

Proposed Default Price-Quality Paths For Electricity Distributors From 1 April 2015

Date: 4 July 2014

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Executive Summary

Purpose of paper

X1 We are seeking views on the default price-quality paths that we propose to put in place for 16 electricity distributors from 1 April 2015.¹ Details on how you can provide your views can be found in Chapter 10.

X1.1 Submissions are due by **15 August 2014**.

X1.2 Cross-submissions are due by **29 August 2014**.

X2 By providing your views on this paper, you will help inform our final decision on the default price-quality paths that will apply from 1 April 2015. Material provided outside of the timeframes shown may not be considered in reaching our final decision.

X3 Table X1 sets out an indicative timetable of our proposed process from here.

Table X1: Indicative timetable of process from here

Indicative date	Publication or event
18 July 2014	Draft determination and companion papers
25 July 2014	Question & answer session on models
2 August 2014	Information gathering request (if required)
10 October 2014	Updated determination for consultation on drafting
28 November 2014	Final determination

X4 In addition, prior to our final decision, we will be considering amendments to the input methodologies for default price-quality paths. We set out the timeframes for consulting on proposed amendments in Chapter 9.

¹ Orion New Zealand will remain subject to a customised price-quality path from 1 April 2014 until 31 March 2019. The proposed treatment of Orion New Zealand is set out in Attachment A.

Price-quality regulation of electricity distribution in certain areas

- X5 17 electricity distributors are subject to price-quality regulation under Part 4 of the Commerce Act 1986 ('Part 4'). Part 4 provides for regulation in markets in which there is little or no competition, and where there is little or no likelihood of a substantial increase in competition.
- X6 For these distributors, we are required to set limits on maximum price, and targets and incentives 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

- X7 The specific type of price-quality regulation that applies to the affected 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.²
- X8 The purpose of default/customised price-quality regulation is shown in Box X1.³

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

- X9 Consequently, we are required to use relatively low cost approaches when setting default price-quality paths. The biggest contributor to the costs of setting customised price-quality paths are audit, verification, and approval processes. For default price-quality paths, alternative techniques are necessary.

² Refer: s 52B(2)(c)(i) of the Act.

³ Refer: s 53K of the Act.

Proposed approaches explained in this paper

- X10 In this paper, we explain the approaches we propose to use 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.
- X11 The main components of the proposed default price-quality paths are:⁴
- X11.1 Price limits;
 - X11.2 Quality targets and incentives; and
 - X11.3 Other incentive mechanisms, eg, consistent with s 54Q of the Act.⁵
- X12 Overall, we are satisfied that the proposals 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

- X13 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:
- X13.1 Expressed net of costs that distributors have little or no control over, the price limits are fixed in advance.
 - X13.2 Separate allowances are provided for costs that distributors have little or no control over (referred to as ‘pass through costs’ and ‘recoverable costs’).⁶
- X14 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.

⁴ 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).

⁵ 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.

⁶ In Chapter 5, we address submissions relating to the recovery of pass through and recoverable costs.

Revenue expected net of pass through costs and recoverable costs

X15 If the proposals in this paper are implemented, the amounts that each distributor would be expected to earn, net of pass through costs and recoverable costs, are shown in Table X2. 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 X2: Revenue expected during the regulatory period (\$m)

Distributor	2016⁷	2017	2018	2019	2020	Total (PV)
Alpine Energy	30.9	34.8	39.1	44.1	49.7	162.3
Aurora Energy	56.6	58.4	60.4	62.5	64.7	250.3
Centralines	10.1	10.9	11.8	12.8	13.9	48.9
Eastland	22.7	24.0	25.3	26.9	28.5	105.0
Electricity Ashburton	32.8	34.4	36.0	37.8	39.7	149.3
Electricity Invercargill	14.6	14.9	15.2	15.6	16.0	63.1
Horizon Energy	22.0	22.7	23.4	24.2	25.0	97.1
Nelson Electricity	6.9	7.1	7.3	7.5	7.7	30.2
Network Tasman	28.7	29.5	30.3	31.2	32.1	125.8
OtagoNet	23.7	24.5	25.3	26.1	27.0	104.8
Powerco	256.5	263.1	269.9	277.5	285.2	1,119.8
The Lines Company	35.8	36.5	37.2	38.0	38.9	154.6
Top Energy	35.0	38.3	42.0	46.1	50.5	173.8
Unison	100.1	102.4	104.9	107.6	110.3	435.2
Vector	396.8	411.7	427.2	444.2	461.9	1,770.8
Wellington Electricity	100.5	103.2	106.0	109.1	112.3	439.7

⁷ The amount expected in 2016 is based on the Maximum Allowable Revenue that we propose to specify in the determination.

Additional amounts for certain distributors to compensate for shortfall in revenue

X16 In addition to the amounts shown in X15Table X2, for Alpine Energy, Top Energy, Centralines, and Unison Networks, we propose to:⁸

X16.1 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

X16.2 Provide 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).

X17 Table X3 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 X3: 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	+ 6.4m
Top Energy	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.6m	+ 2.7m
Centralines	+ 0.6m	+ 0.7m	+ 0.7m	+ 0.8m	+ 0.8m
Unison	+ 2.0m	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.6m

X18 We invite submissions on whether these amounts should be applied in full in the next regulatory period. The alternative would be to smooth the recovery over a longer timeframe, eg, over two regulatory periods. Such an approach may help minimise price shocks to consumers.

⁸ As explained in Chapter 5, we do not propose to provide 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 draft decision

- X19 Table X4 shows the adjustments implied by our draft decision, after taking into account transitional pricing arrangements arising under the November 2012 reset.
- X19.1 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.
- X19.2 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.
- X19.3 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.
- X20 Table X4 also shows that, to minimise price shocks for consumers on 1 April 2015, we propose to spread price increases over a number of years for the distributors denoted with an asterisk.

