B how we have taken this option into account when setting the default price-quality path.

Other regulatory influences on performance

2.20 Default/customised price-quality regulation is just one of the regulatory influences on the performance of electricity distributors. For example, the service quality that electricity distributors provide is also influenced by a range of statutory obligations and voluntary arrangements, including:

2.20.1 the Consumer Guarantees Act (including recent changes in regard to lines businesses);

2.20.2 the Electricity Act 1992;

2.20.3 power voltage regulation;

2.20.4 voluntary guaranteed service levels; and

2.20.5 electricity governance (connection of distributed generation) regulations.

2.21 In addition, the requirement to disclose information under Part 4 increases transparency, which creates incentives for distributors to improve performance. The increased transparency is because information disclosure regulation is intended to allow interested persons to assess whether the Part 4 purpose is being met.[36]

[36] Under information disclosure regulation, distributors are required to disclose information. We may monitor and analyse the information, and we must publish summary and analysis of the information to promote greater understanding of the performance of distributors, their relative performance, and changes in performance over time.

3. How the price limit is specified

Purpose of chapter

3.1 This chapter outlines and explains how price limits are specified.

Ways in which price limits affect distributors and consumers

3.2 The price limits under Part 4 affect distributors and consumers in the following ways:

3.2.1 Price limits are structured to provide distributors with an incentive to focus on the costs that can be controlled; and

3.2.2 Price limits apply to prices charged, on average, across all consumers, not to the prices charged to individual consumers, or groups of consumers.

3.3 In addition, all distributors are required to disclose information about the methodology used to set prices for individual consumers or groups of consumers.

Price limits are structured to provide incentives to focus on costs that can be controlled

3.4 Irrespective of whether a distributor is subject to a default or a customised price-quality path, we structure the price limits to provide an incentive for distributors to focus on the costs they can control.

3.5 Under s 53M(1)(a) of the Act, the price-quality path specifies maximum prices, and comprises:

3.5.1 The price limits (Chapter 4); plus

3.5.2 Allowances for pass-through costs and recoverable costs (Chapter 5).

3.6 The price limit is fixed in advance, and means profitability depends on the extent to which costs are controlled. Actual costs may differ from forecasts for a variety of reasons. But the incentive to increase profits helps to put pressure in the right direction.

3.7 The costs that distributors have little or no control over are recovered through separate allowances for 'pass-through costs' and 'recoverable costs'. The items that qualify for these categories are listed in the input methodologies for electricity distribution services.[37] Examples include local rates and levies.

[37] The list of recoverable costs also currently includes penalties and rewards that are reflected in prices to give effect to incentives to control expenditure under a customised price-quality path.

Limit on prices charged, on average, rather than for individual consumers

3.8 The price limits that we determine constrain the maximum distribution price that distributors can charge, on average, across all consumers. Therefore, changes in the price limits that we apply to electricity distributors are unlikely to translate directly into corresponding changes in the prices paid by individual consumers.

3.9 Reasons for differences between changes in our price limits, and changes in the prices charged to individual consumers for electricity distribution services, include:

3.9.1 Pass-through costs and recoverable costs vary from year to year, eg, changes in transmission charges; [38]

3.9.2 Electricity distributors may choose to rebalance their prices between different consumer groups, eg, residential, industrial, and commercial users; and

3.9.3 Electricity distributors may choose to rebalance the structure of their tariffs, eg, between fixed and variable charges.

3.10 In addition, price changes will depend on the prices a distributor sets, relative to its existing prices, rather than the movement in the price limit. This is because the price limit sets a cap, and some distributors have previously chosen to set prices that are below the cap, eg, distributors with some degree of consumer-ownership.

3.11 Similarly, because distribution is only one part of the electricity supply chain, changes in the price limits do not translate into corresponding changes in average electricity bills. The cost of electricity distribution explains approximately one third of consumer bills. Other components of electricity bills also vary, eg, the cost of electricity generation, and retail margins.

[38] We currently expect the transmission charges will remain broadly constant in real terms, on average, across the country once the reset of the individual price-quality path takes effect on 1 April 2015; however, the charges for specific regions may change as a result of any changes in pricing methodology employed by Transpower New Zealand.

Distributors are required to disclose information about pricing methodologies

3.12 Under Part 4, electricity distributors are required to disclose information about the methodologies used to determine prices for different consumer groups ('pricing methodologies'). However, at present there is no restriction on the extent to which prices for different consumer groups can be rebalanced.

3.13 On behalf of the Electricity Authority, Castalia recently reviewed the pricing methodologies published by distributors between July and September 2013.[39] The review assessed the alignment of each distributor's pricing methodology with the information disclosure guidelines and voluntary pricing principles.

3.14 The objectives of Castalia's review of pricing methodologies were to:

3.14.1 Carry out a stocktake of what pricing methodologies are being used.

3.14.2 Help distributors understand regulatory expectations.

3.14.3 Explore whether regulatory arrangements can be improved.

3.15 Castalia concluded that there were:

> many improvements that can be made to … pricing methodologies, with relatively little cost involved... These improvements relate both to the substance of the pricing approach and to how it is communicated through annual pricing methodologies.
>
> There are three substantive improvements that we believe would greatly improve the value of pricing methodologies and their alignment with the guidelines and principles:
>
> - Finding simple ways to communicate the essence of the pricing approach used, and explaining why the approach makes sense. …
> - Better integrating asset management planning (AMP) processes and pricing. …
> - Developing better ways to engage with retailers and end-users on pricing.

[39] Refer: Castalia, Review of Electricity Distribution Businesses' 2013 Pricing Methodologies, Report to the Electricity Authority, November 2013.

3.16 The Electricity Authority has also recently consulted on its proposals to improve the transparency of electricity bills.[40] Amongst other things, the proposals would:

3.16.1 Require retailers to provide information to consumers about any price changes in a standard form, so that the nature and reasons for these changes are clearly presented; and

3.16.2 Require retailers to consult with distributors, and distributors to consult with retailers, about any media releases each party proposes to issue relating to changes to consumers' charges in the distributor's area.

[40] Refer: Electricity Authority, Improving transparency of consumers' electricity charges: Consultation Paper, 24 June 2014.

4. Price limit net of pass-through and recoverable costs

Purpose of chapter

4.1 This chapter outlines and explains the price limits net of pass-through and recoverable costs.

How we set price limits net of pass-through costs and recoverable costs

4.2 This section explains how we have set price limits net of pass-through costs and recoverable costs. The two main components of these price limits are:

4.2.1 The 'starting price' allowed in the first year of the regulatory period; and

4.2.2 The 'rate of change in price', relative to the Consumer Price Index ('CPI'), that is allowed in later parts of the regulatory period.[41]

4.3 Our decisions on each component are consistent with the provisions set out in Part 4. For example, we have not relied on comparative benchmarking on efficiency when setting the starting price or rate of change for any distributor.[42]

Costs and revenue growth are forecast in a relatively low cost way

4.4 Consistent with the purpose of default/customised price-quality regulation, we have forecast costs and revenue growth in a relatively low cost way. In particular:

4.4.1 Our modelling of operating expenditure and revenue growth has relied on independent forecasts that in our view are free of systematic bias, in either direction; and

4.4.2 Our modelling of capital expenditure has relied on distributor forecasts, plus an uplift for changes in the price of inputs, but with limits on the maximum increases relative to historic levels.[43]

---

41 The price limit therefore takes the traditional regulatory form of 'CPI-X%', where X is a percentage differential known as the X factor.

42 Refer: s 53P of the Act.

43 The limit differs for network and non-network capital expenditure. For network capital expenditure, the limit is 120% of the historic average. For non-network capital expenditure, the limit is equivalent to 200% of the distributor's historic average, unless non-network capital expenditure represents more than 5% of capital expenditure. For those distributors who are forecasting non-network capital expenditure to be more than 5% of total capital expenditure, we have adopted a sliding scale approach to calculating the limit.

4.5 The assumptions that we have settled on do not fully reflect the particular circumstances of all distributors. Individual distributors may make a proposal for a customised price-quality path. The distributor's information can then be reviewed and used in place of our low cost assumptions.

Main changes since our draft decision

4.6 As a result of the submissions received on our draft decision, we have been able to make incremental improvements to the approaches we relied on in November 2012. The most material changes since our draft decision have been:

4.6.1 For operating expenditure, the initial level of operating expenditure has been based on an average of 2013 and 2014 data, rather than relying solely on 2013 data;

4.6.2 For capital expenditure, the limit applied to network capital expenditure is 20% for all distributors, rather than applying a lower limit to distributors based on past forecasting reliability; and

4.6.3 For revenue growth, we have updated our assumption about future changes in electricity use per residential users, and our assumption about the elasticity of revenue from industrial and commercial users to GDP.

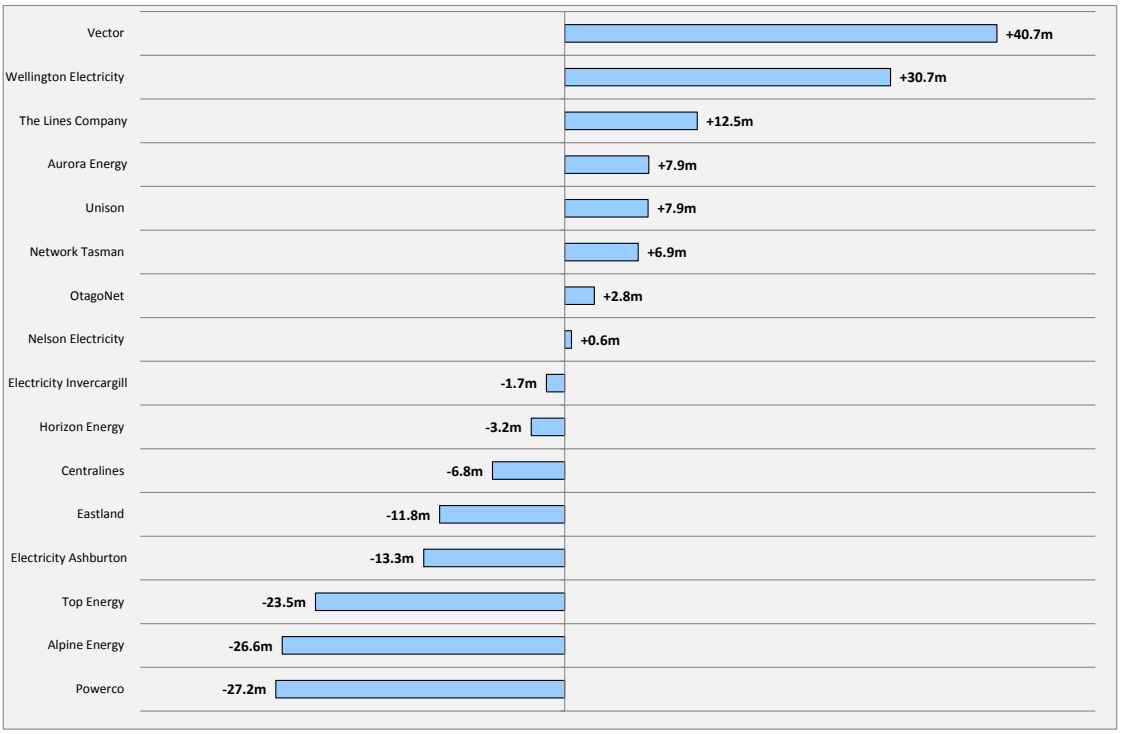
4.7 In addition, the cost of capital used in the July 2014 draft decision was 7.60%, and the cost of capital used in our final decision was 7.19%. This change reflects a more up-to-date and lower estimate of the cost of capital, as well as the use of a 67th percentile estimate (instead of a 75th percentile estimate) following an amendment to input methodologies.

Starting price based on current and projected profitability

4.8 We have determined starting prices based on the current and projected profitability of each distributor. The alternative would have been to simply 'roll over' the price each distributor is currently charging. The option to choose between these two approaches is provided for under s 53P(3) of the Act.

4.9 To illustrate the reason for our choice, Figure 4.1 shows the difference between forecast costs and revenues if current pricing were to continue. The estimates shown are present values as at 1 April 2015. The differences range from an under-recovery of $27.2m to an over-recovery of $40.7m. For the industry as a whole, the over-recovery is $4.1m.

Figure 4.1: Forecast revenues minus forecast costs
1 April 2015 to 31 March 2020



4.10 Price adjustments are now necessary for all distributors because we have taken into account recent data about costs and revenue growth. By contrast, in November 2012, we deliberately reduced our reliance on information about the costs each distributor incurred after the start of the regulatory period.[44]

[44] Such an approach was necessary to ensure that we did not inadvertently penalise distributors that had achieved efficiency gains since the start of the regulatory period in response to the incentives inherent in the price path, or disadvantage consumers of distributors that were not able to control expenditure in response to the incentives inherent in the price path. We did, however, take into account more recent information where it would have been unlikely to undermine any action taken by distributors or consumers since the start of the regulatory period. Factors that were largely outside the control of either suppliers or consumers included movements in input prices, actual and expected changes in population, and changes in the outlook for regional output.

4.11 The size of the adjustment to the price limit depends on a range of factors, including:[45]

4.11.1 The extent to which the distributor has responded to the incentive to economise on costs;

4.11.2 Movements in the industry-wide cost of capital since November 2009; and

4.11.3 The alignment between costs and revenue in the final year of the current regulatory period.[46]

4.12 Notably, in November 2012 it was necessary to minimise price shocks to consumers by limiting the largest price increases allowed in the final two years of the current regulatory period to CPI+10%. Consequently, revenues remained below costs for Alpine Energy, Top Energy, and Centralines.[47] Figure 4.1 demonstrates that further price increases are now justifiable.

Starting price affects the probability of a customised price-quality path proposal

4.13 The probability of a distributor making a customised price-quality path proposal is affected by the starting price for the default price-quality path. A higher starting price would make a proposal less likely. Likewise, a lower starting price increases the likelihood of a proposal.

4.14 In our view, it is appropriate to take this relationship into account when we set the starting price for each distributor. Making a proposal for a customised price-quality path is not costless, and the costs ultimately fall on consumers. We estimate that a complex proposal will generally cost up to $2.5m for a large distributor.

---

45 The extent of price changes also depends on the profile of recovery of returns for each distributor. The profile of recovery of returns depends on factors such as the ratio of the value of capital expenditure to depreciation and the ratio of the regulatory tax asset value to RAB value, which differ between distributors. Factors affecting the profile of returns are discussed in: Commerce Commission, 2010-15 Default Price-Quality Path Starting Price Adjustments and Other Amendments – Update Paper, April 2011.

46 For example, price decreases now appear justified for Electricity Invercargill, because revenue recovery was deferred until the final year of the current regulatory period. Consequently, prices were higher than they otherwise would have been, and a small reduction is now necessary.

47 We also applied a limit of CPI+10% to The Lines Company. However, as explained in Chapter 5, this limit was applied in error due to incorrect data being provided in response to a s 53ZD notice. Consequently, the price limit now needs to be reduced for The Lines Company.

4.15 By the same token, we can only confirm whether higher prices proposed by a distributor are justifiable by applying the audit, verification and evaluation processes that apply in assessing a customised price-quality path proposal. Without these assurances, it is impossible to know whether further increases in expenditure are required.

We weighed the costs and benefits of reducing the probability of a customised proposal

4.16 Consequently, we weighed up the costs and benefits of including an additional allowance to reduce the probability of a distributor making a customised price-quality path proposal. As a result of our analysis, we considered that a small additional allowance would be appropriate for:

4.16.1 Alpine Energy ($563,000, or 0.3% of revenue allowed over the period);

4.16.2 OtagoNet ($62,000, or 0.1% of revenue allowed over the period); and

4.16.3 The Lines Company ($101,000, or 0.1% of revenue allowed over the period).

4.17 Attachment B provides further explanation of the logic that we relied on to determine that an additional allowance would not be appropriate. A mathematical explanation of our approach for calculating additional allowances can be found in Attachment H of the reasons paper we published in November 2012.[48]

Starting price adjustments implied by productivity-based rate of change in price

4.18 Under the Act, we are required to consider the price changes implied for each distributor when the rate of change in price is based on the long-run rate of productivity improvement in the industry.[49] Attachment C explains how we arrived at a 'productivity-based rate of change' of CPI-0%.

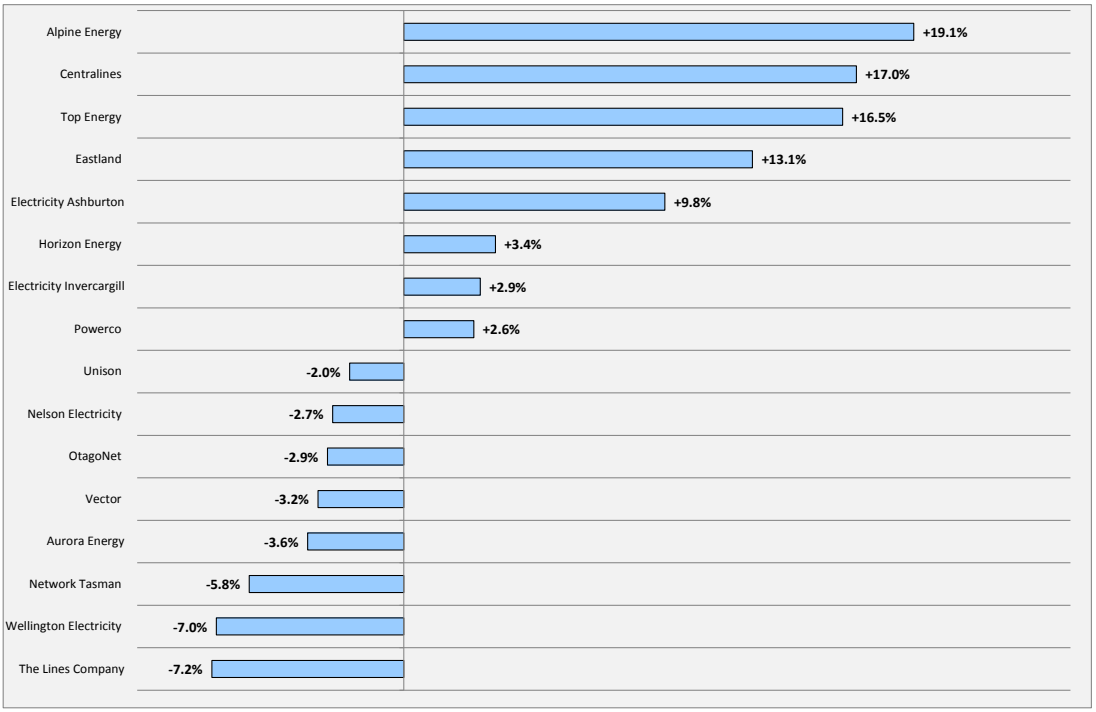
4.19 Figure 4.2 shows the starting price adjustments that would be implied if the rate of change in price was CPI-0%, net of pass-through costs, claw-back, and other recoverable costs. We have calculated these adjustments to help determine whether the adjustments will lead to price shocks to consumers. The figures shown are the year-on-year change in the price limit, ie, from 1 April 2014 to 1 April 2015.