Table X4: Indicative adjustments to price limits⁹

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 limit¹⁰
Alpine Energy *	+ 13.5%	CPI + 10.0%
Top Energy *	+ 8.4%	CPI + 7.0%
Centralines *	+ 7.1%	CPI + 6.0%
Electricity Invercargill *	+ 5.2%	CPI + 0.5%
Eastland *	+ 4.9%	CPI + 3.5%
Horizon Energy *	+ 4.7%	CPI + 0.5%
Electricity Ashburton *	+ 3.5%	CPI + 2.0%
Powerco	+ 0.6%	CPI
Unison	- 0.6%	CPI
Vector	- 1.1%	CPI
The Lines Company	- 5.8%	CPI
Aurora Energy	- 6.5%	CPI
Nelson Electricity	- 8.6%	CPI
Wellington Electricity	- 13.2%	CPI
OtagoNet	- 13.4%	CPI
Network Tasman	- 18.1%	CPI

⁹ Table X4 does not show the effect on price changes of including any other pass through or recoverable costs, eg, transmission charges.

¹⁰ These figures refer to the price increase net of pass through costs and recoverable costs, but changes of a broadly similar magnitude could generally be expected if these amounts were 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

- X21 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 distribution prices for individual consumers.
- X22 Reasons for differences between changes in our price limits, and changes in distribution prices for individual consumers, include:
- X22.1 Pass through costs and recoverable costs vary from year to year, eg, changes in transmission charges;¹¹
 - X22.2 Electricity distributors may choose to rebalance their prices between different consumer groups, eg, residential, industrial, and commercial; and
 - X22.3 Electricity distributors may choose to rebalance the structure of their tariffs, eg, between fixed and variable charges.
- X23 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.
- X24 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.

¹¹ We currently expect the transmission charges will remain broadly constant in real terms, on average, across the country; however, the charges for specific regions may change as a result of changes in pricing methodology employed by Transpower New Zealand.

Proposed changes in price limits based on relatively low cost forecasts

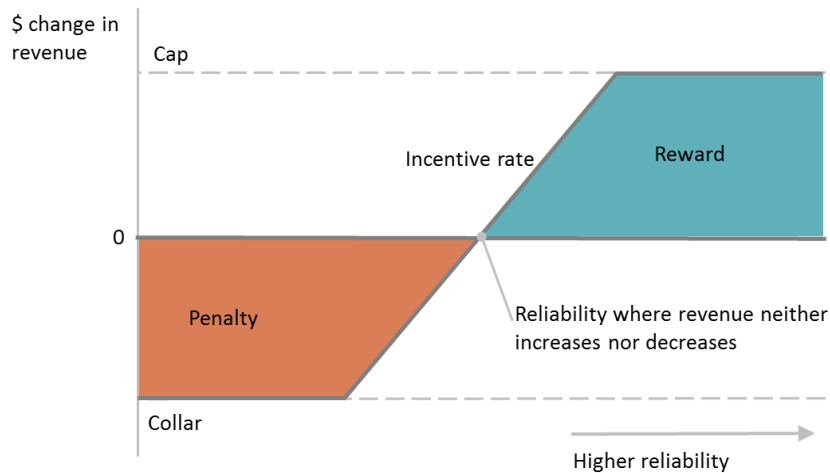
- X25 Consistent with the purpose of default/customised price-quality regulation, the proposed changes in the price limits are based on forecasts determined in a relatively low cost way.
- X25.1 Our proposed modelling of operating expenditure and revenue growth relies on independent forecasts that in our view are free of systematic bias, in either direction; and
- X25.2 Our proposed modelling of capital expenditure relies on distributor forecasts, including an uplift for changes in the price of inputs, but with limits on the maximum increases relative to historic levels.
- X26 The assumptions that we settle on may not reflect the particular circumstances of all distributors. Individual distributors would be invited to 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.
- X27 We have taken this relationship into account when we set the default price-quality path for each distributor. However, after weighing up the costs and benefits of including an additional allowance to account for forecasting uncertainty, we did not consider that an additional allowance would be appropriate for any distributor.¹²

Revenue linked to average reliability of network

- X28 The most notable change proposed in this paper is a more sophisticated approach to regulate quality. If the proposals are implemented, the ‘pass/fail’ limit on network reliability will be replaced by a scheme that links revenue to the average reliability of the network. In our view, this link will incentivise better outcomes over time.
- X29 As shown in Figure X1, under the proposed incentive scheme, a distributor’s revenue would be dependent on the average reliability of the network. If reliability was better than the target, then future revenues would be increased. Likewise, if reliability was worse than the target, then future revenue would be reduced.

¹² Attachment B provides further explanation of the logic that we relied on to determine these amounts. A mathematical explanation of our approach for calculating the 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).

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 ‘cap’. 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 ‘collar’.¹³
- X31 The size of the revenue reward or penalty, 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.
- 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.¹⁴
- X32 Revenue would increase and decrease by the same amount for the given reliability change—ie, the scheme is symmetric. Similar schemes elsewhere usually limit the amount of ‘revenue at risk’—ie, the maximum amount by which a suppliers’ revenue can go up or down depending on its performance.

¹³ There would be no revenue reward or penalty when a distributor’s reliability was equal to the target.

¹⁴ 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.

- X33 In this Chapter 6, we have proposed values for the following parameters:
- X33.1 Revenue at risk
 - X33.2 Targets for reliability
 - X33.3 Caps and collars for reliability; and
 - X33.4 Methodology for normalisation.
- X34 A companion paper on the proposed quality targets and incentives is scheduled for publication on 18 July.

Proposed incentives to control expenditure

- X35 Through an amendment to input methodologies, we propose to put in place an incentive to control capital and operating expenditure that has a constant strength in each year of a default or customised price-quality path.¹⁵ Amongst other things, applying a 'time consistent' incentive means that:
- X35.1 Distributors would no longer be exposed to the full cost of responding to external events that have a temporary impact on expenditure; and
 - X35.2 Distributors would be unable to boost profits by inflating costs in a particular year.
- X36 For this reset, we propose to apply a retention factor of 20% for capital expenditure, ie, distributors would retain 20% of each dollar of capital expenditure they save. A constant 20% 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 proposed retention factor would be 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.

¹⁵ The proposed amendment will be outlined and explained in a separate paper. It is worth noting that the incentive scheme we propose to introduce to control expenditure would only have an impact on allowable revenue in the following regulatory period, ie, 2020 to 2025.

Proposed incentives to meet our obligations under s 54Q

- X38 Following constructive engagement with an ENA Working Group on energy efficiency and demand side management, and the reduction of losses, we propose to:
- X38.1 Introduce a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives;
 - X38.2 Neutralise 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;
 - X38.3 Provide guidance in response to real world examples of instances in which the definition of ‘electricity lines services’ is unclear; and
 - X38.4 Minimise the impact of the approach we use to assess compliance with the price limit on the ability of distributors to transition to pricing structures that improve the incentives for demand side management.
- X39 We have also considered the options available for reducing 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 would result in an incentive strength that is consistent throughout the regulatory period.
 - X39.2 Setting a retention factor for capital expenditure at 20% would significantly reduce 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.

Reconsideration of a default price-quality path following a catastrophic event

- X42 The High Court has directed an amendment to the input methodologies to allow distributors to request that the default price-quality path be reconsidered in response to a catastrophic event. The terms of that amendment are being finalised.
- X43 In this paper, we outline and explain:
- X43.1 Our general approach under both default and customised price-quality paths, which is intended to share risks appropriately between distributors and consumers; and
 - X43.2 Our proposed approach to allowing recovery of additional costs through a recoverable cost term if a default price-quality path is re-opened following a catastrophic event.
- X44 In particular, our general approach is that, after a catastrophic event:
- X44.1 Distributors should be compensated for prudent additional net costs incurred before the price-quality path is reset;
 - X44.2 Distributors should be compensated for prudent additional net costs that are forecast to be incurred after the price-quality path is reset; and
 - X44.3 Distributors should be cushioned against changes in future demand, by factoring in up-to-date forecasts when the price-quality path is reset.
- X45 Distributors can also apply for a customised price-quality path if a catastrophic event occurs. In November 2013, for example, we determined a customised price-quality path for Orion New Zealand after the Canterbury earthquakes.

1. Introduction

Purpose of this paper

1.1 This paper outlines and explains the default price-quality paths that we propose to put in place from 1 April 2015.¹⁶ Details on how you can provide your views can be found in Chapter 10.

1.1.1 Submissions are due by **15 August 2014**.

1.1.2 Cross-submissions are due by **29 August 2014**.

1.2 By providing your views on this paper, you will help inform our final decision on the default price-quality paths that will apply from 1 April 2015.

Price-quality regulation of electricity distribution services

1.3 Part 4 of the Commerce Act 1986 ('Part 4') is one of the primary pieces of legislation for economic regulation in New Zealand. Part 4 provides for regulation in markets in which there is little or no competition, and where there is little or no likelihood of a substantial increase in competition.

1.4 Table 1.1 shows the electricity distributors that are subject to price-quality regulation under Part 4. For these distributors, we are required to set limits on maximum price, and targets and incentives for service quality. These 'price-quality paths' remain in force for a period of time known as the 'regulatory period'.

1.5 The type of price-quality regulation that applies to the distributors shown in Table 1.1 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.¹⁷

¹⁶ Orion New Zealand will remain subject to a customised price-quality path from 1 April 2014 until 31 March 2019.

¹⁷ Refer: s 52B(2)(c)(i) of the Act.

Table 1.1: 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 Lines Limited
Electricity Invercargill	OtagoNet Joint Venture	

Default price-quality paths due to be reset by 30 November 2014

- 1.6 By 30 November 2014, we are required to reset the default price-quality paths that apply to each distributor. These changes will generally take effect from the start of the next regulatory period (1 April 2015). However, Orion New Zealand will remain subject to a customised price-quality path until 31 March 2019.
- 1.7 In March 2014, we published a 'Process and Issues Paper' to seek input ahead of our draft decision. This paper was published following feedback from stakeholders about our last process for resetting default price-quality paths for electricity distributors, which ended in November 2012.
- 1.8 In the Process and Issues Paper, our view was that there would be little reason to depart from the analytical approaches relied on previously, unless new issues become apparent, or new information was available. Our existing approaches were tested through consultation, and are familiar to most of our stakeholders.
- 1.9 In response, stakeholder submissions identified several new issues, and provided new information, and alternatives for us to consider. We thank stakeholders for their input. We appreciated the opportunity to test our preliminary thinking before developing detailed proposals.

Incremental improvements to our existing approaches

- 1.10 The focus of this paper is on the high level aspects of our proposals, which generally reflect incremental improvements on our existing approaches. Since the Process and Issues Paper was published, we have considered stakeholder submissions, and updated our models to reflect our current thinking.
- 1.11 In general, our approaches are very similar to those used in November 2012, not least because we are required to re-apply the up-front rules, requirements and processes of regulation (collectively known as ‘input methodologies’). Amongst other things, input methodologies affect asset valuation, and the treatment of taxation.
- 1.12 The most notable change proposed in this paper is a more sophisticated approach to regulate quality. If the proposals are implemented, the ‘pass/fail’ limit on network reliability will be replaced by a scheme that links revenue to the average reliability of the network. In our view, this link will incentivise better outcomes over time.
- 1.13 Our proposed treatment of Orion New Zealand Limited 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.