---

48 Refer: Commerce Commission "Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012).

49 Refer: s 53P(6) of the Act.

Figure 4.2: Adjustment to starting price with no alternative rate of change



4.20 Figure 4.3 shows the adjustments implied by our decision, after taking into account transitional pricing arrangements arising under the November 2012 reset. In particular, the difference between Figure 4.2 and Figure 4.3 is that the latter takes into account the fact that:

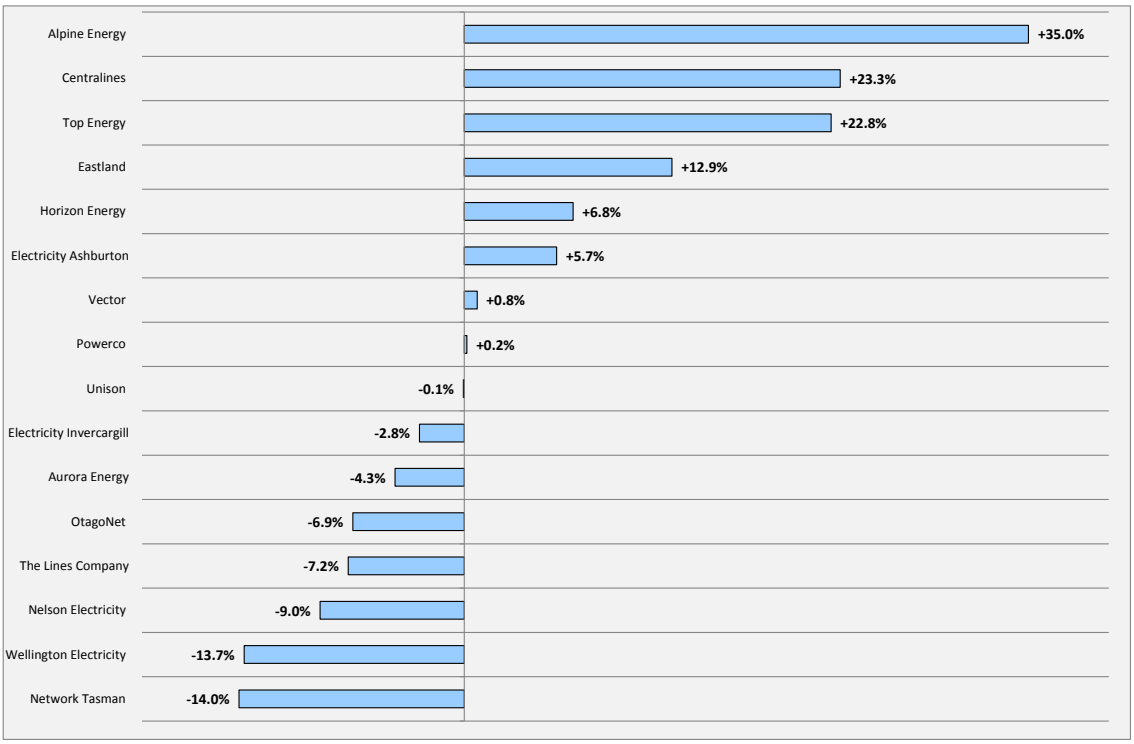
4.20.1 9 distributors had revenue temporarily increased in the last year of the current regulatory period, as a result of claw-back being provided in that year through a recoverable cost term.

4.20.2 2 distributors (Vector and Horizon) had revenue temporarily reduced in the last year of the current regulatory period, as a result of claw-back being provided in that year through a recoverable cost term.

4.20.3 4 distributors are due additional revenue, as a result of the provision of claw-back being deferred, and—of these—three distributors are due further uplifts as a result of price increases being limited to a maximum of CPI+10% in the current regulatory period.

4.21 Chapter 5 provides further information about the amounts that we have included as recoverable cost terms in the next regulatory period as a result of decisions made in November 2012.

Figure 4.3: Initial adjustment to price limit after taking into account aspects of November 2012 decision



4.22 As can be seen in Figure 4.2 and Figure 4.3, the starting price adjustments for some distributors would be significant when applying a productivity-based rate of change of CPI-0%.

Minimising price shocks to consumers by varying the rate of change in price

4.23 In the case of the largest adjustments to starting prices, we have varied the rate of change in price as an alternative to the starting price adjustment. The way in which we have determined alternative rates of change for individual distributors is explained in Attachment C.

4.24 Table 4.1 shows the adjustments to the price limits that are implied after the rate of change in price has been varied. The adjustments to the price limits are shown:

4.24.1 Net of all pass-through or recoverable costs; and

4.24.2 After taking into account the aspects of our November 2012 decision that are listed in paragraphs 4.20.1 to 4.20.3, but net of any other pass-through or recoverable costs.

4.25 As explained in Attachment C, we have only varied the rate of change for distributors that would otherwise face a price increase of more than 5% in real terms. Alternative rates of change have therefore been set to minimise price shocks for consumers for the distributors denoted with an asterisk in Table 4.1.

4.26 The alternative rates of change we have set are as follows:

4.26.1 Alpine Energy: CPI+11%;

4.26.2 Top Energy: CPI+7%;

4.26.3 Centralines: CPI+7%; and

4.26.4 Eastland: CPI+3.0%.

4.27 The practical effect of varying the rate of change is to defer price increases until later years of the regulatory period.

4.28 As shown in Table 4.1, the application of alternative rates of change is generally not sufficient to bring the initial price adjustment under 5% in real terms.[50] This treatment avoids a situation in which subsequent price adjustments would be larger than the initial price adjustment.

[50] After varying the rate of change for Electricity Invercargill, the initial price adjustment was a 5.2% increase. After taking into account inflation, the initial price adjustment is therefore less than 5% in real terms.

Table 4.1: Initial adjustment to price limit with alternative rates of change applied

Distributor	Estimate of initial change in price limit after transitional aspects of November 2012 decision are taken into account
Alpine Energy *	+ 12.5%
Centralines *	+ 8.8%
Top Energy *	+ 8.3%
Horizon Energy	+ 6.8%
Eastland *	+ 6.7%
Electricity Ashburton	+ 5.7%
Vector	+ 0.8%
Powerco	+ 0.2%
Unison	- 0.1%
Electricity Invercargill	- 2.8%
Aurora Energy	- 4.3%
OtagoNet	- 6.9%
The Lines Company	- 7.2%
Nelson Electricity	- 9.0%
Wellington Electricity	- 13.7%
Network Tasman	- 14.0%

Revenue expected net of pass-through costs and recoverable costs

4.29 Table 4.2 sets out the amount that we expect that each distributor would earn in each year of the regulatory period, net of pass-through costs and recoverable costs, once starting prices are adjusted based on current and projected profitability.

Table 4.2: Revenue expected in each year of the regulatory period ($m)

Distributor	2016	2017	2018	2019	2020	Total (PV)
Alpine Energy	30.5	34.4	39.0	44.3	50.3	163.7
Aurora Energy	56.5	57.7	59.0	60.6	62.3	247.7
Centralines	10.0	10.8	11.7	12.7	13.7	48.8
Eastland	22.7	23.7	24.8	26.0	27.4	104.0
Electricity Ashburton	33.0	33.7	34.4	35.2	36.1	144.2
Electricity Invercargill	13.6	13.8	14.0	14.4	14.7	59.0
Horizon Energy	22.0	22.4	22.8	23.2	23.8	95.5
Nelson Electricity	6.8	7.0	7.1	7.3	7.5	29.9
Network Tasman	28.1	28.6	29.3	30.1	30.8	122.9
OtagoNet	24.8	25.2	25.8	26.4	27.1	108.1
Powerco	250.4	254.3	259.0	264.6	270.5	1087.1
The Lines Company	34.7	35.1	35.5	36.1	36.7	149.1
Top Energy	34.2	37.1	40.3	43.9	47.9	168.7
Unison	100.1	101.9	104.0	106.5	109.2	436.5
Vector	395.2	405.6	417.3	430.8	444.9	1749.9
Wellington Electricity	98.8	100.7	103.0	105.6	108.4	432.0

4.30 In practice, a distributor may be able to earn more or less than the values shown in Table 4.2. This is because we have made assumptions about the likely growth in each distributor's billed quantities. Under the price limits, a distributor may be permitted to earn more than the amounts shown if billed quantities grow faster than our assumptions, and vice versa.

5. Allowances for pass-through and recoverable costs

Purpose of chapter

5.1 This chapter outlines and explains the approach to pass-through and recoverable costs from 1 April 2015 to 31 March 2020.

Limiting the risk of under- or over-recovery of pass-through and recoverable costs

5.2 We have chosen to put in place an approach to pass-through and recoverable costs to ensure distributors are able to fully recover the relevant amounts.[51] This approach reflects the fact that the amounts are generally outside the control of distributors, so few if any incentives are created by exposing distributors to the risk of under-recovery.

5.3 In each year, that portion of prices attributable to pass-through costs and recoverable costs comprises:

5.4 An allowance for forecast pass-through costs and recoverable costs relating to the current year; and

5.5 Any recovery (or pay-back) of all or part of the most recent 'pass-through balance'.

5.6 The 'pass-through balance' represents the unrecovered (or not paid back) balance of the cumulative differences between forecast and actual pass-through costs and recoverable costs for prior years (adjusted for the cost of debt).

5.7 In practice two issues have made full recovery of pass-through and recoverable costs problematic during the current regulatory period. Both of these issues were identified in the Process and Issues Paper, repeated in the Main Proposal Paper,[52] and then recognised in stakeholder submissions.

---

51 Any temporary over- or under-recovery being adjusted for the time value of money at the cost of debt.

52 *Commerce Commission "Proposed deafult price-quality paths for electricity distributors from 1 April 2015"* (4 July 2014), paragraph 5.3.

5.8 These issues have been that:

5.8.1 Distributors were required to forecast pass-through and recoverable costs, which they have found difficult in practice; and

5.8.2 The recovery of the amounts required to cover pass-through and recoverable costs were associated with some degree of volume risk.

5.9 Both of these issues are addressed by the approach that we have developed through consultation. Further detail on the approach will be provided in our Compliance Requirements Paper.

Amounts due to distributors to compensate for shortfall in revenue

5.10 In the Process and Issues Paper, we noted that five distributors under-recovered revenue during the current regulatory period because of constraints on pricing that we imposed. The five distributors we identified were:

5.10.1 Alpine Energy Limited;

5.10.2 Centralines Limited;

5.10.3 Top Energy Limited;

5.10.4 Unison Networks Limited; and

5.10.5 The Lines Company Limited.

5.11 This section outlines and explains the uplift we have allowed for each of these distributors during the next regulatory period.

Amounts due to Alpine Energy, Top Energy, Centralines, and Unison Networks

5.12 For Alpine Energy, Top Energy, Centralines, and Unison Networks, we propose to:[53]

5.12.1 Provide for the deferred recovery of the claw-back applied in November 2012 as a result of the delay to the reset under s 54K(3); and

5.12.2 Provide additional revenue to address the impact of limiting price increases in the last 2 years of the current regulatory period to CPI+10% (where relevant).

5.13 Claw-back is to be provided for the amounts shown in Table 5.1.

Table 5.1: Outstanding claw-back amounts ($m, PV as at 1 April 2015)

Distributor	Outstanding amount
Alpine Energy	+ 11.7m
Top Energy	+ 7.5m
Centralines	+ 1.9m
Unison	+ 9.8m

5.14 Additional revenue has been provided for the amounts shown in Table 5.2. Unison Networks is not shown in Table 5.2 because its price changes were below the CPI+10% limit in the last 2 years of the current regulatory period.

Table 5.2: Additional amount due to limit on price increases ($m, PV as at 1 April 2015)

Distributor	Additional amount
Alpine Energy	+ 12.5m
Top Energy	+ 2.8m
Centralines	+ 1.1m

5.15 We have introduced a new one-off recoverable cost term to implement this revenue uplift and we have amended the input methodologies list of recoverable costs accordingly.

[53] We have calculated the amounts shown using the approaches proposed in the Process and Issues Paper.

5.16 Table 5.3 provides an estimate of the combined impact of spreading the amounts shown in Table 5.1 and 5.2 equally (in present value terms) across each year of the upcoming regulatory period.

Table 5.3: Estimate of combined amounts to be applied each year ($m, PV as at 1 April 2015)

Distributor	2016	2017	2018	2019	2020
Alpine Energy	+ 5.0m	+ 5.3m	+ 5.6m	+ 6.0m	+ 6.3m
Top Energy	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.5m	+ 2.7m
Centralines	+ 0.6m	+ 0.7m	+ 0.7m	+ 0.7m	+ 0.8m
Unison	+ 2.0m	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.5m

5.17 We have chosen to apply these amounts in full in the next regulatory period, rather than smoothing them over a longer timeframe, eg, over two regulatory periods. We considered that delaying the recovery of revenue was unnecessary after applying alternative rates of change to help minimise price shocks to consumers.

5.18 Consistent with our draft decision, the discount rate used in applying claw-back is the cost of debt. In response to our draft decision, we received submissions in support of the use of the cost of capital that were similar to those that we had considered previously.[54]

5.19 As we noted in November 2012, the cost of debt is the appropriate rate to use because we need to balance the interests of the businesses and consumers. The cost of debt is similar to the two-year fixed term mortgage rate. The debt rate therefore provides an indication of the opportunity cost of funds to both distributors and consumers.

The Lines Company

5.20 For The Lines Company, we have not provided for recovery of deferred claw-back in the next regulatory period. This is because The Lines Company provided incorrect information in response to the information gathering request we issued ahead of the November 2012 reset.

5.21 In its submission of 15 August 2014 The Lines Company submitted that our draft decision approach of not providing for recovery "appears to be a pragmatic resolution to the information error issue".

[54] Refer, for example: Unison Networks Limited, Submission on the Default Price-quality paths from 1 April 2015: Draft Decisions, 15 August 2014, p. 38.

5.22 As a consequence of providing incorrect information:

5.22.1 The price limit for The Lines Company was much higher after the November 2012 reset than it should have been; and

5.22.2 Claw-back was not provided in 2014/15.

5.23 If The Lines Company had submitted the correct information:

5.23.1 The price limit would have been lower; but

5.23.2 Claw-back would have been provided in 2014/15.

5.24 The amount of deferred claw-back that The Lines Company would have received in 2015 is similar to the uplift granted as a result of incorrect information being provided. Providing no claw-back in the next regulatory period is therefore a pragmatic resolution to the issue.

5.25 Notably, the rationale for applying claw-back under s 54K(3) was to compensate distributors for the impact of the delay to the process for resetting the paths following the publication of input methodologies. The Lines Company has already had the opportunity to recover the shortfall in revenue resulting from the delay, ie, through the price limit being higher than it would have been otherwise.[55]

[55] For similar reasons, we have not provided for additional revenue for The Lines Company to address the impact of limiting price increases in the last two years of the current regulatory period.

Claw-back applied in 2015 pricing year

5.26 Table 5.4 shows the amount of claw-back recovered in the final year of the current regulatory period.

Table 5.4: Claw-back amounts provided in 2015 ($m, 2015 prices)

Distributor	Claw-back amount
Wellington Electricity	8.1
Powerco	6.0
Network Tasman	2.8
Electricity Ashburton	1.1
OtagoNet	1.1
Electricity Invercargill	0.8
Nelson Electricity	0.5
Aurora Energy	0.4
Eastland	0.0
Horizon Energy	-0.7
Vector	-15.8

6. Quality standards and incentives for service quality

Purpose of chapter

6.1 This chapter outlines and explains the quality standards and the revenue-linked quality incentive scheme, which work together to provide distributors with the incentives for quality.

Average network reliability is used as the measure of quality

6.2 The quality standards and revenue-linked quality incentive scheme focus solely on reliability. This is because reliability is generally considered to be the most important aspect of quality by consumers.[56] For example, the Electricity Networks Association (ENA) Working Group on quality of service summarised customer surveys, undertaken by distributors, and found the frequency and duration of power cuts to be the most important aspect of quality for consumers.[57] The sole consideration of reliability for the quality standards and quality incentive scheme was generally supported by submitters.[58]

6.3 We use SAIDI and SAIFI as the measures of reliability for the purposes of the quality standards and the revenue-linked quality incentive scheme.[59] SAIDI and SAIFI are internationally recognised and the most common method of measuring reliability. There is also a significant amount of historic SAIDI and SAIFI data available and SAIDI and SAIFI would continue to be measured in the future even if it were not required for the quality standards and the quality incentive scheme. A higher SAIDI or SAIFI represent poorer reliability performance.