Other published material

- 1.14 This paper outlines and explains the proposed default price-quality paths for each distributor; however, other published material includes:
- 1.14.1 Material that we will publish on our website alongside this paper; and
- 1.14.2 Proposed amendments to input methodologies.
- 1.15 An overview of this material is provided overleaf.

Material that we will publish on our website alongside this paper

- 1.16 Material that we will publish on our website on the same day as this paper includes:
- 1.16.1 A companion paper that explains our low cost forecasting approaches (‘Forecasting Paper’);
- 1.16.2 Models used in determining the proposed starting prices, and targets and incentives for service quality;
- 1.16.3 An independent report on productivity by Economic Insights Limited (Economic Insights); and
- 1.16.4 An independent report on econometrics by Professor Jeff Borland.

- 1.17 On 18 July 2014, we propose to publish on our website:
- 1.17.1 A companion paper on the proposed targets and incentives for service quality ('Quality Targets and Incentives Paper');
 - 1.17.2 Proposed drafting for the determination ('Draft Determination');
 - 1.17.3 A companion paper on compliance requirements ('Compliance Paper');
- 1.18 Chapter 10 provides full details on how you can provide your views on this paper and the accompanying material.

Proposed amendments to input methodologies.

- 1.19 Details about our proposed amendments to input methodologies can be found in Chapter 9.

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 4.¹⁸

Overview of default/customised price-quality regulation

- 2.3 In this section, we provide an overview of default/customised price-quality regulation. In particular, we explain:
 - 2.3.1 The purpose of default/customised price-quality regulation; and
 - 2.3.2 How default price-quality paths promote the purpose of Part 4.
- 2.4 We also explain the role of a customised price-quality path.

Purpose of default/customised price-quality regulation

- 2.5 The purpose of default/customised price-quality regulation is shown in Box 1.¹⁹

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

¹⁸ Introducing additional objectives is unnecessary, and may inadvertently lead to conflict with our statutory obligations. Additional objectives were proposed by Unison Networks. Refer: Unison Networks Limited “Submission on the Default Price-quality paths from 1 April 2015: Process and issues Paper” 30 April 2014, paragraph 13.

¹⁹ Refer: s 53K of the Act.

- 2.6 We have taken this purpose to mean that:
- 2.6.1 Default price-quality paths must be set in a relatively low cost way, and are not intended to meet all the circumstances that a distributor may face;²⁰ and
- 2.6.2 Customised price-quality paths must be tailored to the particular circumstances of an individual distributor.
- 2.7 The implication is that relatively low cost approaches are necessary when default price-quality paths are determined. The biggest contributor to the costs of setting customised price-quality paths are audit, verification, and approval processes. Consequently, alternative techniques must be used for default price-quality paths.

Default price-quality paths promote the purpose of Part 4

- 2.8 Default price-quality paths are intended to promote the purpose of Part 4. The 'Part 4 Purpose' is:²¹
- ...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.
- 2.9 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.
- 2.10 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.

²⁰ A variety of constraints apply to the way that default price-quality paths are set. Refer: s 53P of the Act.

²¹ 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.

- 2.11 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. The targets expected in future can also affect incentives to invest.
- 2.12 In this paper, we explain the approaches we have used to determine each part of the proposed default price-quality paths. For instance, we explain how and why we propose to set starting prices based on the current and projected profitability of each distributor, rather than rolling over existing prices.
- 2.13 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

- 2.14 A customised price-quality path is an option for a distributor that considers that an alternative price-quality path would better meet their particular circumstances.²² Figure 2.1 provides an overview of the proposal process.

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



²² A distributor can propose a customised price-quality path at any time except during the final year of the regulatory period.

- 2.15 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.
- 2.16 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. Consumers are therefore protected from opportunistic proposals by distributors.
- 2.17 The legislative framework also includes substantial safeguards for distributors. Most of the rules, requirements and processes for a proposal have been determined up-front, following more than two years of consultation. In addition, each distributor has a form of 'merit' appeal to the High Court for:
- 2.17.1 the input methodologies determination applying to price-quality paths;²³ and
 - 2.17.2 a customised price-quality path determination.
- 2.18 A customised price-quality path is therefore a valuable option that is not available to consumers if price limits are set too high.

Other regulatory influences on performance

- 2.19 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:
- 2.19.1 the Consumer Guarantees Act (including recent changes in regard to lines businesses);
 - 2.19.2 the Electricity Act 1992;
 - 2.19.3 power voltage regulation;
 - 2.19.4 voluntary guaranteed service levels; and
 - 2.19.5 electricity governance (connection of distributed generation) regulations.

²³ The input methodologies determined in December 2010 were the subject of extensive appeals.

2.20 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.²⁴

²⁴ 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 that we specify 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;

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; and

3.2.3 Distributors are required to disclose information about the methodology used to set prices for individual consumers or groups of consumers.

3.3 We explain each of these features in the sections that follow.

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. The costs that distributors have little or no control over are treated differently.

3.5 Expressed net of costs that distributors have little or no control over, 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.

3.6 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.²⁵ Examples include local rates and levies.

²⁵ 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

- 3.7 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 distribution prices for individual consumers.
- 3.8 Reasons for differences between changes in our price limits, and changes in distribution prices for individual consumers, include:
- 3.8.1 Pass through costs and recoverable costs vary from year to year, eg, changes in transmission charges;²⁶ and
 - 3.8.2 Electricity distributors may choose to rebalance their prices between different consumer groups, eg, residential, industrial, and commercial users; and
 - 3.8.3 Electricity distributors may choose to rebalance the structure of their tariffs, eg, between fixed and variable charges.
- 3.9 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.
- 3.10 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.

Distributors are required to disclose information about pricing methodologies

- 3.11 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.

²⁶ We currently expect the transmission charges will remain broadly constant in real terms, on average, across the country; however, the charges for specific regions may change as a result of changes in pricing methodology employed by Transpower New Zealand.

3.12 On behalf of the Electricity Authority, Castalia recently reviewed the pricing methodologies published by distributors between July and September 2013.²⁷ The review assessed the alignment of each distributor's pricing methodology with the information disclosure guidelines and voluntary pricing principles.

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

3.13.1 carry out a stocktake of what pricing methodologies are being used

3.13.2 help distributors understand regulatory expectations

3.13.3 explore whether regulatory arrangements can be improved.

3.14 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.

3.15 The Electricity Authority is currently also seeking feedback on proposals to improve transparency of electricity bills.²⁸ Amongst other things, the proposals would:

3.15.1 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

3.15.2 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.

3.16 Consultation on these proposals is due to close on Friday, 26 September 2014.

²⁷ Refer: Castalia, Review of Electricity Distribution Businesses' 2013 Pricing Methodologies, Report to the Electricity Authority, November 2013.

²⁸ Refer: Electricity Authority, Improving transparency of consumers' electricity charges: Consultation Paper, 24 June 2014.

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

Purpose of chapter

- 4.1 This chapter outlines and explains the price limits, expressed net of pass through and recoverable costs, that we propose to put in place from 1 April 2015 to 31 March 2020.

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

- 4.2 This section explains how we propose to 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.²⁹
- 4.3 Our proposals 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.³⁰

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 proposed modelling of operating expenditure and revenue growth relies on independent forecasts that in our view are free of systematic bias, in either direction; and
 - 4.4.2 Our proposed modelling of capital expenditure relies on distributor forecasts, plus an uplift for changes in the price of inputs, but with limits on the maximum increases relative to historic levels.³¹

²⁹ The price limit therefore takes the traditional regulatory form of 'CPI-X%', where X is a percentage differential known as the X factor.

³⁰ Refer: s 53P of the Act.

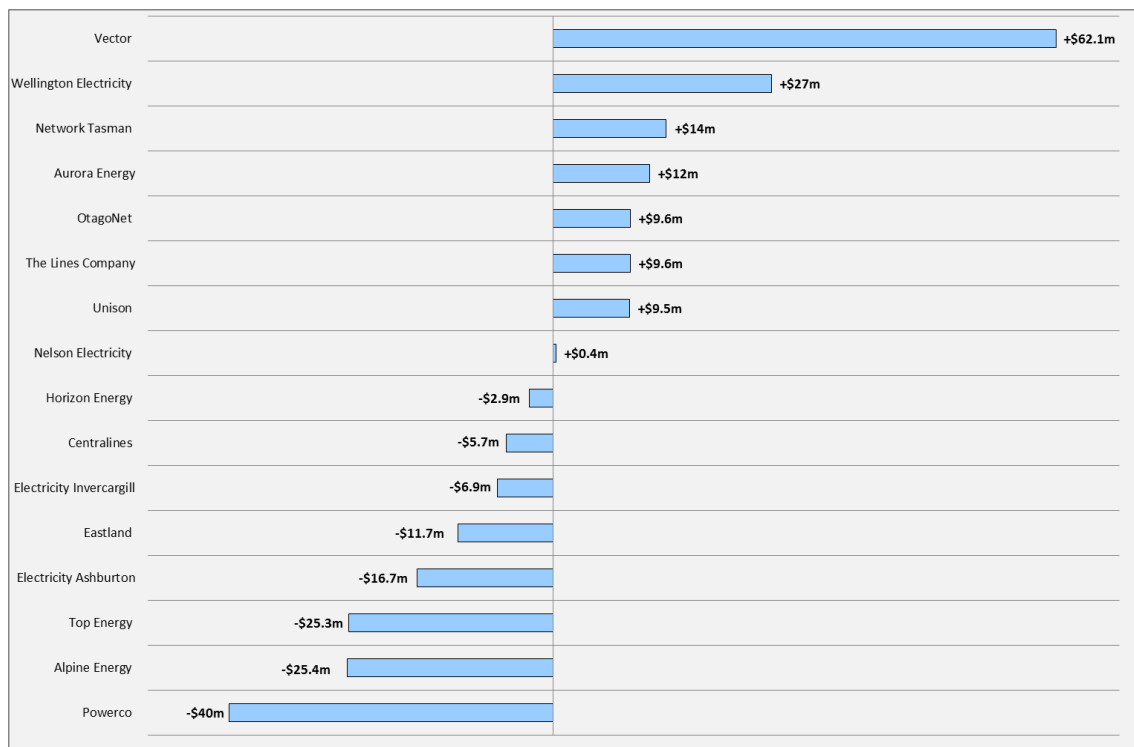
³¹ The proposed limit differs for network and non-network capital expenditure. For network capital expenditure, we propose that the limit would be 110% or 120% of the historic average, depending on the reliability of the forecast that we relied on from distributors in November 2012. For non-network capital expenditure, the proposed limit is equivalent to 200% of the distributor's historic average, unless non-network capital expenditure represents more than 5% of capital expenditure.

- 4.5 The assumptions that we settle on may not reflect the particular circumstances of all distributors. Individual distributors would be invited to 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.