---

56 The ENA notes that commercial consumers place more importance on the duration and number of interruptions than residential customers.

57 Measured in terms of System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).

58 Examples include Orion New Zealand Limited "Submission on proposed quality targets and incentives for DPPs" 29 August 2014, paragraphs 9; and PwC "Submission to the Commerce Commission on Proposed Quality Targets and Incentives for Default Price-Quality Paths from 1 April 2015 - Made on behalf of 19 Electricity Distribution Businesses" 29 August 2014, paragraph 46.

59 SAIDI is the system average interruption duration index and SAIFI is the system average interruption frequency index.

6.4 In the sections that follow, we explain:

6.4.1 What the quality standards are;

6.4.2 How the revenue-linked quality incentive scheme will operate;

6.4.3 The parameters that make up the revenue-linked quality incentive scheme and quality standards, eg, targets, caps, and collars for reliability; and

6.4.4 How we have normalised the reliability data.

6.5 The Compliance Requirements companion paper will provide a more detailed explanation of compliance assessment against the quality standards. The accompanying paper on quality standards, targets and incentives provides a more detailed explanation of the revenue-linked quality incentive scheme and the calculation of the parameters for both the incentive scheme and the quality standards.[60]

Quality standards

6.6 Section 53M of the Commerce Act 1986 requires default price-quality paths to specify the quality standards that must be met by the regulated suppliers. This requirement has been met by setting quality standards for each non-exempt distributor in terms of reliability.

6.7 A distributor is deemed to be non-compliant with the quality standards if they exceed the SAIDI or SAIFI limit in two-out-of-three consecutive years.[61] The SAIDI and SAIFI limits are set at one standard deviation above the historical average, which is the same as the SAIDI and SAIFI caps under the quality incentive scheme. The method used to calculate the limits and caps is explained in paragraphs 6.33 to 6.45.

6.8 The use of a quality standard that aggregates all consumers for each distributor is a simple, cost-effective, and transparent method of applying quality standards. However, distributors should still address, where practicable, the preferences of individuals, groups, or classes of consumers.

---

[60] Commerce Commission "Quality Targets and Incentives for Default Price-Quality Paths From 1 April 2015" 28 November 2014.

[61] A thorough explanation of how the two out of three year rule works in different scenarios will be provided in the Compliance Requirements Paper. This includes explanation of how limit exceedances in the two years prior to the regulatory period are considered so that the two out of three year rule works in the first and second years of the regulatory period.

Quality standards set to balance identification of quality against risk of false positives

6.9 The quality standards employ the two-out-of-three year rule because this allows for one-off poor performing years, which alone may not constitute an underlying material deterioration of reliability (for example, due to natural variability).

6.10 We received several submissions that support the quality standards as a two-out-of-three year rule with the limits set one standard deviation above the historical average. For example, a recent submission from Wellington Electricity Lines Limited said:

> "WELL supports the revised draft determination to reinstate the 'two-out-of-three' test for compliance with the quality path. Defining the quality compliance test as occurring when the reliability cap (mean plus one standard deviation) is exceeded in both the current regulatory year and one of the immediately preceding two regulatory years ensures that there is a lower probability of breaching the quality path simply due to natural variation."[62]

6.11 The reliability limits for the quality standards are set at one standard deviation above the historical SAIDI and SAIFI average to allow for a reasonable level of variability in reliability performance. Allowing for reasonable natural variability means that the quality standards better reflect underlying network performance.

6.12 These different approaches to reduce the number of false positives work together as a package (along with data normalisation).[63] They do this by taking extreme events and some variability into account. Therefore, the quality standards are more focused on performance over time than a single annual non-normalised measure.

6.13 Removal of any one of the different approaches would require a strengthening of the others to maintain a similar level of mitigation against false positives. We consider that in combination with the multi-year assessment and normalisation for major event days, it is appropriate to set reliability limits at one standard deviation above the historic average. We consider that this level establishes an appropriate balance between adequately identifying performance deterioration and avoiding an adverse amount of false positives.

6.14 This also means that useful information can be collected from distributors about assessment periods in which the reliability limit is exceeded, even if the multi-year assessment does not suggest a material deterioration of the network.

---

62 Wellington Electricity "Revised Draft Default Price-Quality Path Determination" 31 October 2014, p.2. The submission uses the word 'reinstate' because it was a two out of three year rule in the 2010-2014 regulatory period, but we considered dropping it for the 2015 determination at the draft stage.

63 False positives refer to situations where a distributor is assessed as non-compliant with the quality standards when there is not a material deterioration of network performance.

6.15 We have used a ten year reference period to calculate the reliability limits because we consider that a reference period of 10-years best reflects the current underlying level of reliability performance. We consider that five years is too short to capture the underlying level of reliability.

Possible penalties for non-compliance

6.16 Where quality standards are not met, we may seek pecuniary penalties, or compensation for an aggrieved person under section 87 of the Commerce Act for that underperformance.

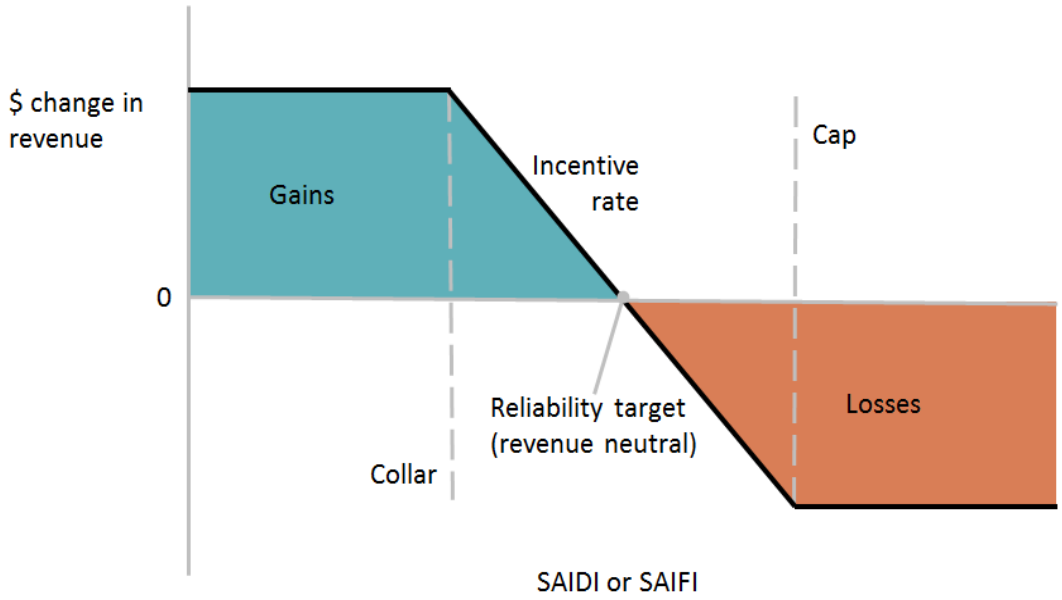
Revenue-linked quality incentive scheme

6.17 We have introduced a revenue-linked incentive scheme to the 2015 regulatory period to explicitly convey an element of the cost-quality trade-off between distributors and consumers. This will incentivise distributors to improve reliability beyond that required by the quality standards where cost-effective. Likewise, the scheme will incentivise distributors to avoid over-investing in reliability where it is not cost-effective.

6.18 We have set the parameters of the revenue-linked quality incentive scheme conservatively for its first regulatory period so the impact of the scheme will be material but not large. As discussed in paragraphs 6.56 to 6.65, we may strengthen the scheme once we, distributors, and consumers have gained more experience with it.

6.19 The incentive scheme will apply to both the average frequency (SAIFI) and duration (SAIDI) of interruptions. The revenue at risk will be shared equally between the two measures. Figure 6.1 is a stylised chart of how the revenue-linked incentive scheme will operate.

Figure 6.1: Stylised chart of the revenue-linked incentive scheme



6.20 Under the incentive scheme the revenue gains a distributor receives for performing better than the reliability target increases up to a maximum, associated with a SAIDI or SAIFI level lower than the target known as the 'collar'. The maximum losses from performing worse than the reliability target is also subject to a limit known as the SAIDI or SAIFI 'cap'.[64] As is discussed above, the cap is equal to the SAIDI of SAIFI limit used for assessing compliance with the quality standards.

6.21 The size of the revenue gains or losses, in respect of reliability performance up to the cap or collar, is determined by how much the distributor departs from the reliability target. The 'incentive rate' is the change in revenue resulting from a unit change in reliability.

6.21.1 A higher incentive rate, ie, a steeper slope in the incentive rate line, leads to larger changes in revenue from a given change in reliability.

6.21.2 The incentive rate beyond the cap or collar on reliability is zero, ie, there are no additional automatic gains or losses for SAIDI or SAIFI exceeding the cap or falling below the collar.

[64] There is no gain or loss via the quality incentive scheme when a distributor's reliability is equal to the target.

6.22 Revenue will increase and decrease by the same scale for the same positive or negative reliability change—ie, the scheme is symmetric. The annual revenue at risk is set at 1% of the starting price maximum allowable revenue for the regulatory period. This is the maximum amount by which a supplier's revenue can go up or down depending on its performance.

Linking revenue to reliability will help improve incentives

6.23 A revenue-linked incentive for reliability will provide better incentives for each distributor to improve marginal reliability where cost-effective, which will encourage distributors to better understand the cost-quality trade-off on their network.

6.24 Distributors will also still be incentivised to avoid over-investment in reliability because of the other incentives within the default price-quality path to reduce expenditure and because the incentive rates are not excessive. We have set the incentive rates at a level necessary to provide meaningful incentives. In addition distributors also face a strong additional incentive to perform within quality standards due to exposure to section 87 of the Commerce Act.

6.25 The incentive scheme strengthens the incentives for distributors to improve their understanding and reaction to the cost of providing a given level of reliability. For example, the cost of tree cutting in a particular location can be compared to the revenue gain provided (or loss avoided) for the expected outcome in reliability.

6.26 However, we acknowledge that the cost-quality trade-off is not always identifiable for all expenditure. Also, some changes in reliability resulting from expenditure in the 2015 to 2020 regulatory period will not eventuate until future regulatory periods.

6.27 For the first regulatory period over which this incentive scheme is operating it is appropriate to set conservative revenue at risk and incentive rates for each distributor. This means that the revenue gains and losses associated with the incentive scheme alone may understate consumers' broad 'willingness to pay' for changes in reliability.

6.28 This type of incentive scheme cannot completely reflect individual consumer demands for reliability, although a greater incentive rate in the future may be closer to reflecting general consumer willingness to pay.[65]

---

[65] 'Willingness to pay' should be interpreted in terms of willingness to pay increased prices for specific increases in reliability (or decreased prices for specific decreases in quality). This is not necessarily the same as the value of lost load.

6.29 We recognise that, in the short term, a distributor may not be able to control all the determinants of short-term reliability. However, the distributor's asset management decisions will have a strong bearing on long-term average reliability.

Improvement on existing approach

6.30 The revenue-linked quality scheme represents an improvement on the existing approach by introducing new incentives beyond quality standards compliance. For example, a distributor does not face a direct financial incentive for having a lower SAIDI or SAIFI than the limit under the existing approach, but will face a financial incentive under the new approach.[66]

6.31 The ENA Quality of Supply and Incentives Working Group and other submissions supported moving to a more incentive based approach to quality.[67]

6.32 There are a number of other weaknesses with the existing approach. We discussed these in the Process and Issues Paper.[68] For example, an incentive can arise to unnecessarily delay planned work to avoid planned outages pushing a distributor over the limit once a distributor realises that it is at risk of breaching the limit in that year.

---

66 The financial reward for lower SAIDI or SAIFI is either a lower loss or a larger gain depending on whether it is above or below the target.

67 As examples of support from submitters refer to: Electricity Networks Association (quality of supply and incentives working group) "Pathway to quality - quality of supply and incentives working group report" (February 2014), p.50; Vector "Submission to Commerce Commission on the Default Price-Quality Paths from 1 April 2015: Process and issues paper" (30 April 2014), paragraph 155; Powerco "Submission on Proposed Quality Targets and Incentives for Default Price-quality Paths" (29 August 2014), paragraph 3. As an example of opposition refer: Eastland Network "Submission to Commerce Commission: Default Price-Quality Paths from 1 April 2015 for 17 electricity distributors - Process and Issues Paper" (30 April 2014), p.11.

68 Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014), paragraphs 4.22-4.33.

Parameters of the incentive scheme and the quality standards

6.33 The parameters for the revenue-linked quality incentive scheme and quality standards are contained in Tables 6.1 and 6.2.

6.34 If a major transaction or transmission asset purchase occurs during the regulatory period, the distributor must re-calculate the parameters using the methodology specified in Schedule 4B of the determination.[69] This is explained in the accompanying quality paper.[70]

6.35 In order to implement the revenue-linked quality incentive scheme and quality standards we have identified:

6.35.1 the amount of revenue at risk;

6.35.2 the reliability targets;

6.35.3 the caps/limits and collars;

6.35.4 the incentive rates; and

6.35.5 the normalisation methodology for maximum event days (used both to calculate the reliability targets and normalise actual performance).

6.36 The caps for the incentive scheme are equal to the limits for the quality standards so they are calculated in the same way, although there are some differences in the reasoning for setting them at one standard deviation above the historic average.

6.37 The reasons for our decisions on how the reliability limits are set for the quality standards are described in paragraphs 6.9 to 6.15.

6.38 We have adopted a prudent approach to setting the parameters of the revenue-linked quality incentive scheme. The parameters of the incentive scheme make up a package and should be viewed in combination. We anticipate that as further information becomes available over future resets the quality of service incentives will be refined and strengthened.

---

69 *Electricity Distribution Services Default Price-Quality Path Determination 2015 [2015]* NZCC 33, Schedule 4B.

70 Commerce Commission "Quality targets and incentives for default price-quality paths for electricity distributors from 1 April 2015" (28 November 2014), paragraph 2.28-2.34.

6.39 The amount of revenue at risk per year is set as 1% of the starting price maximum allowable revenue. We consider this the minimum level of revenue at risk such to create meaningful incentives. This is also consistent with our recent final decision on Transpower's individual price-quality path.

6.40 We have used the latest data available to set the quality incentive scheme parameters. This includes the data that was requested from distributors (through s 53ZD of the Commerce Act 1986), which was not available at the time of the draft decision.

What the parameters are based on

6.41 We applied a 10 year historic average of SAIDI and SAIFI from 2005 to 2014. The 10 year historic average best reflects the current underlying level of reliability performance. The reliability targets are set as the average of the normalised 10 year reference period.

6.42 No adjustment has been applied to the targets for past quality breaches. There was objection from submitters against an adjustment, which we have accepted. The main reasons for not including an adjustment are:[71]

6.42.1 A breach is not necessarily equivalent to material deterioration and is not in itself indicative of fault or negligence; and

6.42.2 The past compliance limits used a different normalisation methodology, which we acknowledge has several drawbacks compared to the new methodology.

6.43 In calculating the quality incentive scheme and quality standards parameters, we have applied a 50% de-weighting to planned interruptions. This weighting recognises that customers are less inconvenienced by planned interruptions compared to unplanned interruptions, as they are likely to know about them in advance.

6.44 The caps and collars are set symmetrically as the reliability target plus and minus one standard deviation.[72] The reliability limits are set as one standard deviation above the reference period average, which makes the reliability limits equal to the caps.

---

[71] For example, Aurora Energy Limited "Proposed Quality Targets and Incentives for Default Price-Quality Paths from 1 April 2015" (29 August 2014), p 9-10 and Eastland Network "Default price-quality paths from 1 April 2015 for 17 electricity distributors" (29 August 2014), paragraph 48.

[72] For the quality incentive scheme, a cap and collar that is too narrow could result in the scheme effectively becoming binary, with distributors' performance resulting in either the maximum revenue gain or maximum loss. This would not be effective in creating the marginal incentives on reliability.

6.45 The standard deviations have been calculated from daily data, rather than annual data. Using daily data is more accurate and less volatile than using annual data.

Normalisation

6.46 A normalisation approach is applied to the reference unplanned SAIDI and SAIFI datasets and will also be applied to the actual unplanned SAIDI and SAIFI data over the regulatory period. The normalisation approach limits the impact of major events on the quality standards and the revenue-linked incentive scheme. We achieve this by setting a process for identifying major event days, and replacing the actual SAIDI or SAIFI values on these days with boundary values which act as the assessed values.

6.47 The normalisation approach is in place to avoid single events, such as storms, having unduly large effects on the measures of reliability. Without application of normalisation, one particularly large event could result in a generally reliable network having a SAIDI or SAIFI higher than its target (for the incentive scheme) or reliability limit (for the quality standards).

6.48 The normalisation approach is applied to the SAIDI and SAIFI data separately. A day can be classified as a major event day for SAIDI but not for SAIFI and vice versa.

6.49 The separation is because different types of events can have different effects on SAIDI and SAIFI. For example, a single long duration outage at a substation will have a greater effect on SAIDI than SAIFI compared to a widespread storm that results in a large number of quickly repaired local interruptions. The separate consideration of SAIDI and SAIFI has been recommended by several submitters.[73]

6.50 The normalisation approach requires the Commission to set the triggers for major event days and the boundary values for major event days, which are described in the sections below.

[73] For example, Electricity Networks Association "Submission on proposed quality targets and incentives for Default Price-Quality Paths from 1 April 2015" (29 August 2014), paragraphs 45-55.

Triggers for major event days

6.51 The trigger for major event days is our decision on what situations mean that a day should be considered for normalisation to remove the effects of extreme events. The trigger for SAIDI and SAIFI major event days is set as when a distributor exceeds the boundary value on any given day. This limits the amount of SAIDI and SAIFI that can be accrued by a distributor in any one day. The trigger has been designed such that distributors can, on average, expect 2.3 SAIDI major event days and 2.3 SAIFI major event days per year.[74]

Boundary values for major event days

6.52 The boundary values for major event days have been set for each distributor as the 23rd largest SAIDI and SAIDI event over the ten year reference period so that distributors can expect an average of 2.3 major event days per year.

6.53 The boundary values are only applied to unplanned interruptions because it is only these that are outside the control of the distributor and likely to be extreme.

Further detail on normalisation is available in the quality companion paper

6.54 The quality companion paper includes a chapter on normalisation, which provides detailed explanation and rationale.[75]

---

[74] SAIDI and SAIFI are treated separately and their major event days may or may not coincide.

[75] Commerce Commission "Quality Targets and Incentives for Default Price-Quality Paths From 1 April 2015" (28 November 2014), chapter 3.

Summary of revenue-linked quality incentive scheme parameters

6.55 The parameters for the quality incentive scheme and quality standards are provided in Table 6.1 and Table 6.2 below.

Table 6.1: Table for SAIDI

Distributor	Revenue at risk ($000)	SAIDI target[76]	SAIDI collar[76]	SAIDI cap and limit[76]	Incentive rate ($/SAIDI)[77]	SAIDI boundary[78]
Alpine Energy	152.3	132.8	111.5	154.2	7,134	9.17
Aurora Energy	282.6	74.5	65.6	83.4	31,741	3.38
Centralines	49.9	119.1	98.8	139.3	2,462	8.52
Eastland Network	113.7	242.1	210.2	274.1	3,560	13.07
Electricity Ashburton	165.2	132.8	114.7	151.0	9,080	8.08
Electricity Invercargill	67.8	24.1	17.0	31.1	9,620	3.24
Horizon Energy	110.1	150.1	124.4	175.8	4,285	10.77
Nelson Electricity	34.1	16.2	10.2	22.2	5,664	2.70
Network Tasman	140.5	112.5	95.1	129.8	8,100	6.98
Orion[79]	0	73.4	73.4	73.4	-	4.4
OtagoNet	123.9	224.6	194.2	254.9	4,084	13.24
Powerco	1,252.1	188.9	167.1	210.6	57,526	11.21
The Lines Company	173.5	208.8	183.4	234.2	6,830	10.97
Top Energy	171.2	405.4	340.1	470.8	2,619	28.43
Unison Networks	500.5	99.1	88.1	110.2	45,378	4.54
Vector Lines	1,976	96.0	87.9	104.2	242,885	3.37
Wellington Electricity	493.9	35.4	30.2	40.6	95,091	2.1

76 Annual SAIDI, which is the (adjusted) total duration of interruptions averaged per ICP over the year in minutes.

77 Dollars per annual SAIDI minute (adjusted minutes of interruption duration per ICP over a year).

78 Daily SAIDI, which is the (adjusted) total duration of interruptions averaged per ICP over one day.

79 The values for Orion are to apply in 2019/20 unless Orion is subject to a new CPP. Some of these values may also be re-calculated within the CPP, such as re-calculation to account for a major transaction.

Table 6.2: Table for SAIFI

Distributor	Revenue at risk ($000)	SAIFI target[80]	SAIFI collar[80]	SAIFI cap and limit[80]	Incentive rate ($/SAIFI)[81]	SAIFI boundary[82]
Alpine Energy	152.3	1.30	1.09	1.51	725,665	0.072
Aurora Energy	282.6	1.29	1.14	1.45	1,856,663	0.061
Centralines	49.9	3.52	2.84	4.20	73,229	0.294
Eastland Network	113.7	3.09	2.64	3.53	256,077	0.183
Electricity Ashburton	165.2	1.39	1.16	1.61	735,989	0.098
Electricity Invercargill	67.8	0.59	0.42	0.77	380,660	0.080
Horizon Energy	110.1	1.92	1.63	2.21	376,939	0.100
Nelson Electricity	34.1	0.18	0.11	0.24	516,939	0.033
Network Tasman	140.5	1.23	1.04	1.42	732,537	0.067
Orion	0	0.87	0.87	0.87	-	0.06
OtagoNet	123.9	2.52	2.12	2.93	307,095	0.176
Powerco	1,252.1	2.11	1.94	2.27	7,528,471	0.059
The Lines Company	173.5	3.07	2.67	3.47	438,210	0.144
Top Energy	171.2	5.28	4.50	6.06	220,465	0.332
Unison Networks	500.5	1.94	1.74	2.15	2,449,901	0.077
Vector Lines	1,976	1.29	1.19	1.40	19,005,110	0.039
Wellington Electricity	493.9	0.55	0.47	0.62	6,307,379	0.031

80 Annual SAIFI, which is the (adjusted) number of interruptions averaged per ICP over a year.

81 Dollars per annual SAIFI (adjusted number of interruptions averaged per ICP over a year).

82 Daily SAIFI, which is the (adjusted) number of interruptions averaged per ICP over a day.

Further developments in future regulatory periods

6.56 Further developments of our approach may be possible in future regulatory periods. Areas for development include:

6.56.1 increasing the breadth of measures of service quality;

6.56.2 refining the measures of reliability; and

6.56.3 strengthening the incentives of the incentive scheme.

Increasing the breadth of measures of service quality

6.57 Our current view is that development of the quality regime in future regulatory periods might be best targeted on capturing a greater breadth of service quality valued by consumers. New measures could therefore be introduced to the quality incentive scheme or quality standards to capture a greater variety of dimensions of service quality.

6.58 Using customer surveys and collective experience, the ENA compiled a list of quality aspects that consumers most value.[83] In addition to the frequency and duration of interruptions, additional dimensions of quality are:

6.58.1 providing high quality power supply;

6.58.2 the time it takes to respond to a power cut;

6.58.3 the time taken to answer the telephone;

6.58.4 providing information on reasons for and the likely duration and the extent of a power cut;

6.58.5 processing applications for new connections including those for connection of distributed generation; and

6.58.6 providing sufficient notice of shutdowns.

6.59 Submissions are generally supportive of future consideration of customer service measures.[84]

---

83 For further discussion refer to: Electricity Networks Association "Pathway to quality – quality of supply and incentives working group report" (February 2014), pages 38–39.

84 For example refer to: Powerco "Submission on Proposed Quality Targets and Incentives for Default Price-Quality Paths" (29 August 2014), paragraph 61.

6.60 Some submitters have expressed support for the development of new measures through the information disclosure regime. Potential customer service measures to develop and refinements to interruption measures are discussed by the ENA Quality of Supply and Incentives Working Group in its report.[85]

Refining the measures of reliability

6.61 In addition, we may in future focus on a refinement of our existing service reliability measures. This view is shared by the ENA quality working group. In this regard, we consider that disaggregation of the average duration and frequency of interruption measures and customer service measures to be the potential next steps.

6.62 Disaggregating the average number and frequency of interruptions could provide a better measure of the distinction in service received by customers of different classes or location.

6.63 Further refining the quality regime in future regulatory periods may first require distributors to report additional data through an enhanced information disclosure regime or through the default price-quality path determination process. A distributor may or may or may not already be collecting a given measure outside of the information disclosure regime.

Strengthening the incentives of the quality incentive scheme

6.64 In future regulatory periods once the Commission and the distributors have gained experience and confidence in the revenue-linked quality incentive scheme, the parameters may be strengthened. For example, this could include a higher level of revenue at risk or steeper incentive rate.

6.65 Although the revenue-linked incentive scheme and the quality standards are separate, we view them together with the price path as an overall package. Therefore, a strengthened incentive scheme may allow for the threshold for breaching the standard to be raised so that the overall package maintains a similar level of strength but has more certain incentives.

---

85 Electricity Networks Association "Pathway to Quality: Quality of Service Incentives Working Group Report" February 2014.

7. Other incentive mechanisms

Purpose of chapter

7.1 This chapter outlines and explains the other incentive mechanisms that we have introduced for the upcoming regulatory period.

Incentives to control expenditure

7.2 Through an amendment to input methodologies, we have put in place incentives to control operating and capital expenditure that has a constant strength in each year of a default price-quality path.[86] This is due to an Incremental Rolling Incentive Scheme (IRIS) for operating expenditure and capital expenditure.

7.3 Amongst other things, applying a 'time consistent' incentive means that:

7.3.1 Distributors are no longer exposed to the full cost of responding to external events that have a temporary impact on expenditure; and

7.3.2 Distributors are unable to boost profits by inflating costs in a particular year.

7.4 The details of the amendment are outlined and explained in an accompanying paper.[87] Notably, for operating expenditure, the retention factor is approximately equal to 35%. This retention factor is based on distributors being exposed to the benefits of any efficiency gains for 5 years from the date the gain is made.[88]

Choice of retention factor for capital expenditure

7.5 In keeping with the approach that applies to Transpower New Zealand, the incentive mechanism for capital expenditure requires the Commission to determine a retention factor for each distributor at the time of each reset. Distributors therefore have certainty that the retention factor will be specified in advance of any efficiency improvements being achieved.

---

86 We plan to implement a further amendment as soon as practicable to put in place an equivalent incentive that applies to customised price quality paths.

87 Commerce Commission "Input methodology amendments for electricity distribution services and Transpower New Zealand: Incremental Rolling Incentive Scheme" (27 November 2014).

88 It is worth noting that the incentive scheme we to introduce to control expenditure will only have an impact on allowable revenue in the following regulatory period (ie, 2020 to 2025). Further information on the principles behind this type of scheme is available in a previously published paper: Commerce Commission "Incentives for Suppliers to Control Expenditure During a Regulatory period: Process and Issues Paper" (20 September 2013).

7.6 For this reset, we are applying a retention factor of 15%, ie, distributors will retain 15% of each dollar of capital expenditure they save. A constant 15% retention factor is broadly in line with the average retention factor for capital expenditure, ie, under a price path without an additional capital expenditure incentive scheme.[89]

7.7 Our reasons for setting a retention factor of 15% are explained in our Low Cost Forecasting Paper.[90] In particular it is related to our low cost forecasting approach, which may not reflect the prudent and efficient level of capital expenditure. A retention factor above 15% may therefore result in significant gains to distributors over and above those that arise from genuine efficiencies in capital expenditure.[91]

7.8 Our concerns were based on the following:[92]

7.8.1 Our low cost approach is reliant on using the capital expenditure forecasts provided by the distributors and, as set out in the Low Cost Forecasting Paper, by relying on each distributor's forecast in the past, we provided distributors with an incentive to systematically bias their forecast to increase their starting price, eg, by adopting low risk forecasting assumptions; and

7.8.2 For a large number of distributors, expenditure in the current regulatory period was below their own forecasts, which may be the result of inaccurate forecasting, or systematically biased forecasts.[93]

7.9 Moreover, a higher strength of incentive to economise on capital expenditure may result in the incentive to defer or economise on expenditure being stronger than the incentives to maintain quality.

---

89 This number assumes the price path has a capex wash-up mechanism that washes up for capital expenditure in the years preceding the start of the price path.

90 Commerce Commission "Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020: Low cost forecasting approaches" (28 November 2014), Chapter 4.

91 A lower retention factor reduces the financial impact on a distributor needing to spend more than our forecast of capital expenditure.

92 Some these concerns may be mitigated in the future through the application of menu regulation as noted by Frontier in their report to the ENA forecasting working group: Frontier Economics Limited "Output 3: Development of approaches to forecast EDB costs under a DPP framework - a report prepared for the Electricity Networks Association of New Zealand" May 2014.

93 Commerce Commission "Regulatory Incentives and the Cost of Capital: Working paper" (23 June 2014), paragraph 34.

Incentives for energy efficiency, demand side management and reduction of energy losses

7.10 Section 54Q of the Commerce Act states that the Commission must promote incentives, and must avoid imposing disincentives, for distributors to invest in energy efficiency and demand side management, and to reduce energy losses.

Recommendations of the ENA Working Group on energy efficiency incentives

7.11 Due to the technical nature of the topic we were interested in receiving industry recommendations on how incentives for energy efficiency and demand side management could be improved. Industry input was provided through the ENA Energy Efficiency Incentives Working Group with Commission staff attending in an observer role.

7.12 The ENA Energy Efficiency Incentives Working Group identified a number of issues with current regulatory and market settings that act as disincentives to distributors investing in energy efficiency. We published the ENA Energy Efficiency Incentives Working Group paper alongside our 'process and issues' paper in March 2014.[94]

[94] Electricity Networks Association (energy efficiency incentives working group) "Options and Incentives for Electricity Distribution Businesses to Improve Supply and Demand-Side Efficiency" April 2014.

7.13 The key issues and recommendations in the ENA Working Group report included:

7.13.1 The introduction of a revenue-decoupling mechanism for energy efficiency initiatives as part of the default price-quality path reset, because with volume based pricing, energy efficiency initiatives could adversely affect revenue recovered by distributors, by decreasing volumes;

7.13.2 Removing disincentives to invest in assets with shorter lives, by ensuring there is no barrier to invest in shorter-life assets, given Commission's assumption of an average asset life of 45 years;

7.13.3 Ensuring that capital expenditure solutions are not favoured over operating expenditure solutions, and that the incentive differential does not change over the course of the regulatory period;

7.13.4 Providing clarification of the definition of regulated services, to ensure distributors know how energy efficiency investments will be treated, and in particular whether they fall wholly or partly within the definition of 'electricity lines services';

7.14 We address each of these recommendations in turn. We recognise that the ENA report and recommendations were supported by a number of submissions.[95]

Approaches to promote energy efficiency and demand side management

7.15 In summary, having considered the ENA Working Group report in depth, we have expanded our approach to promoting energy efficient and demand side management. In addition to monitoring under information disclosure, we have:

7.15.1 Introduced a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives ('The energy efficiency and demand side management scheme'); and

7.15.2 Neutralised the incentive to commission assets based on expected asset life, ie, ensuring distributors are not penalised by investing in short life assets instead of longer life assets.

[95] For examples, see PwC, "Submission to the Commerce Commission on Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper, Made on behalf of 20 Electricity Distribution Businesses" (30 April 2014) and Vector, "Submission to Commerce Commission on the Default Price-Quality Paths from 1 April 2015: Process and issues paper" (30 April 2014).

7.16 In addition we have considered the options available for reducing the difference in strength between operating and capital expenditure incentives:

7.16.1 The introduction of a constant strength capital expenditure incentive and a constant strength operating expenditure incentive means that incentives for operating expenditure and capital expenditure will be consistent across the regulatory period;[96] and

7.16.2 Setting a retention factor for capital expenditure at 15% reduces the maximum differences between capital and operating expenditure incentives that have existed in the current regulatory period.

7.17 The incentives on operating and capital expenditure are important because they affect the trade-off between different options for meeting demand. For example, large differences in the incentive strength may mean that capital intensive solutions (such as expanding substation capacity) would be preferred over more economical operational solutions (such as contracting for demand side response).

Implementation of an energy efficiency and demand side management scheme

7.18 Following the recommendations of the ENA Working Group, we have introduced a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives.[97]

7.19 The energy efficiency and demand side management scheme:

7.19.1 covers a broad scope of activities that improve energy efficiency or demand side management (excluding primarily tariff based measures);

7.19.2 limits financial compensation to foregone revenue from energy efficiency or demand side management initiatives;

7.19.3 uses a principles based approach to establishing a link between energy efficiency or demand side management activities and foregone revenue;

7.19.4 requires a request for approval of an allowance for foregone revenue to be submitted by the distributor; and

7.19.5 applies any financial adjustment in the year after assessment as an additional recoverable cost.

---

96 Commerce Commission "Input methodology amendments for electricity distribution services and Transpower New Zealand: Incremental Rolling Incentive Scheme" (27 November 2014).

97 Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), paragraph E1–E27.

7.20 The approach closely follows the recommendations of Castalia in its report to Vector of April 2014.[98] As these recommendations were in turn based on the D-factor regime implemented in New South Wales, Australia, we have considered the New South Wales approach in the drafting of our determination.

7.21 Most submissions agreed with the introduction of this type of incentive scheme to the default price-quality path. However there was a variation in opinions as to how much the scheme could practically achieve.[99]

7.22 Some submissions maintained that the alternative options of a revenue cap or volume wash-up may provide a more effective way of dealing with the identified issues. These are options that we expect to evaluate when undertaking a 7 year review of input methodologies.

7.23 We have introduced the energy efficiency and demand side management scheme as an ex-post approvals process because:

7.23.1 Distributors will be able to understand the demonstration and verification process sooner than waiting for a reset of the default price-quality path to wash-up for the quantities associated with any qualifying initiative. This creates more certainty for industry and promotes further investment in energy efficiency; and

7.23.2 It is likely to be a lower cost option than making an assessment of ex ante forecasts. As noted by the ENA, forecasting expenditure associated with energy efficiency measures is very uncertain, and using the compliance formula avoids the costs of wash-ups and the potential for biased forecasts.[100]

7.24 Submissions were broadly supportive on the need for an approvals process and our requirement to verify the link between activities and the foregone revenue.[101]

---

98 Castalia Strategic Advisors “Providing a D-Factor Mechanism under the DPP Framework - Report to Vector” April 2014.

99 For example, Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 99 and Powerco "Submission on Default price-quality paths for electricity distributors from 1 April 2015 and Low cost forecasting approaches for default price-quality paths" (15 August 2014), paragraph 97.

100 Electricity Networks Association, “Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper” (30 April 2014).

101 Vector "Submission on Proposed Electricity DPP Compliance Requirements" (29 August 2014), paragraph 24 and Powerco "Submission on Proposed Compliance Requirements for the 2015-2020 Default Price-Quality Paths for Electricity Distributors" (29 August 2014), paragraph 27.