Starting price based on current and projected profitability

- 4.6 We propose to determine starting prices based on the current and projected profitability of each distributor. The alternative would be 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.
- 4.7 To illustrate the reason for our proposed 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 \$40m to an over-recovery of \$62.1m. For the industry as a whole, the over-recovery is \$9.6m.

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



- 4.8 Price adjustments now appear 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.³²
- 4.9 The size of the adjustment to the price limit depends on a range of factors, including:³³
- 4.9.1 The extent to which the distributor has responded to the incentive to economise on costs;
 - 4.9.2 Movements in the industry-wide cost of capital since November 2009; and
 - 4.9.3 The alignment between costs and revenue in the final year of the current regulatory period.³⁴
- 4.10 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.³⁵ Figure 4.1 demonstrates that further price increases are now justifiable.

³² 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 be 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.

³³ 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.

³⁴ For example, price decreases now appear justified for Unison Networks, 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.

³⁵ 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.

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

- 4.11 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.
- 4.12 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 \$1.5m for a large distributor.
- 4.13 By the same token, we can only confirm whether higher prices proposed by a distributor are justifiable by applying audit, verification and evaluation processes. 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

- 4.14 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. However, we did not consider that an additional allowance would be appropriate for any distributor.
- 4.15 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 2012.³⁶

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

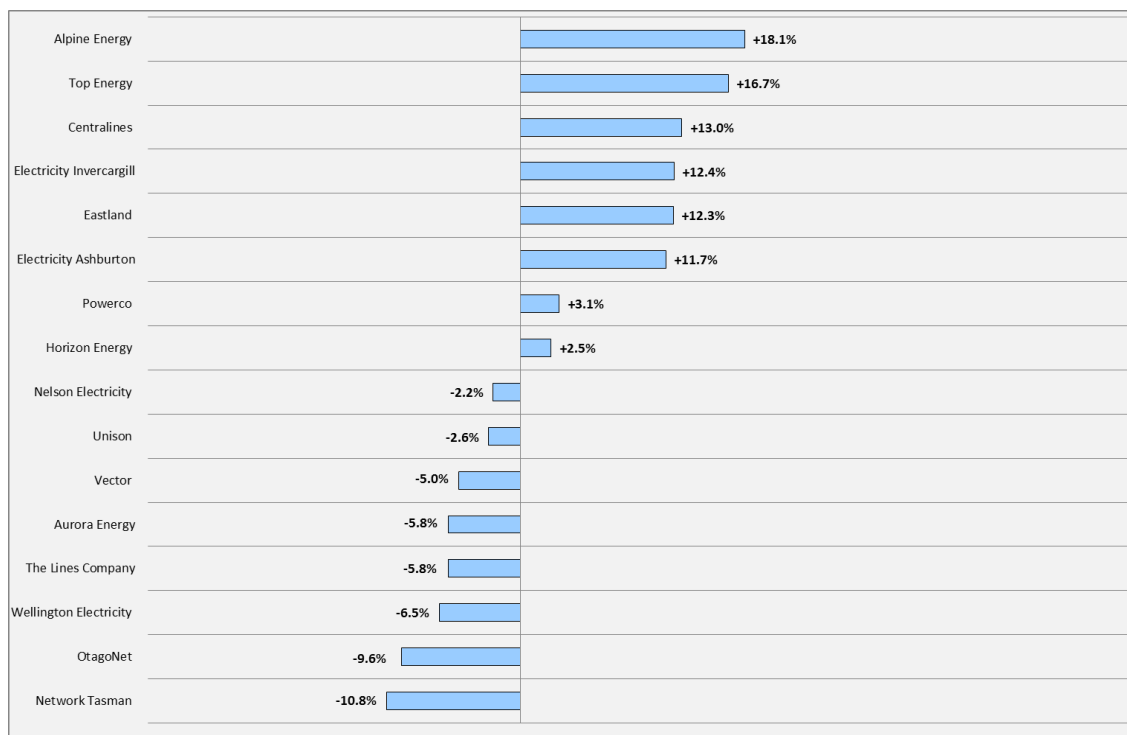
- 4.16 Under the Act, we are required to consider the price changes implied for each distributor when the rate of change in price is based on the long run rate of productivity improvement in the industry.³⁷ Attachment C explains how we arrived at a 'productivity-based rate of change' of CPI-0%.

³⁶ Refer: Commerce Commission "Resetting the 2010-15 Default Price-Quality Paths for 16 Electricity Distributors" (30 November 2012).

³⁷ Refer: s 53P(6) of the Act.

- 4.17 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.

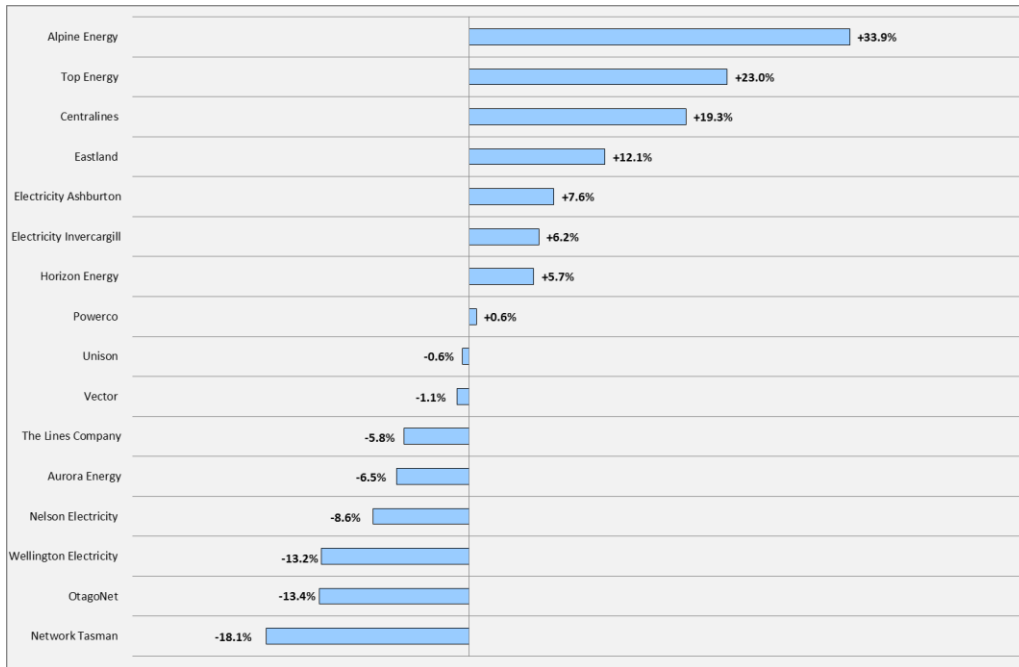
Figure 4.2: Adjustment to starting price with no alternative rate of change