7.25 We have implemented the energy efficiency and demand side management scheme by way of a new recoverable cost term.[102] This term will allow recovery of the foregone revenue approved under the scheme in the following pricing year adjusted for the time value of money.

7.26 The energy efficiency and demand side management scheme is a new scheme that is operating on a principles based approach with an approvals process. Given it is a new scheme we may look to refine the compliance and approval processes once it becomes clear how the scheme can work most efficiently in practice.

7.27 Further information on the operation of the scheme and our responses to submissions on its details are provided in Attachment E of this paper and in an accompanying Compliance Requirements Paper.

Neutralising incentive to invest in long lived assets

7.28 Due to the way we have implemented a constant strength capital expenditure, we have solved one of the barriers identified by the ENA Energy Efficiency Incentives Working Group about the standard asset life assumption(s) relied on when setting price-quality paths.

7.29 In particular, before applying the retention factor to the difference between actual and forecast expenditure, there is an initial wash-up for the difference between forecast and actual return *on* and *of* capital. This wash-up corrects for the difference between the actual asset life of installed assets, and the asset life that was assumed at the time the price-quality path was reset.

7.30 This approach also addresses the concerns raised by ENA with the current disincentive to undertake expenditure on short life assets. This is because the retention factor for all capital expenditure is the same regardless of the assumed asset life.

7.31 Neutralising the incentive to invest in long lived assets over short lived assets was considered by the ENA to be important as it ensures that suppliers are not penalised for opting for short lived assets if these assets form part of delivering a more efficient solution.

[102] Such as those used for approved avoided transmission charges (clause 3.1.3(1)e)) and approved new transmission contracts (clause 3.1.3(1)(c)).

Relative strength of incentives for operating and capital expenditure efficiencies

7.32 An important element in achieving efficiency is to make the correct decision on whether operating or capital expenditure is appropriate. This is particularly true for energy efficiency and demand side management activities which often require the supplier to incur operating expenditure in order to avoid capital expenditure.

7.33 Consequently, our general view is that retention factors for capital expenditure should be broadly reflective of the retention factor for operating expenditure, except where there are good reasons to prefer a different value.[103] For example, concerns about forecasting uncertainty, or the scope to manipulate forecasts, could be mitigated by varying the strength of the retention factor.

7.34 As discussed above, we have applied a 15% retention factor for capital expenditure for the forthcoming reset due to the significant uncertainty we have in capital expenditure forecasts. Clearly, this choice of retention factor does not equalise the incentive between capital expenditure and operating expenditure, but it does represent an improvement relative to the existing arrangements.

7.35 In particular, under the new incentive mechanism to control expenditure, the difference in incentives between capital and operating expenditure:

7.35.1 Remains consistent over the course of the regulatory period; and

7.35.2 Is significantly lower than the maximum difference in incentives seen during the course of the current regulatory period.

Clarification of regulated services

7.36 The ENA have pointed out that energy efficiency and demand side management activities subject to regulation should be clearly defined so that distributors know how their efficiency investments will be treated.

7.37 If energy efficiency investments fall within the definition of 'electricity lines services' they are regarded as a regulated service and be included in an distributor's regulatory asset base, either in part or in full. If part of the investment falls outside the regulated business, then distributors are also be able to earn alternative (unregulated) revenue sources in addition to that associated with its price path.

---

[103] The sharing ratio for operating expenditure is approximately 35:65 between distributors and consumers when based on retaining efficiencies for period of 5 years after the year in which the efficiency is occurred and a WACC of 7.6%.

7.38 In our draft decision, we requested real world examples of instances in which clarification would be helpful. We will continue to evaluate the types of energy efficiency and demand side management activities that should be considered regulated services.

7.39 Clarification of regulated services can be provided through a variety of channels, but is likely to be achieved through additional guidance and/or amendments to information disclosure requirements. Any amendments to information disclosure requirements would be subject to a process of consultation.

Other matters related to energy efficiency and demand side management

7.40 A number of other issues that affect the incentives to develop energy efficiency initiatives have been identified and considered:

7.40.1 Pricing structures that incentivise behaviour change;

7.40.2 Low user fixed charge;

7.40.3 Incentives for distributed generation; and

7.40.4 Loss reduction.

Pricing structures that incentivise behaviour change

7.41 The ENA report highlighted behavioural awareness-raising and educational programmes as well as the use of pricing structures that incentivise changes in customer demands as options for improving supply and demand side efficiency in New Zealand.

7.42 The Commission considers that distributors have the flexibility to adjust pricing structures under the default price-quality path determination.[104] This is provided by both the form of the weighted average price-cap and the price restructure provisions contained at clauses 8.7 to 8.10 of the determination.

7.43 This form of price-cap limits aggregate price increases, but does not constrain prices for individual services, classes of services, or for different customer groups. The Commission has retained this approach as it provides flexibility for distributors to reflect changing consumer demands (or other factors) as part of their pricing structures and to price more cost reflectively.

[104] Electricity Distribution Services Default Price-Quality Path Determination 2015 [2015] NZCC 33.

7.44 Such flexibility will allow distributors to adjust their pricing structures in a way that can contribute to the promotion of energy efficiency e.g., by reducing reliance on volumetric pricing and by allowing the introduction of peak demand and/or time-of-use pricing.

Low user fixed charge

7.45 The ENA report set out the following concerns with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations. In particular they note: [105]

> EDBs have a degree of flexibility in their pricing as regulations do not specifically require pricing based on usage (for example, kWh). However, the current norm is pricing based on consumption rather than peak demand (which drives much of EDBs' costs). The Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations (LUFC regulations) may in practice make such consumption charges a default. This is because they define the average consumer by their annual consumption and require that the average consumer pays no more in total under alternative tariff options. This makes it more difficult for an EDB to show that the average consumer would pay no more using a variable charge based on peak demand.

7.46 We agree with previous submitters on the Process and Issues Paper who noted that these regulations are outside our area of responsibility. For example Contact stated:[106]

> We agree with Vector that, while these regulations sit outside the Commission's area of responsibility, the Commission's assistance in seeking change to these regulations would be useful and, in our view, of benefit to consumers. We believe the initial intent of these regulations is no longer being served.

7.47 We believe our role is therefore to make sure sufficient information is available via both information disclosure requirements and our work on summary and analysis to inform the needs of all stakeholders, including policy makers.

Distributed generation

7.48 There are specific requirements under the Electricity Code for distributors to ensure that avoided transmission and distribution charges are paid to distributed generation connected to their network. [107]

---

105 Electricity Networks Association, "Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper", 30 April 2014.

106 Contact Energy, "Process and issues paper dated 21 March 2014, default price-quality paths from 1 April 2015 for 17 electricity distributors – cross submission by Contact Energy", 14 May 2014.

107 Electricity Industry Participation Code 2010, Part 6.

7.49 Avoided cost of transmission relating to distributed generation is now a broader "distributed generation allowance" covering any positive allowance for costs incurred and negative amounts allowance for amounts receivable. This broader definition has been incorporated to allow for uncertainty given work currently being undertaken in the area.

7.50 ENA and PricewaterhouseCoopers (PwC) supported the new definition.[108]

7.51 Orion submitted they had concerns with the new definition as it links the allowance to the regulated avoided transmission charge which is inconsistent with their payment scheme to generators.[109] However Orion's issue is specific to the way their payment scheme for distributed generation functions as it is not strictly aligned to the Electricity Code, which is the cause of their concern, rather than the new definition.

7.52 We have also decided that we will not require approval of a distributed generation allowance. This is consistent with the submission from the ENA who suggest recoverable costs for which the amount to be recovered can be calculated definitively in a manner consistent with the input methodologies.[110]

---

108 Electricity Networks Association "Submission on proposed compliance requirements for the 2015-2020 Default Price-Quality Paths for electricity distributors" (29 August 2014), paragraph 73 and PwC "Submission to the Commerce Commission on Proposed Compliance Requirements for the 2015–2020 Default Price-Quality Paths for Electricity Distributors and Associated Input Methodology Amendments - Made on behalf of 19 Electricity Distribution Businesses" (29 August 2014), p.12.

109 Orion New Zealand Limited "Submission on the draft DPP determination and related documents" (29 August 2014), paragraph 32.

110 Electricity Networks Association "Submission on proposed compliance requirements for the 2015-2020 Default Price-Quality Paths for electricity distributors" (29 August 2014), paragraph 100.

Reduction of line losses

7.53 Although covered by the ENA report, no specific recommendations were made about line losses. The working group report noted that:

7.53.1 Distributors are best placed to lead in this area;

7.53.2 Losses are indirectly limited through requirements to maintain voltage at premises at 230V with a tolerance band of +/- six percent.[111] These voltage requirements place limits on the cable sizes used in that EDBs will minimise costs subject to meeting these requirements-thereby limiting losses; and

7.53.3 Minimum Energy Performance Standards and Energy Efficiency (Energy Using Products) Regulations 2002 set requirements for energy performance levels of a number of products.[112]

7.54 Therefore the ENA considers that the extent of potential gains in this area appear limited. We have accordingly not introduced any additional incentives to those already provided through reporting of losses under information disclosure.

---

[111] See for example Vector's Asset Management Plan 2013-2023. In comparison, other countries incorporate incentives around losses directly into regulatory settings (for example in The Philippines where losses were originally above 10%).

[112] See: http://www.med.govt.nz/sectors-industries/energy/energy-environment/energy-efficiency, http://-www.eeca.govt.nz/standards-and-ratings/minimum-energy-performance-standards-and-labelling and http://www.legislation.govt.nz/regulation/public/2002/0009/latest/DLM108730.html?search=ts_regulation_Energy+Efficiency+%28Energy+Using+Products%29+Regulations+2002_resel&sr=1

8. Reconsideration of price-quality paths

Purpose of chapter

8.1 This chapter outlines the circumstances in which a default price-quality path can be reconsidered and how we have amended input methodologies to provide for two new recoverable cost terms relating to the reconsideration of default price-quality paths.

Four circumstances in which default price-quality paths may be re-opened

8.2 Following an amendment ordered by the High Court the input methodologies for electricity distribution services now allow the default price-quality path to be reconsidered under four circumstances:[113]

8.2.1 A catastrophic event;

8.2.2 A change event;[114]

8.2.3 An error; and

8.2.4 Provision of false and misleading information.

8.3 A reconsideration due to a catastrophic event, change event, or an error can only take place if the magnitude of additional costs incurred or change in allowable revenue is greater than 1% of the allowable notional revenue under the existing price path for the affected years.

New recoverable cost terms introduced to the input methodologies

8.4 We have amended the input methodologies that apply to default price-quality paths in order to introduce new recoverable cost terms that will enable:

8.4.1 A sharing of costs between distributors and consumers that is consistent with the Part 4 Purpose following a catastrophic event; and

8.4.2 To mitigate the financial impact of a change event, an error or the provision of false or misleading information.

---

113 *Wellington International Airport Ltd and others v Commerce Commission* [2013] NZHC 3289. The amended determinations were notified in the Gazette on 27 November 2014.

114 A change event is a new, legislative or regulatory requirement implemented during the regulatory period and not explicitly provided for in the default price-quality path.

8.5 The 'catastrophic event allowance' is only applicable following a catastrophic event, while the 'reconsideration event allowance' is applicable to all other circumstances that result in a default price-quality path reconsideration.

8.6 Further details on the reasons for introducing these recoverable costs terms are provided in our reasons paper explaining the amendments we have made to input methodologies that apply to default price-quality paths.[115]

No additional compensation for demand risk for catastrophic events

8.7 The recoverable cost term excludes foregone revenue from the catastrophic event allowance that is assessed at the time of the price-quality path being reconsidered.[116] Our input methodologies approach means that distributors bear the demand risk of a catastrophic event from the time of the event until the reset of the path.

8.8 We have considered submissions on our draft decision that suggest that if distributors bear this demand risk then there should be ex ante compensation because the risk of a catastrophic event is asymmetric.[117] Submitters argue that ex ante compensation is required for asymmetric risk to ensure distributors have an expectation of a normal return.

8.9 We have not provided any additional compensation for this demand risk when setting the default price-quality paths. This is consistent with our decision for the Orion's customised price-quality path, and our approach when we amended input methodologies to introduce the catastrophic event allowance. [118] Amongst other things, we noted regulated suppliers (and their investors) are generally better placed to manage the risks of catastrophic events than consumers.

---

115 Commerce Commission "Input methodology amendments for electricity distribution services: Default price-quality paths" (27 November 2014), chapters 11 and 12.

116 Commerce Commission "Input methodology amendments for electricity distribution services: Default price-quality paths" (27 November 2014), paragraph 11.15–11.23.

117 Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 129; Unison Networks Limited "Submission on the Default Price-quality paths from 1 April 2015: Draft Decisions" (15 August 2014), paragraph 21 g; and Wellington Electricity Lines Limited "Draft Decision on 2015-2020 Default Price-quality Path" (15 August 2014), p.31.

118 Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013), paragraph C20; and Commerce Commission "Input methodology amendments affecting the default price-quality paths for electricity distributors" (27 November 2014), chapter 11.

8.10 We believe that to a diversified investor across a balanced portfolio, the demand risk associated with catastrophic events would be minimal. As outlined in these previous decisions we believe that this risk is small because:

8.10.1 To well-diversified investors, only the risks that affect all investments matter; the risks specific to just one investment can be expected to offset one another and are therefore of little consequence.[119]

8.10.2 Our analysis of the available data indicated that there was little impact on demand for New Zealand distributors overall following the Canterbury earthquakes.[120] Given that these earthquakes are amongst the worst natural disasters in New Zealand's history, we expect this situation to be typical for most catastrophic events that New Zealand distributors are likely to face.

8.10.3 The relatively minor impact on demand for New Zealand distributors overall means that a hypothetical investor diversified across New Zealand distributors is unlikely require additional compensation for demand risk associated with catastrophic events.

8.10.4 Additionally, by investing in a single sector (electricity distribution), the hypothetical investor mentioned above spreads its risk less than it could have by diversifying across a wider range of sectors. Diversifying more widely would further reduce the impact of demand risk.

8.11 Given the ability to diversify across a wide range of sectors we consider that the impact of a catastrophic event on individual distributor on the level of return and risk to a well-diversified investor is insignificant.

8.12 As a result we have not provided any compensation under the default price-quality price to cover demand risk associated with a catastrophic event.

8.13 Our approach recognises that it would not be appropriate to impose additional costs on consumers because a distributor's owners have chosen an ownership arrangement that precludes diversification. We do not think consumers should pay higher prices if distributor's owners choose not to diversify their investment.

---

[119] For example, the increased demand from people moving from Christchurch to other areas, or the benefits of an event such as the Rugby World Cup.

[120] Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013), paragraph B73–B97.

Option of a customised price-quality path

8.14 We also note as an alternative to the reconsideration of a default price-quality path, distributors also have the option to apply for a customised price-quality path.

8.15 The dates that a customised price-quality path may be submitted during the 2015-2020 regulatory period (other than following a catastrophic event) are set out in Table 8.1.

Table 8.1: Dates for proposing a customised price-quality path[121]

Calendar year	February window	May window
2015		Mon 4 May—Mon 11 May
2016	Mon 8 Feb—Mon 15 Feb	Mon 2 May—Mon 9 May
2017	Tue 7 Feb—Tue 14 Feb	Mon 1 May—Mon 8 May
2018	Mon 12 Feb—Mon 19 Feb	Mon 7 May—Mon 14 May
2019	Mon 11 Feb—Mon 18 Feb	

121 Following a catastrophic event, a customised price-quality path proposal may be made at any time during the 24 months following the event. However, no customised price-quality path proposals can be submitted in the 12 months before the end of a regulatory period.

Attachment A: Treatment of Orion New Zealand

Purpose of this attachment

A1 This attachment explains, and gives reasons for, our treatment of Orion New Zealand under this reset of the default price-quality paths.

Orion New Zealand scheduled to transition to default price-quality path on 1 April 2019

A2 On 1 April 2019, Orion New Zealand is scheduled to transition to the default price-quality path that is generally applicable to other distributors.[122] This means that Orion New Zealand will only be subject to the default price-quality path for one year before the end of the regulatory period.

A3 Under s 53X(2):

> The starting prices that apply at the beginning of the default price-quality path are those that applied at the end of the customised price-quality path unless, at least four months before the end of the customised price-quality path, the Commission advises the supplier that different starting prices must apply.

A4 In our draft decision, we explained that the starting price that applies to Orion New Zealand will be either:

A4.1 the price that applied in the final year of the customised price-quality path; or

A4.2 a price advised by the Commission four months before the end of the customised price-quality path.[123]

A5 Therefore, our final determination of the default price-quality paths to apply from 1 April 2015 only needs to specify Orion New Zealand's:

A5.1 Rate of change; and

A5.2 Quality standards.

---

[122] This is unless Orion New Zealand seeks another customised price-quality path.

[123] Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), paragraph A6.

Main aspects of final decision for the treatment of Orion New Zealand

A6 Generally, our final decision retains the draft decision approach to the treatment of Orion New Zealand under this reset of the default price-quality paths.[124] This includes:

A6.1 Not determining the starting prices for Orion New Zealand at this time; and

A6.2 Specifying a rate of change and quality standards to apply to Orion New Zealand when its customised price-quality path ends.

A7 However, we now consider that an earlier start to the consultation process for Orion New Zealand's transition to the default price-quality path than was proposed in the draft decision's Main Policy Paper is appropriate.[125]

Setting starting prices, a rate of change, and quality standards for Orion New Zealand

A8 We do not consider that there is any reason to move away from the draft decision approach to determining starting prices, a rate of change, and quality standards to apply to Orion New Zealand when its customised price-quality path ends.

A9 Submissions were received from the ENA and Orion New Zealand regarding the treatment of Orion New Zealand when its customised price-quality path ends. Submitters did not raise any concerns with the proposed approach on these matters during consultation.

A10 The ENA considered that Orion New Zealand was best placed to respond to the proposals.[126] Orion New Zealand agreed with the Commission's proposed approaches to determining starting prices, rates of change and quality standards when its customised price-quality path ends.

---

124 Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), Attachment A.

125 Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), paragraphs A18-A19.

126 ENA "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 171.

A11 Specifically, Orion New Zealand agreed that we did not need to determine its starting prices now.[127] When its customised price-quality path ends, Orion New Zealand also agreed that it should have the productivity-based rate of change and quality standards that are generally applicable to other distributors.[128]

A12 We are not required to set starting prices Orion New Zealand now for when its customised price-quality path ends. However, we consider that a rate of change and quality standards are 'generally applicable' elements of the default price-quality path, so do need to be determined now.[129]

A13 It is worth noting, however, that the rate of change will have no impact on Orion New Zealand. This is because Orion New Zealand will only be subject to the default price-quality path for one year before the next reset.[130] Attachment C outlines and explains our approach for determining the productivity-based rate of change that is 'generally applicable' to distributors.

A14 When its customised price-quality path ends, Orion New Zealand will:

A14.1 Have the productivity-based rate of change that is generally applicable to distributors (CPI + 0%); and

A14.2 Be subject to the quality standards that we determine before 30 November 2014, which will only apply between 1 April 2019 and 31 March 2020.

A15 Orion New Zealand will be subject to quality standards that are expressed in terms of the frequency and duration of interruptions, ie, SAIDI and SAIFI. The same metrics apply to other distributors under this reset of the default price-quality paths. The quality standards will only apply between 1 April 2019 and 31 March 2020, provided that Orion New Zealand does not apply for another customised price-quality path.

---

127 Orion New Zealand Limited "Submission on the proposed DPP for EDB's from 1 April 2015" (15 August 2014), paragraph 21.

128 Orion New Zealand Limited "Submission on the proposed DPP for EDB's from 1 April 2015" (15 August 2014), paragraph 38 and 45.

129 Commerce Act 1986, s 53X.

130 Orion New Zealand's submission on our 'process and issues' paper made this point. Orion New Zealand Limited "Submission on the default price quality path from 1 April 2015 for 17 distributors – process and issues paper" (30 April 2014), paragraphs 20-22.

A16 Orion New Zealand's SAIDI and SAIFI reliability limits to apply between 1 April 2019 and 31 March 2020 will be equal to those for the last year of its customised price-quality path, ie, 1 April 2018 to 31 March 2019. Notably, by that time, Orion New Zealand's reliability limits will have returned to within 25% of the limits in place before the earthquakes.

A17 Consistent with our draft decision, Orion New Zealand will be subject to the same revenue-linked incentive scheme for quality as other distributors, but with the target, cap, and collar set equal to its reliability limits, and 0% revenue at risk. This is because the effects on quality due to the Canterbury earthquakes are particularly uncertain. In any event, the incentive will only apply for a relatively short period.

A18 Submissions on our Process and Issues Paper generally agreed that our proposed treatment of Orion New Zealand regarding quality standards and the incentives that would apply was a pragmatic approach.[131] No alternative views were raised during consultation following our draft decision.

Process when the customised price-quality path comes to an end

A19 We now expect to begin consultation on the process for Orion New Zealand's transition to a default price-quality path in the latter part of the 2015 calendar year. Our draft decision indicated that we would begin this consultation by 31 March 2017.[132]

A20 Orion New Zealand submitted that it "would need to understand the process and parameters the Commission will use for our transition back to a [default price-quality path] and the process the Commission will use to set starting prices by January 2016".[133] Orion New Zealand considers this timeline is necessary so that it can make an informed decision on whether to apply for another customised price-quality path.

---

131 Orion New Zealand Limited "Submission on the default price quality path from 1 April 2015 for 17 distributors – process and issues paper" (30 April 2014), paragraphs 23-28; Electricity Networks Association "Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper" (30 April 2014), paragraph 12.

132 Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), Paragraphs A18-A19.

133 Orion New Zealand Limited "Submission on the proposed DPP for EDB's from 1 April 2015" (15 August 2014), paragraph 36.

A21 We agree that it is important that Orion New Zealand has a generous amount of time to prepare a quality proposal. This is because Orion New Zealand faces extraordinary circumstances caused by the Canterbury earthquakes, the ongoing recovery, and the fact that it is subject to the first customised price-quality path determined under Part 4 of the Act.

A22 We do not consider that a similar timeline will necessarily be appropriate in the future for Orion New Zealand or other distributors that may transition from a customised price-quality path to a default price-quality path. Starting this consultation process 36 months before Orion New Zealand's customised price-quality path ends is desirable because of its specific circumstances. It is also the first time that many of the transition issues will be considered.

Attachment B: Additional allowances for forecasting uncertainty

Purpose of attachment

B1 This attachment outlines and explains the analysis we relied on to determine whether an additional allowance is required for forecasting uncertainty.

Additional allowances reduce the probability of a customised price-quality path proposal

B2 As explained in Chapter 4, we may include an additional allowance to reduce the probability that a distributor will make a customised price-quality path proposal.[134]

B3 We determined whether an additional allowance was required by:

B3.1 Calculating the difference between the revenue that would be allowed using our forecasts of expenditure relative to the revenue that would be allowed based on the forecasts provided by each distributor; and

B3.2 Using the difference to determine whether a small increase in the starting price would meaningfully reduce the probability of a customised price-quality path proposal.

B4 In summary:

B4.1 An additional allowance is unnecessary if the distributor's forecasts imply that there is no probability of a proposal at this point in time, ie, the distributor's forecasts support our forecasts; and

B4.2 An additional allowance is inappropriate when the starting price would have to be increased significantly to have any meaningful impact on the probability of a customised price-quality path proposal.[135]

B5 Table B1 shows the results of modelling each distributor's revenue requirement using our forecasts and each distributor's own information. The difference between these two figures, assessed in present value terms over the regulatory period, gives a sense of the additional revenue that is indicated by the distributor's forecast.

---

134 The additional allowance reduces the probability of a proposal by increasing the prices that can be charged under the default price-quality path.

135 In these cases, the difference between our forecasts and the distributor's forecasts implies that there is significant uncertainty about the true amount of expenditure required.

Table B1: Difference in revenue that would be allowed based on distributor forecasts of expenditure ($m)

Distributor	Commission forecast	Distributor forecast	Difference
Vector	1,749.9	1,788.4	38.4
Powerco	1,087.1	1,117.1	30.1
Wellington Electricity	432.0	460.4	28.4
Eastland	104.0	119.5	15.6
Horizon Energy	95.5	99.8	4.3
Electricity Ashburton	144.2	147.5	3.4
The Lines Company	149.0	151.3	2.3
Alpine Energy	163.1	163.7	0.6
OtagoNet	108.1	108.1	0.1
Nelson Electricity	29.9	29.8	-0.2
Network Tasman	122.9	122.5	-0.4
Unison	436.5	436.1	-0.4
Top Energy	168.7	166.3	-2.4
Electricity Invercargill	59.0	56.4	-2.5
Aurora Energy	247.7	244.7	-3.0
Centralines	48.8	42.0	-6.8

B6 As we are unable to apply audit, verification or evaluation processes, we cannot assess whether the differences in Table B1 are due to inaccuracies in our forecasts, the distributor's forecasts, or both. Notably, however, distributors may have an incentive to bias their forecast, or rely on low risk assumptions.

No additional allowance if the distributor's forecasts imply a lower revenue allowance

B7 When the distributor's forecast implies lower starting prices than our forecasts, there is no justification to include an additional allowance.[136] This is because the distributor's forecast indicates that the distributor is unlikely to propose a customised price-quality path, because the distributor's forecasts support our forecasts.

No additional allowance if revenue must increase significantly to match distributor forecast

B8 The justification for introducing an additional allowance is weak when significant increases in revenue would be required to have any meaningful effect on the probability of a proposal. Consumers would benefit more from having the distributor's information taken into account through full audit, verification, and approval processes.

B9 For example, based on the distributor's forecast, up to $38.4 million of revenue may be required to avoid a proposal for a customised price-quality path. These costs are very high relative to the cost of making a proposal, including having all information taken into account through full audit, verification and approval processes.

Additional allowances may have been appropriate in some situations with small differences

B10 We recognised that an additional allowance may have been appropriate in some situations in which there was a small difference between the revenue required based our forecasts and the distributor's own forecast.

B11 In the case of small differences between the revenue required based on our forecasts, and the distributor's own forecasts, we used the formula derived in Attachment H of the November 2012 reasons paper to determine whether an additional allowance would be appropriate.

[136] We have not reduced the price limit in situations in which the distributor forecasts that less expenditure is required than our own forecasts.

B12 In performing these calculations, we made the following simplifying assumptions:

B12.1 The upper bound on the cost of a complex customised price-quality path proposal would be approximately $2.5m;[137] and

B12.2 The probability of any distributor making a proposal is 50%, when in practice the probability is likely to be far lower.

B13 As a result of our analysis, we considered that a small additional allowance would be appropriate for:

B13.1 Alpine Energy ($563,000, or 0.3% of revenue allowed over the period);

B13.2 OtagoNet ($62,000, or 0.1% of revenue allowed over the period); and

B13.3 The Lines Company ($101,000, or 0.1% of revenue allowed over the period).

B14 For Alpine Energy and OtagoNet, the practical effect of including these additional allowances is to set the price limits in a way that is consistent with relying entirely on the supplier's own forecasts.

[137] $2.5m is our view on the upper bound on the costs of a customised price-quality path, and is based on a relatively complex customised price-quality path proposal being made. For example, a proposal that is made in response to a catastrophic event, like an earthquake, and which may involve a significant amount of consultancy work to identify appropriate quality standards. In practice, the costs of a customised price-quality path proposal are likely to be far lower if the proposal is motivated by revenue set under the default price-quality path being insufficient to meet the distributor's particular circumstances.

Attachment C: Allowable rates of change in price

Purpose of this attachment

C1 This attachment outlines and explains our approach and decisions for setting the allowable rate(s) of change in price for distributors.

Determining the allowable rate of change in price

C2 As explained in Chapter 3, in each year of the regulatory period, we apply a cap to the allowable rate of change in the price of electricity distribution services, net of pass-through costs and recoverable costs. The rate of change is expressed in the form CPI–X%, where 'CPI' reflects general inflation, and X is a percentage differential known as the 'X-factor'.

C3 In determining the 'X-factor', we are required to determine a 'productivity-based' rate of change in price that is based on the long-run average productivity improvement rate of distributors. We may consider the long-run average productivity improvement rate achieved by distributors in New Zealand and/or comparable countries.[138]

C4 The productivity-based rate of change will apply to each distributor, unless it is necessary or desirable to set an alternative rate of change,[139] to minimise any undue financial hardship to the distributor or price shock to consumers.

[138] Refer: s 53P(6) of the Act.

[139] Refer: s 53P(8) of the Act.

Productivity-based rate of change

C5 Our final decision is to apply a productivity-based rate of change of 0% for the upcoming regulatory period. This decision is in part based on a study into the long-run average productivity improvement rate of electricity distributors in New Zealand, conducted by Economic Insights Pty Limited (Economic Insights).

C6 Our decision for the productivity-based rate of change differed to the recommendation of -1% by Economic Insights and Pacific Economics Group's recommendation of between -1.66% and -2.12%.[140] We decided to base our decision on specifications which better captured a wider range of outputs than the specification on which Economic Insights based its recommendation.[141]

C7 We have also considered that Economic Insights found only two instances where estimates of historic improvements in total factor productivity overseas were estimated to be negative, with the remaining estimates ranging from 0% to 1.5%.[142]

C8 Submissions generally suggested a greater reliance on the historic-based productivity assessment provided by Economic Insights and the Pacific Economics Group. However, we are mindful that these productivity estimates reflect past economic conditions which may not necessarily reflect future economic conditions.[143] Therefore while we have based or productivity decisions on historic information we have also taken a forward looking view.

---

140 Refer: Economic Insights "Electricity Distribution Industry Productivity Analysis: 1996–2013" (30 October 2014), p.37; and Pacific Economics Group "Productivity Trends of New Zealand Electricity Distributors" (June 2014), p.5.

141 A wider range of output measures generally lifted estimated historical productivity performance in Economic Insights analysis. We placed a higher weight on estimated historical productivity performance that included measures such as system capacity and ratcheted maximum demand as capex is an input as well as opex. We took into consideration that these wider output measures also included measures of customer demand, such as energy throughput and customer numbers, which we do not expect to grow as slowly over the next five years compared to the past ten years.

142 See Economic Insights "Electricity Distribution Industry Productivity Analysis: 1996–2013" (30 October 2014), p.30-31. We discuss the X-factor and allowable rates of change in price in Attachment C.

143 Past economic conditions were also considered for the 2010 initial reset of the default price-quality path. See Commerce Commission "Initial Reset of the Default Price-Quality Path for Electricity Distribution Businesses" (30 November 2009), paragraph 5.38 – 5.43.

C9 As part of the draft decision, we invited views on analysis by Economic Insights. For example, we sought views on:

C9.1 The most appropriate input and output specifications used to determine the productivity-based rate of change;

C9.2 The market conditions faced by the energy supply industry since 2007 and its consistency with the long-term trend; and

C9.3 Future expectations for demand growth over the forthcoming regulatory period.

C10 We received and considered a range of submissions that are addressed in a report by Economic Insights, which we have published alongside this paper.[144]

C11 We note Pacific Economics Group critiqued specific aspects of Economic Insights' draft report, and acknowledge the input provided to Economic Insights final report.[145]

Alternative rates of change to minimise price shocks

C12 We have set alternative rate of change when the increase in the price limit would otherwise exceed 5% in real terms. In addition, we have taken into account deferred revenue recovery when considering whether an alternative rate of change would be necessary or desirable.[146] This is because we are interested in the impact of our decision in aggregate on consumers, rather than any individual aspect, eg, the change in starting price.

C13 In the case of Eastland, an alternative rate of change of CPI+3% was sufficient to bring the initial change in the price limit to at or below 5% in real terms. By contrast, for Alpine Energy, Centralines, and Top Energy, the initial price adjustment remains above 5% in real terms unless the rate of change is set in a way that would mean that subsequent price adjustments would be larger than the initial adjustment. In these circumstances, we have set the rate of change such that it is broadly equal to the initial adjustment, ie, we have smoothed the price increases.

---

144 Economics Insights "Review of Submissions on Electricity Distribution Productivity" 4 November 2014.

145 Pacific Economics Group "Review of Economic Insights' Report *Electricity Distribution Productivity Analysis: 1996-2013"* (August 2014).

146 We applied claw-back for the 2012/13 year under s 54K(3) of the Act. Refer: Commerce Commission "Resetting the 2010–2015 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012), Chapter 7.

C14 In response to a similar approach being proposed at the draft decision stage, Genesis Energy suggested that the approach would result in an annual increase of around 8% per interconnection point on Alpine Energy's network.[147] Genesis Energy suggests a price increase of this magnitude may be a particular concern for residential retail consumers who might be less able to mitigate increased costs.

C15 The ENA and PwC observe that the 5% cap is lower than the caps that were considered for the 2012 reset.[148] Vector considers the 5% cap to be too low and may unduly delay recovery of a price increase. Vector considers 10% to be a reasonable threshold given distribution charges make up approximately one third of an end consumers bill.[149]

C16 The ENA observes a high rate of change can result in prices at the end of the regulatory period being both substantially higher than at the beginning and substantially higher than the underlying building blocks allowable revenue. This can result in a significant price step correction in the next regulatory period, which the ENA considers should be mitigated if possible. A potential mitigation is to increase the cap at the beginning of the period.[150]

C17 The ENA and PwC submitted that relevant distributors should be consulted on their preferred revenue recovery profile before an alternative X-factor is decided.[151] We note that all distributors had the opportunity to set out their preferred revenue recovery profile in response to the draft decision.

---

147 Genesis Energy "Cross-submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" 15 May 2014, p.1-2.

148 Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 67. and PwC "Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015 - Made on behalf of 19 Electricity Distribution Businesses" (15 August 2014), paragraph 36.

149 Vector "Submission on the Default Price-Quality Paths from 1 April 2015: Main Policy Paper" (15 August 2014), paragraph 115.

150 Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 67(b).

151 Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 68; and PwC "Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015 - Made on behalf of 19 Electricity Distribution Businesses" (15 August 2014), paragraph 38.

C18 Overall, we were not persuaded that there was sufficient reason to move away from the approach proposed in our draft decision. While we recognise that price increases will have an impact on particular consumers:

C18.1 The price increases appear justified based on an assessment of the distributor's costs; and

C18.2 Each distributor is able to help offset any impact on particular consumers or groups of consumers through its choice of pricing structure.

We invited evidence of undue financial hardship for suppliers

C19 We have not set alternative rates of change to minimise undue financial hardship to suppliers. This is because we are not aware of any evidence to suggest that distributors would face financial hardship as a result of our final decision.

C20 As part of our draft decision, we invited any distributor that expected the price adjustments would cause undue financial hardship to provide evidence to support that, which we expected should include evidence that:[152]

C20.1 The revenue adjustment would, or would be likely to, limit the distributor's ability to finance its reasonable investment needs and meet its debt repayments as they fall due; and/or

C20.2 It is not reasonable (and/or possible) for the distributor to address its limited ability to finance its reasonable investment needs and meet its debt repayments as they fall due by altering its behaviour.[153]

C21 As we did not receive any evidence from individual distributors, our view is that it is unlikely that a prudently financed distributor would face financial hardship on the basis of the figures indicated.

---

[152] The expenditure objective for customised price-quality paths provides guidance on what is meant by reasonable investment needs. Refer: *Commerce Act (Electricity Distribution Services Input Methodologies) Determination 2010*, (23 December 2010), clause 1.1.4.