- 4.18 Figure 4.3 shows the adjustments implied by our draft decision, after taking into account transitional pricing arrangements arising under the November 2012 reset.
- 4.18.1 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.
- 4.18.2 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.
- 4.18.3 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.

- 4.19 Chapter 5 provides further information about the amounts that we propose to include 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



- 4.20 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

- 4.21 In the case of the largest adjustments to starting prices, we propose to vary 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.
- 4.22 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:
- 4.22.1 Net of all pass through or recoverable costs; and
- 4.22.2 After taking into account the aspects of our November 2012 decision that are listed in paragraphs 4.18.1 to 4.18.3, but net of any other pass through or recoverable costs.

- 4.23 As explained in Attachment C, we only propose to vary 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 proposed to minimise price shocks for consumers for the distributors denoted with an asterisk in Table 4.1.
- 4.24 The alternative rates of change we propose are as follows:
- 4.24.1 Alpine Energy: CPI+10%
 - 4.24.2 Top Energy: CPI+7%
 - 4.24.3 Centralines: CPI+6%
 - 4.24.4 Eastland: CPI+3.5%
 - 4.24.5 Electricity Ashburton: CPI+2%
 - 4.24.6 Electricity Invercargill: CPI+0.5%
 - 4.24.7 Horizon Energy: CPI+0.5%
- 4.25 The practical effect of varying the rate of change is to defer price increases until later years of the regulatory period.
- 4.26 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.³⁸ This treatment avoids a situation in which subsequent price adjustments would be larger than the initial price adjustment. It is also based on the premise that no revenue recovery should be deferred to subsequent regulatory periods.

³⁸ 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 if alternative rates of change are applied

Distributor	Estimate of initial change in price limit after transitional aspects of November 2012 decision are taken into account
Alpine Energy *	+ 13.5%
Top Energy *	+ 8.4%
Centralines *	+ 7.1%
Electricity Invercargill *	+ 5.2%
Eastland *	+ 4.9%
Horizon Energy *	+ 4.7%
Electricity Ashburton *	+ 3.5%
Powerco	+ 0.6%
Unison	- 0.6%
Vector	- 1.1%
The Lines Company	- 5.8%
Aurora Energy	- 6.5%
Nelson Electricity	- 8.6%
Wellington Electricity	- 13.2%
OtagoNet	- 13.4%
Network Tasman	- 18.1%

Revenue expected net of pass through costs and recoverable costs

4.27 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, if starting prices are adjusted based on current and projected profitability.

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

Distributor	2016³⁹	2017	2018	2019	2020	Total (PV)
Alpine Energy	30.9	34.8	39.1	44.1	49.7	162.3
Aurora Energy	56.6	58.4	60.4	62.5	64.7	250.3
Centralines	10.1	10.9	11.8	12.8	13.9	48.9
Eastland	22.7	24.0	25.3	26.9	28.5	105.0
Electricity Ashburton	32.8	34.4	36.0	37.8	39.7	149.3
Electricity Invercargill	14.6	14.9	15.2	15.6	16.0	63.1
Horizon Energy	22.0	22.7	23.4	24.2	25.0	97.1
Nelson Electricity	6.9	7.1	7.3	7.5	7.7	30.2
Network Tasman	28.7	29.5	30.3	31.2	32.1	125.8
OtagoNet	23.7	24.5	25.3	26.1	27.0	104.8
Powerco	256.5	263.1	269.9	277.5	285.2	1,119.8
The Lines Company	35.8	36.5	37.2	38.0	38.9	154.6
Top Energy	35.0	38.3	42.0	46.1	50.5	173.8
Unison	100.1	102.4	104.9	107.6	110.3	435.2
Vector	396.8	411.7	427.2	444.2	461.9	1,770.8
Wellington Electricity	100.5	103.2	106.0	109.1	112.3	439.7

4.28 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 would earn more than the amounts shown if billed quantities grow faster than our assumptions, and vice-versa.

³⁹ The amount expected in 2016 is based on the Maximum Allowable Revenue that we propose to specify in the determination.

5. Allowances for pass through and recoverable costs

Purpose of chapter

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

Ability to recover pass-through and recoverable costs

- 5.2 In principle, distributors should be able to recover pass-through and the allowed recoverable costs in full. This is because 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.⁴⁰
- 5.3 In practice, however, two issues make full recovery problematic. Both of these issues were identified in the Process and Issues Paper, and were recognised in stakeholder submissions.⁴¹
- 5.3.1 First, distributors have difficulty forecasting the amounts required to cover pass through and recoverable costs.
- 5.3.2 Secondly, the recovery of the amounts required to cover pass through and recoverable costs are associated with some degree of volume risk.
- 5.4 We invited views on the materiality of these issues, and the general view appears to be that forecasting uncertainty is the greater of the two concerns. Powerco and Vector both noted that distributors can manage an element of volume risk, eg, by modifying the way they charge to recover these costs.⁴²

⁴⁰ Genesis Energy argued that full pass through of costs removes any incentive for distributors to ensure that any cost increases are justified. We invite views on the materiality of this issue. Refer: Genesis Energy “Cross-submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper” 15 May 2014, pp.1–2.