[153] It may not be reasonable for a supplier to address its financial hardship by altering its behaviour if a change in behaviour would, on balance, have a negative impact on the efficient running of the business.

Impact of productivity-based rate of change on allowed revenue

C22 Irrespective of the way we set starting prices, the rate of change will affect the rate at which revenue is recovered during the regulatory period. All other things being equal, a higher rate of assumed productivity improvement, ie, the X-factor, will result in an overall lower rate of change, ie, CPI-X%, and therefore a lower rate of increase in revenue.

C23 As noted in the Process and Issues Paper, the effect of the productivity-based rate of change depends on whether we set starting prices by rolling over the prices that previously applied, or based on the current and projected profitability of each distributor. Because starting prices are based on the current and projected profitability of each supplier, the rate of change will not affect the amount of revenue the distributor can expect to recover over the regulatory period.

C24 This is because we use the rate of change when setting expected revenues equal to expected costs over the regulatory period. The rate of change will, however, affect the level of prices in particular years including at the end of the regulatory period.[154]

C25 The alternative available to us under the Act would have been to set starting price by rolling over the prices that previously applied. If we had adopted that approach, the rate of change would also have affected the amount of revenue the distributor can expect to earn over the regulatory period.

[154] It may therefore have a significant impact on the size of price changes at the end of each regulatory period.

Linkage to estimates of partial productivity

C26 Improvements in productivity associated with either operating expenditure or capital expenditure will reduce the amount of expenditure a distributor needs to provide the service. As set out in our Low Cost Forecasting Paper:

C26.1 We have taken expected changes in operating expenditure partial productivity into account when forecasting operating expenditure; and

C26.2 Our partial productivity assumption for operating expenditure is informed by evidence on past trends in productivity in New Zealand and overseas, as well as consideration of whether those trends are likely to continue in future.

C27 As part of our draft decision, we invited views on the productivity study undertaken by Economic Insights, which also included evidence relating to partial productivity for operating expenditure. Consistent with the assumption for overall productivity, we have assumed that partial productivity for operating expenditure will change by -0.25% per annum over the upcoming regulatory period.[155]

[155] As commented upon in submissions, the decision for operating expenditure partial productivity is most appropriately based on Economic Insights' specification consistent with our operating expenditure projection formula. Under the building blocks framework, there is no requirement for the same specification to be used to both base our decision on total factor productivity and operating expenditure partial productivity.

Attachment D: Treatment of assets purchased from Transpower New Zealand

Purpose of attachment

D1 This attachment clarifies our treatment of assets purchased from Transpower New Zealand (Transpower) under this reset of the default price-quality paths.

Distributors have requested clarification on treatment

D2 We noted previously that several distributors have requested clarification on the regulatory treatment of assets purchased from Transpower. This is because some distributors, which usually pay Transpower connection charges associated with these assets, have purchased, or are proposing to purchase, them outright instead.[156]

D3 The decisions related to our proposed treatment of Transpower asset purchases fall into several categories:

D3.1 The incentive mechanism that applies to purchases of Transpower assets;

D3.2 Our forecasts of asset purchases from Transpower for this default price-quality path;

D3.3 The extent to which purchases of Transpower assets affect service quality standards; and

D3.4 Our forecasts of additional operating and capital expenditure on purchased Transpower assets required over the default price-quality path period.

D4 We provide clarification of our decisions within each of these areas in turn.

Incentive mechanism applying to asset transfers from Transpower

D5 The input methodologies contain an incentive mechanism that applies to purchases of Transpower assets.

D6 In particular, distributors are allowed to recover, for a period of five years, the value of any transmission charges that are avoided by purchasing an asset from

[156] Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014), paragraph C2.

Transpower.[157] The ability to recover avoided transmission charges for five years after the transfer applies irrespective of the date of the transfer.

D7 In this reset, we have:

D7.1 deferred the development of any mechanisms that could reduce the unequal incentives to purchase Transpower assets over the period; and

D7.2 clarified the calculation of the Avoided Cost of Transmission recoverable cost.[158]

Deferral of any initiative to reduce the unequal incentives on Transpower asset purchases

D8 In our Process and Issues Paper, we explained how a distributor's incentive to purchase Transpower assets will change depending on the year in which the asset is purchased. We demonstrated the different incentive strengths a distributor can have to purchase these assets.

D9 We also noted that in principle it would be preferable to reduce or eliminate the incentives to purchase Transpower assets at a particular point in time during the regulatory period.[159]

D10 Following submissions on our Process and Issues Paper we outlined in the draft decision that it was not our priority to amend the incentive to correct for this issue before the setting of the default price-quality path. Any change would not have significant impact on distributor prices for the forthcoming period. We therefore proposed to defer any change until the next review of input methodologies.

D11 The ENA agreed with the decision to defer given the limited impact on the forthcoming reset and noted our intention to consider the issue further when input methodologies are the subject of the 7 year review.[160]

---

157 *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, clauses 3.1.3(1)(b) and 3.1.3(1)(e).

158 Distributors are allowed to recover, for a period of five years, the value of any transmission charges that are avoided by purchasing an asset from Transpower. The ability to recover avoided transmission charges for five years after the purchase applies irrespective of the date of the purchase. *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, clauses 3.1.3(1)(b) and 3.1.3(1)(e).

159 Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014).

160 Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 139.

Clarification of the calculation of the Avoided Cost of Transmission

D12 We outlined in the draft decision how there is significant uncertainty in calculating the avoided cost of transmission for the purpose of the incentive mechanism. This is particularly true in light of the ongoing Transmission Pricing Methodology review currently being undertaken by the Electricity Authority.

D13 The draft decision proposed that the avoided cost of transmission should be calculated as follows:

D13.1 The cost for the first year should be calculated by Transpower by running a 'counterfactual' pricing scenario in which the transferred assets are put back into their pricing system. The cost would then be based on the difference between the factual (without the assets) and counterfactual (with the assets) cases.

D13.2 The cost for years two to five should be the same cost as in year one, held constant in nominal terms.

D14 The ENA and others provided a number of reasons why, in their view, the draft decision approach was inappropriate.[161] These included:

D14.1 That it would not capture avoided interconnection charges as these rely on lagged data;

D14.2 Keeping the avoided cost of transmission charge constant would not reflect actual avoided costs of transmission over the 5 year incentive period;

D14.3 Some distributors have already purchased assets and it would be inappropriate to change the calculation of the incentive;

D14.4 It can cause complications for transactions that occur half way through a period; and

D14.5 An ex ante approval process can cause potential delays.

D15 Following submissions we have revised the determination of the default price-quality path to ensure the each of the two subcomponents of the transmission cost (connection charges and interconnection charges) are treated separately. Distributors will therefore be able to obtain a recoverable cost for a period of 5 years

[161] Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 142.

from the date at which each sub-component is avoided. This will not necessarily be same five year period.

D16 We also agree with submissions that it would be preferable not to change the calculation of the incentive after assets have been purchased. We therefore plan to grandfather the existing approach to calculating the avoided cost of transmission for assets that have been purchased prior to the start of the forthcoming default price-quality path.

D17 We also accept that the revised calculation for the incentive is likely to provide a value less consistent with the actual avoided costs of the transmission. However we think holding the incentive constant in nominal terms provides a significant benefit by increasing the certainty of the total value of the incentive.

D18 This greater certainty in the value of the incentive can help distributors and Transpower agree to asset transfers when it in is in the long-term interest of consumers. This is particularly relevant given the current review of transmission charging methodology.

D19 The revised calculation will also place a lower burden on Transpower, distributors and the Commission in calculating and reviewing the value of the incentive.

D20 We have also reverted to the previous approval process for determining the avoided cost of transmission to be consistent with the 2012 default price-quality path determination. Therefore there should be no additional delay due to an ex ante approval process.

D21 We do not agree that the revised calculation will increase complexity compared to the current approach in the event of a purchase part way through the year. The incentive is only available from the first assessment period after the asset has been purchased. Therefore there is no requirement to calculate avoided transmission charges that cover only part of a year due to a mid-year purchase.

D22 In addition any difference between incurred transmission charges and forecast transmission charges in the year of purchase would be taken into account as part of the pass-through balance approach.

Our forecasts of asset purchases from Transpower for this default price-quality path;

D23 Forecasts of assets purchased from Transpower inform the forecast value of commissioned assets. This in turn affects the value of the regulatory asset base both at the start and in each year of the regulatory period. Assets are added to the asset base in the year in which they are commissioned.

D24 In this context, asset purchases from Transpower can affect the return on and of capital that a distributor can expect to earn during the regulatory period, from:[162]

D24.1 The forecast value of the regulatory asset base as at the start of the regulatory period (ie, 1 April 2015); and

D24.2 The forecast value of any assets expected to be added to the asset base during the regulatory period.

D25 We have received information from distributors about past and future asset transfers from Transpower. This enables forecasts of total capital expenditure to be calculated net of any asset transfers and removes potential distortions from one-off asset purchases unlikely to be repeated.[163]

D26 This approach also allows us to provide any additional capital expenditure allowances for assets purchased from Transpower on a case by case basis.

Determining value of Transpower asset purchases as at the start of the regulatory period

D27 Ideally, the value of the regulatory asset base at the start of the regulatory period would be known when we set prices. Any asset transfers that occur prior to the start of the regulatory period would then be included.

D28 However, we do not know for certain which of the proposed asset transfers, and the value of those transfers, will take place before the start of the regulatory period. We only have data on actual asset transfers up to 2013/14 and therefore must rely on a forecast of the amount spent by each distributor purchasing Transpower assets over the period 2014/2015.

---

[162] The term ‘return on capital’ refers to an allowance for the cost of capital while the term ‘return of capital’ refers to an allowance for depreciation.

[163] Capital expenditure forecasts are discussed further in our companion paper covering our low cost forecasting approaches: Commerce Commission "Low cost forecasting approaches for default price-quality paths for electricity distributors from 1 April 2015" (28 November 2014), chapter 4.

D29 We have amended input methodologies to introduce a new recoverable cost (the 'capex wash-up').[164] The wash-up corrects for differences in the revenues that each distributor could expect to recover during the regulatory period as a result of changes between the forecast and actual value of commissioned assets in the year 2014/2015.

D30 The exact amount to be recovered would be determined once actual information is available for the year 2014/2015. Individual distributors will calculate this amount using the approach specified in the input methodologies.[165]

D31 Distributors then adjust the price path in the last four years of the regulatory period based on this amount. The adjustment will be checked through the compliance process.

D32 The mechanism is particularly useful for those distributors which forecast asset purchases in the year 2014/15. It enables us to include these assets in the price path prior to their purchase being confirmed with the certainty the prices will be corrected in the event that the assets are not purchased prior to the start of the regulatory period.

D33 The introduction of a capex wash-up was supported by a number of submissions who believed it was sensible to use the most accurate information as possible when setting price-quality paths.[166]

---

164 Commerce Commission "Input methodology amendments for electricity distribution services: Default price-quality paths" (27 November 2014), Chapter 7.

165 Electricity Distribution Input methodology Amendments Determination 2014 [2014] NZCC 31.

166 Examples include: Electricity Networks Association "Submission on proposed compliance requirements for the 2015-2020 Default Price-Quality Paths for electricity distributors" (29 August 2014), paragraph 47; and PwC "Submission to the Commerce Commission on Proposed Compliance Requirements for the 2015–2020 Default Price-Quality Paths for Electricity Distributors and Associated Input Methodology Amendments - Made on behalf of 19 Electricity Distribution Businesses" (29 August 2014), paragraph 20.

D34 In summary we have decided that:

D34.1 Transferred assets will be included in the value of the regulatory asset base as at the start of the regulatory period if the transfer had already occurred up to and including 2013/2014. These purchases will have been disclosed under the most recent information disclosure requirements.

D34.2 Asset transfers forecast by distributors to occur after 31 March 2014 but before the start of the regulatory period will also added to the regulatory asset base when determining its value as at the start of the regulatory period.

D34.3 Although we have no information about these purchases prior to the start of the default price-quality path in April 2015, once the actual value of commissioned assets is known, available distributors will make the appropriate adjustments to the price path using the capex wash-up mechanism.

Capital expenditure forecasts of Transpower asset purchases during the regulatory period

D35 We have previously described in the Process and Issues Paper and draft decision that we would not include forecast asset transfers that take place after 1 April 2015 in the regulatory asset base for this regulatory period. We consider this is consistent with the intent of the incentive provided by a distributor's ability to recover avoided transmission costs for 5 years following the purchase of a Transpower asset.

D36 It is also consistent with the approach taken in the Orion customised price-quality path decision.[167]

D37 This overall approach to forecast asset purchases that take place after the start of the regulatory period was supported by the ENA following our Process and Issues Paper.[168] However the ENA outline in their submission to the draft decision that there could be potential issues with recovering sufficient revenue to cover the costs of additional capital expenditure spent on the assets after the purchase has taken place.[169]

---

[167] Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013), Attachment M.

[168] Electricity Networks Association "Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper" (30 April 2014), paragraph 170.

[169] Electricity Networks Association "Submission on proposed default price-quality paths for electricity distributors from 1 April 2015" (15 August 2014), paragraph 154.

D38 We note this concern but consider that the intention of the incentive mechanism is to cover the costs of asset purchase and any subsequent capital expenditure on the transferred asset until the next regulatory reset. At the next reset any such expenditure will enter the regulatory asset base.

D39 Consistent with the low cost intent of a default price-quality path, the avoided cost of transmission incentive is a relatively unsophisticated incentive mechanism and this should also be taken into context.

D40 It was intended to provide a greater incentive for distributors to purchase assets from Transpower when that would be in the long-term interest of consumers. It was not intended to provide a certain return for additional capital expenditure on assets that are yet to be purchased.

The extent to which purchases of Transpower assets affect service quality standards

D41 As we have previously explained, the purchase of a Transpower asset may result in increasing interruptions on the distributor's network solely as a result of owning the asset.[170] This may:

D41.1 Have direct financial consequences for the distributor under the revenue-linked incentive scheme that is being proposed for the upcoming regulatory period; and

D41.2 Increase the chance of a breach of the quality path under the pass/fail regime.

D42 To avoid creating potentially undesirable incentives we have included an adjustment mechanism in the quality standards we use in setting quality paths for the expected impact of assets purchased from Transpower. This would be done with reference to the assets' historic reliability information as received from Transpower.[171]

---

[170] Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014), paragraph C22. Note that the number and duration of interruptions experienced by end consumers could remain unchanged.

[171] Commerce Commission "Default price-quality paths for electricity distributors from 1 April 2015 to 31 March 2020: Quality standards, targets, and incentives" (28 November 2014).

Forecasts of additional operating and capital expenditure required

D43 Assets purchased from Transpower may require additional expenditure in addition to the transaction cost, such as:

D43.1 Operating expenditure for operating and maintaining the asset; and

D43.2 Capital expenditure for maintaining the asset or increasing the asset's service potential.

Operating expenditure

D44 We noted in our draft decision that, consistent with the intent of the incentive provided through the recovery of the avoided cost of transmission, there would be no specifically identified allowance for operating expenditure associated with purchased assets.

D45 Operating expenditure associated with purchased assets which is not captured by the general forecasting approach should be funded via the additional revenue allowance provided by including the avoided cost of transmission as a recoverable cost.[172]

D46 Some submissions continue to suggest that an additional operational expenditure allowance should be included as part of the default price-quality path for these assets. For example the ENA, Eastland and PwC all submit that the operational expenditure allowance should be higher.[173]

D47 The recovery of the avoided cost of transmission can provide a significant incentive to purchase Transpower assets however it remains a relatively unsophisticated mechanism.

D48 We are not convinced that providing an additional allowance for operating expenditure associated with purchased Transpower assets is suitable under the low cost context of the default price-quality path. We therefore consider that relying on our generic operational expenditure forecasting approach in combination with the avoided cost of transmission incentive is the most appropriate approach.

---

[172] Distributors may treat as a recoverable cost the avoided transmission charge of that asset. They are able to obtain a recoverable cost for a period of 5 years from the date at which each sub-component of the transmission charge is avoided.

[173] Eastland Network "Default price-quality paths from 1 April 2015 for 17 electricity distributors" (29 August 2014), paragraphs 27–31; and PwC "Submission to the Commerce Commission on Proposed Default Price-Quality Paths for Electricity Distributors From 1 April 2015 - Made on behalf of 19 Electricity Distribution Businesses" (15 August 2014), paragraph 69.

D49 In reaching this decision we note that:

D49.1 No distributor has submitted that any forecast purchase is unlikely to proceed based on our approach to forecast operating expenditure in the draft decision; and

D49.2 Network Tasman suggest in their submission that any shortfall in operating expenditure could be covered by the avoided cost of transmission incentive "…we acknowledge the 5 year avoid cost allowance within recoverable costs under the IMs may provide adequate offset…"[174]

Additional capital expenditure

D50 For Transpower assets purchased up to and including the 2015[175], an allowance for forecast additional capital expenditure during the regulatory period associated with those assets has been provided. The amount of this additional expenditure is consistent with the forecasts provided by distributors.[176]

D51 This approach enables the recovery of the return on and of additional capital expenditure forecast to be spent on the purchased asset. This is consistent with the intention of the avoided cost of transmission recoverable cost outlined in the input methodologies.

D52 As part of this decision we also wish to make it clear that any avoided cost of transmission amount calculated under the grandfathered approach should not include the avoided costs of this additional capital expenditure.[177]

---

174 Network Tasman Limited "Submission to the Commerce Commission Concerning Electricity Distribution Services Default Price-Quality Path Draft Determination 2015" (15 August 2014), paragraph 8.

175 This assumes that appropriate assurance is given that a forecast purchase will go ahead.

176 Commerce Commission "Notice to supply information to the Commerce Commission under section 53ZD of the Commerce Act 1986" (13 August 2014).

177 Refer paragraph D16.

Transmission asset wash-up

D53 Two distributors (Eastland and Network Tasman) are forecasting the purchase of Transpower assets during the year 2014/15. Given the purchase of assets in the last year of a regulatory period cannot not yet be confirmed prior to the final decision on the price-quality path in the next regulatory period, we have introduced a transmission asset wash-up as part of the default price-quality path.[178]

D54 The transmission asset wash-up specifies the amount of revenue included in the default price-quality path that is associated with additional capital expenditure on the transferred assets. In the event that the forecast purchase does not take place prior to the start of the forthcoming regulatory period (1 April 2015), then the price path must be subsequently reduced.

D55 Any decrease in the price path needs to be consistent with the amount in present value terms specified for each distributor in the default-quality path determination. Any reduction would impact on prices in years 2 to 5 of the regulatory period.

D56 Submissions on the transmission asset wash-up were supportive with the ENA suggesting it was a pragmatic approach.[179]

---

178 Commerce Commission "Input methodology amendments for electricity distribution services: Default price-quality paths" (27 November 2014), Chapter 8.

179 Electricity Networks Association "Submission on proposed compliance requirements for the 2015-2020 Default Price-Quality Paths for electricity distributors" 29 August 2014, paragraph 51.

Attachment E: Compensation for demand side management initiatives

Purpose of this attachment

E1 This attachment provides information on the activities covered by the scheme and the compensation available. In particular this attachment covers:

E1.1 The broad scope of activities covered;

E1.2 The financial compensation available under the scheme; and

E1.3 Our response to other issues raised by submissions in relation to the energy efficiency and demand side management scheme.

E2 An accompanying Compliance Requirements Paper will clarify expectations of how the scheme will operate. This includes details of the process for having the amounts approved, the anticipated timelines and the principles we will apply in verifying the link between activities undertaken by the distributor and its foregone revenue due to those activities.

Broad scope of activities covered

E3 Castalia (on behalf of Vector) consider the activities should be defined as anything that may be considered energy efficiency or demand side management.[180]

E4 However, we have limited this broad definition to:

E4.1 Cases where distributors can demonstrate energy efficiency or demand side management purpose and intent; and

E4.2 Cases that exclude predominantly tariff based measures.

E5 We have provided a definition in the final determination that is broadly consistent with approach used in the similar D-factor scheme for the 2009 NSW distribution determination.[181] The text we have used is:[182]

> ….energy efficiency or demand side management initiatives, projects, or activities undertaken-
>
> (a) by or on behalf of the Non-exempt EDB, either independently or in conjunction with any other persons (including generators, retailers, and consumers); and
>
> (b) with the purpose and intent of reducing the costs of providing Electricity Distribution Services by altering the pattern of consumption of energy, the source of energy, or the use of the EDB's distribution system,
>
> but excluding any activities that are primarily tariff based.

E6 Improvements in energy efficiency and demand side management may come from a range of innovations. Therefore, it is appropriate to allow a consideration of a wide scope of potential solutions, with appropriate safeguards.

E7 Submissions were supportive of having a broad definition of activities covered by the scheme. The ENA suggested that:[183]

> … the key elements are that the initiative should have the purpose of reducing the cost of providing electricity lines services by changing the level or pattern of demand, the source of energy or the use of the network.

---

180 Castalia, “Providing a D-Factor Mechanism under the DPP Framework: Report to Vector”, (April 2014).

181 AER, “New South Wales distribution determination 2009–10 to 2013–14” (28 April 2009), Appendix K.

182 Electricity Distribution Services Default Price-Quality Path Determination 2015 [2015] NZCC 33, schedule 5A.

183 Electricity Networks Association "Submission on proposed compliance requirements for the 2015-2020 Default Price-Quality Paths for electricity distributors" (29 August 2014), paragraph 145.

E8 While Powerco suggested a slightly wider scope that did not necessarily require a reduction in network costs.[184]

Powerco suggests that an energy efficiency or demand side initiative for an EDB be an activity that achieves one of the following:

1) A reduction of the amount of electricity used to meet a consumer need (such as enabling switching to more energy efficient products or the substitution of energy used where that substitution will reduce peak loads and therefore the long run costs of the network);

2) A change to when electricity is used such that that change will reduce peak loads and therefore the long run costs of the network

E9 The ENA also suggested that we should use a definition broadly similar to that used by the Australian Energy Regulator (AER) in their D-factor scheme.

E10 All activities must have the consequence of reducing the ultimate cost of the network. We have not included Powerco's suggestion to include any activity that reduces the amount of electricity used to meet a consumer need as we feel this goes further than would be appropriate.

[184] Powerco "Submission on Proposed Compliance Requirements for the 2015-2020 Default Price-Quality Paths for Electricity Distributors" (29 August 2014), paragraph 57.

E11 The reasons for this treatment are that:

E11.1 Costs associated with energy efficiency and demand side management activities that do not result in lower network costs should not be borne by consumers of electricity distribution services. They may provide wider market benefits but they should be compensated through other means (e.g. retailers, government funding);

E11.2 Expanding the scope of the incentive to cover activities that do not necessarily reduce costs of the network would require greater compliance overheads in order to ensure the appropriate intent and purpose of any activity; and

E11.3 As noted by Pioneer and Right House, provision of energy efficiency and demand side management activities can be by parties other than the distribution businesses.[185] Expanding the scheme to cover activities that do not have a direct impact on network businesses could potentially provide distributors with an advantage in an unregulated area of the electricity sector.

E12 A number of submissions suggested that the exclusion of activities that are primarily tariff based should be lifted.[186]

---

185 Pioneer Generation "Cross submission – Proposed default price-quality paths for electricity distributors from 1 April 2015" 29 August 2014, p.4 and Right House "Cross- submission on the proposed default price-quality paths for electricity distributors from 1 April 2015 " (29 August 2014), p.2

186 For example, PwC "Submission to the Commerce Commission on Proposed Compliance Requirements for the 2015–2020 Default Price-Quality Paths for Electricity Distributors and Associated Input Methodology Amendments - Made on behalf of 19 Electricity Distribution Businesses" (29 August 2014), paragraph 42; and Unison Networks Limited "Submission on Proposed Compliance Requirements for the 2015-2020 DPP for Electricity Distributors" (29 August 2014), p.1.

E13 We do not consider it would be appropriate to include predominantly tariff based initiatives under the energy efficiency and demand side management scheme. On balance we have decided these initiatives should not be part of the scheme because:

E13.1 There exists a separate mechanism to restructure of tariffs under default price-quality path regulation. Adding a separate compensation scheme for tariff changes could undermine the intentions of our approach to price restructuring;

E13.2 The principles based approvals process was designed to cover non-tariff based investments. Extending the scheme to tariff based measures would increase compliance costs as there is the potential for larger levels of compensation and greater complexities in linking tariffs changes to quantity changes. This high cost approach is inconsistent with the design of the scheme which is intended to keep compliance requirements to a minimum; and

E13.3 Given the cautious approach we are taking to introducing this scheme we are keen to keep consistency with the D-factor scheme operated by the AER in NSW which specifically excluded tariff impacts.

E14 We also note that Castalia recommended that tariff based measures should be excluded in their report on how a demand side management scheme could work in New Zealand.[187] This was so the scheme could initially focus on non-tariff measures.

E15 We have excluded from the definition “activities that expand the distribution system or its capacity or which renew, repair, or maintain it, or that are primarily tariff based” which was included in the previous draft determination.[188] This is consistent with a submission from the ENA that suggested the exclusion of this definition.[189]

E16 We consider that the restriction provided in the draft determination is acceptable, given that we would not expect any activities to which renew, repair or maintain the network to reduce revenue unless there are also reductions in the quality of service. We would not therefore expect this type of investment to qualify for compensation for foregone revenue.

---

[187] Castalia Strategic Advisors “Review of Electricity Default Price-Quality Path Determination 2015 - Report to Vector” (August 2014), p.8.

[188] Commerce Commission "Electricity Distribution Services Default Price-Quality Path Draft Determination 2015" (20 October 2014), schedule 5A (1).

[189] Electricity Networks Association "Submission on the technical drafting of the Draft DPP Determination and IM amendments" (31 October 2014), paragraph 56–57.

E17 However given the cautious approach we are taking to introducing this scheme, we have decided to remove this restriction from the determination. We are keen to set up a workable compliance and approvals process by learning from experience following the scheme's introduction.

Financial compensation available under the scheme

E18 The energy efficiency and demand side management scheme helps address the issue around volume pricing previously identified by the ENA Working Group on energy efficiency and demand side management.[190] In particular, the issue is mitigated by providing compensation for foregone revenue. This is also consistent with the approach previously recommended by Castalia.[191]

E19 The mechanism only allows distributors to be compensated for the foregone revenue resulting from energy efficiency and demand side management initiatives. It does not compensate for additional operating or capital costs associated with the demand side management activities.

E20 Wellington Electricity made a submission that additional costs should be included.[192] However allowing compensation for additional costs would not be consistent with ensuring the energy efficiency initiatives provide a long-term benefit to consumers, as there may be a risk of double recovery of the costs for activities that qualify under the scheme but are also part of the regulated business.

E21 In particular, by avoiding the cost of additional investment in the network, the distributor would already have benefitted from the expenditure on energy efficiency investments.

E22 We have adopted a principles based approach to establishing the link between energy efficiency and foregone revenue. A credible link must be demonstrated between the activity and foregone revenue in order for the incentive to adequately promote energy efficiency and demand side management.

E23 However high costs of demonstrating and verifying such a link may hamper these objectives. A principles based approach that provides some discretion as to the level of scrutiny and information required offers an appropriate solution.

---

190 Electricity Networks Association (energy efficiency incentives working group) "Options and Incentives for Electricity Distribution Businesses to Improve Supply and Demand-Side Efficiency" (April 2014), p.vii.

191 Castalia Strategic Advisors "Providing a D-Factor Mechanism under the DPP Framework - Report to Vector" (April 2014), p.8.

192 Wellington Electricity "Cross-submission on DPP draft decision and low-cost forecasting approaches" (29 August 2014), p.28.

E24 The principles based approach was supported by submitters who realise it is a practical method for introducing the scheme, but also noted the Commission needs to be seen to be acting in "fair and reasonable" manner when applying the principles.

E25 Our approval process and the principles applied to the energy efficiency and demand side management scheme will be provided in an accompanying Compliance Requirements Paper.

The timing of financial compensation

E26 Under the energy efficiency and demand side management scheme distributors will recover foregone revenue two years after the activity. This allows time for our assessment and approval of the amount as applied for under the incentive scheme. The adjustment value will be corrected for the time value of money using the cost of debt.

E27 Compensation would be available for the duration of the demand side management initiative, when it occurs wholly within the regulatory period. Longer-term or permanent initiatives can obtain compensation until the next price reset. At the reset, the forecast of electricity demand would take into account of any reduction in demand volumes and the starting price will be adjusted accordingly.

Other Issues raised in submissions

E28 A number of submissions associated with the energy efficiency and demand side management scheme were received following the publication of the draft decision. We respond to these submissions below.

Impact on third parties

E29 We received cross submissions on the incentive scheme from Pioneer Generation and Right House. They were concerned with impact of the scheme on the third party providers of energy efficiency and demand side management activities.[193]

E30 They suggested that there should be a process by which the distributor converts any compensation received from the energy efficiency and demand side management scheme into a payment to third party providers of those services.

E31 The scope of activities eligible for compensation under the incentive scheme includes services provided by third parties. However we do not think it is appropriate for us to

[193] Pioneer Generation "Cross submission – Proposed default price-quality paths for electricity distributors from 1 April 2015" (29 August 2014), p.4; and Right House "Cross- submission on the proposed default price-quality paths for electricity distributors from 1 April 2015" (29 August 2014), p.2.

specify how this revenue should pass through to a third party provider any more than it would be appropriate to specify payment terms for other suppliers of services to the regulated businesses.

E32 Pioneer also submitted concerns about the impact on competitive parts of the electricity market. This is relevant because the benefits of some energy efficiency and demand side management measures will benefit both regulated and unregulated sectors of the electricity market.

E33 As noted in above we have restricted the ability to obtain compensation to activities which have an impact on the costs of the distribution network. This reduces the impact on the competitive areas of the electricity market. Compensation to third parties providing competitive services to the regulated distributors would need to come directly from those businesses.

All distributor's undertaking appropriate initiatives should be eligible

E34 Major Energy Users Group (MEUG) also submits that compensation under the energy efficiency and demand side management scheme should only be available to innovative activities or initiatives. It should not be a general compensation for activities that meet the definition in the default price-quality path determination.[194]

E35 Both the ENA and Powerco cross-submitted on MEUG's comment suggesting that their suggestion was inconsistent with 54Q.[195] Powerco suggest that MEUG submission misses the point as the scheme is intended to incentivise investment that would otherwise not have taken place due to the revenue impacts on distributors.

E36 The intention of the incentive scheme is to reduce issues associated with implementing energy efficiency and demand side management measures. These initiatives can involve already proven technologies. The creation of any innovative solutions would be a supplementary benefit from the incentive scheme.

E37 We therefore do not agree with MEUG's suggestion to limit the energy efficiency and demand side management scheme to innovative activities.

---

194 Major Electricity Users' Group "Proposed DPP for EDB from 1 April 2015" (15 August 2014), paragraph 16.

195 Electricity Networks Association "ENA cross-submission on responses to DPP consultation papers" (29 August 2014), p.2

Attachment F: Process we followed

Purpose of attachment

F1 This attachment describes our process for determining the reset of the default price-quality paths and the related amendments to the input methodologies.

Parallel consultation processes

F2 We conducted parallel consultation processes on the reset of the default price-quality paths and the amendments to the associated input methodologies, including the IRIS.[196]

F3 We have taken into account in each determination all relevant submissions received in both processes.

Processes for amending the input methodologies and resetting the default price-quality path

F4 Under s 53P(4) we were required to consult with interested parties in resetting starting prices, rates of change and quality standards for the reset of the default price-quality path. Under s 52Q we were also required to consult with interested parties on the other proposed changes to the default price-quality path.

F5 Under s 52V(1) we were required to publish a notice of our intention to amend the input methodologies. Under s 52V(2) we were required to publish a draft of the proposed amendment input methodologies, give interested parties a reasonable opportunity to give their views on the draft methodologies, and have regard to the any views received from interested parties within the timeframes set. We did not hold a conference under s 52V(2)(c).

F6 The tables that follow set out a number of the process steps involved as part of the consultation process.

[196] We have also separately consulted on amendments to the cost of capital input methodologies. Submissions from that process have not been expressly considered in these determinations.

Table F1: Process for resetting default price-quality paths and amending input methodologies

Date	Publication	Submission due date
	Preliminary phase	
30 April 2013	Notice of intention: Potential amendments to input methodologies for electricity distribution services, gas pipeline services, and Transpower (IRIS)	
6 September 2013	Proposed process – default price quality paths from 2015	20 September 2013
20 September 2013	Incentives for suppliers to control expenditure during a regulatory period: Process and issues paper (IRIS)	
29 April 2014	Notice of intention: Proposed amendments to input methodologies for electricity distribution services	
29 November 2013	Preliminary version of the financial model for electricity default price-quality paths from 2015 Accompanying paper	14 February 2014
12 December 2014	Question and answer session on the financial model	
17 February 2014	Signal of contents of information gathering request	
12 March 2014	Information gathering request	
24 March 2014	Process and issues paper: default price-quality paths from 1 April 2015	30 April 2014 (cross submissions by 15 May 2014)
2 May 2014	Workshop	
5 May 2014	Updated preliminary version of the financial model	
24 June 2014	Version of financial model applying draft IM amendments	

IM draft decision phase		
24 June 2014	Proposed amendments to input methodologies for electricity distribution services (Type 1)	18 July 2014
18 July 2014	Paper: Proposed amendments to input methodologies for electricity distribution services (Type 2) Draft: Proposed electricity distribution input methodology amendments 2014 (Type 2) Paper: Proposed electricity distribution input methodology amendments 2014 (IRIS) (plus models) Draft: Draft Incremental Rolling Incentive Scheme input methodology amendments 2014	29 August 2014[197] (cross submissions 12 September 2014)

[197] ENA applied for and was allowed a two week extension of the deadline and lodged submissions on 15 September 2014.

DPP draft decision phase		
4 July 2014	Main policy paper: Proposed default price-quality paths for electricity distributors from 1 April 2015 Companion paper: Low cost forecasting approaches for default price-quality paths Expert reports and models	15 August 2014 (cross submissions 29 August 2014)
18 July 2014	Companion paper: Proposed compliance requirements for the 2015-2020 default price-quality paths for electricity distributors Companion paper: Proposed quality targets and incentives for default price-quality paths from 1 April 2015 Draft: Electricity distribution services default price-quality path draft determination 2015 (plus models)	29 August 2014[198] (cross submissions 12 September 2014)
25 July 2014	Question and answer session on models	
13 August 2014	Information gathering requests	

[198] ENA applied for and was allowed a two week extension of the deadline and lodged submissions on 15 September 2014.

Process update papers	
10 October 2014	Process update paper: default price-quality paths for electricity distributors and associated input methodologies Process update paper: proposed amendments to the incremental rolling incentive scheme

DPP and IM updated draft and final consultation phase		
20 October 2014	How we propose to implement default price quality paths for electricity distributors Electricity Distribution Services Default Price-Quality Path Draft Determination 2015 How we propose to implement amendments to input methodologies for electricity distribution services: First and second type Draft Electricity Distribution Input Methodology Amendments Determination 2014 How we propose to implement amendments to input methodologies for electricity lines businesses subject to price-quality regulation: Incremental Rolling Incentive Scheme (IRIS) (plus workbooks) Draft Incremental Rolling Incentive Scheme Input Methodology Amendments Determination 2014	31 October 2014