⁴¹ Refer, for example: Wellington Electricity Lines Limited “Submission on issues paper on 2015-2020 Default Price-quality Path” 30 April 2014, p.15-16; Electricity Networks Association “Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper” 30 April 2014, paragraphs 111-118.

⁴² Refer: Powerco “Submission on Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper” 30 April 2014, paragraph 89; Vector “Cross-submission DPP Issues Paper” 15 May 2014, paragraph 4.

Suggestions on how to improve the compliance requirements

- 5.5 In response to our Process and Issues Paper, distributors suggested a variety of solutions to the issues identified above. In particular, we received suggestions from the ENA, and from Vector. We are grateful to both parties for suggesting options for us to consider. A number of submitters supported Vector's proposal.
- 5.6 During consultation on this paper, we intend to publish a separate 'Compliance Paper' to outline and explain the compliance requirements for the default price quality path. That paper will cover a number of matters, including the formula we propose to use to assess compliance with the limit on maximum price.
- 5.7 In the Compliance Paper, we will explain our reasons for preferring a modified version of Vector's proposed approach. That modified approach would effectively take the form of revenue control for transmission charges. For all pass-through costs and recoverable costs that are not transmission charges, we prefer to apply the approach applied to gas pipeline services, namely an 'ascertainable costs' method.
- 5.8 The Compliance Paper will also invite suggested wording for the drafting of certain parts of the determination. We welcome suggested drafting from interested parties to enable us to implement these changes.
- 5.9 Proposed drafting of an amendment to the input methodologies will also be provided alongside the draft determination.

Amounts due to distributors to compensate for shortfall in revenue

- 5.10 In the Process and Issues Paper, we noted that 5 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 sets out our proposed approach to providing an uplift to revenue 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:⁴³

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 two 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 would be 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 two 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 propose to introduce a new one-off recoverable cost term to implement this revenue uplift. On 18 July 2014, we intend to publish a draft amendment to input methodologies which, if implemented, would introduce a suitable term.

⁴³ We have calculated the amounts shown using the approaches proposed in the Process and Issues Paper. We invite distributors to identify whether the amounts shown are consistent with their understanding.

- 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	+ 6.4m
Top Energy	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.6m	+ 2.7m
Centralines	+ 0.6m	+ 0.7m	+ 0.7m	+ 0.8m	+ 0.8m
Unison	+ 2.0m	+ 2.1m	+ 2.3m	+ 2.4m	+ 2.6m

- 5.17 We invite submitters to indicate whether the amounts should be applied in full in the next regulatory period. The alternative would be to smooth the recovery over a longer timeframe, eg, over two regulatory periods. Such an approach may help minimise price shocks to consumers.
- 5.18 In response to our Process and Issues Paper, both Alpine Energy and Unison Networks submitted that claw-back amounts should be calculated by using the cost of capital to adjust for the time value of money, rather than at the cost of debt. In particular:
- 5.18.1 Unison Networks submitted that the recovery of the claw-back amounts was subject to volume risk that was not compensated for by the cost of debt; and
- 5.18.2 Alpine Energy submitted that, by staggering price increases over multiple regulatory periods, we had introduced a “systematic (aggregate)” risk on Alpine Energy’s ability to recover its claw-back amount, with the risk arising from market structure, regulatory uncertainty, international economic forces, and acts of nature.

- 5.19 Similar submissions were considered at the time we reset prices in November 2012, and we remain of the view that the cost of debt is the appropriate rate to use. For example, as noted by Vector in its cross-submission on the Process and Issues Paper:⁴⁴
- 5.19.1 In the current regulatory period, it is possible to significantly increase the certainty of recovering claw-back amounts by modifying the pricing approach; and
- 5.19.2 In the next regulatory period, the risk associated with the recovery of claw-back amounts will be reduced even further (relative to the risk associated with general revenue recovery), provided we implement one of the proposed approaches for reducing the volume risk associated with the recovery of recoverable costs.
- 5.20 In addition, 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.

Claw-back amount for The Lines Company

- 5.21 For The Lines Company, we do not propose to provide for recovery of 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.
- 5.22 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.

⁴⁴ We also note that any demand risk that occurs, only occurs in the year the amounts are recovered. There is no demand risk in the years that the amounts are accruing.

- 5.24 The amount of 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 would therefore appear to be a pragmatic resolution to the issue. Alternatively, we could consider re-opening the current default price-quality path to include claw-back in 2015. We invite submissions on this point.
- 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.⁴⁵

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

⁴⁵ 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.

- 5.27 We are currently in the process of assessing whether the amounts shown are consistent with our expectations. We will contact distributors in due course in the event of any discrepancies being detected.

6. Targets and incentives for service quality

Purpose of chapter

- 6.1 This chapter outlines and explains the proposed targets we set as the quality standards and the associated incentives for quality of service. In particular, we explain:
- 6.1.1 How allowable revenue would depend on the reliability of the network; and
 - 6.1.2 How the parameters for a revenue-linked quality incentive scheme would be set, eg, targets, caps and collars for reliability.
- 6.2 Detailed analysis regarding the proposed targets and incentives for service quality will be provided in our companion paper on quality targets and incentives.

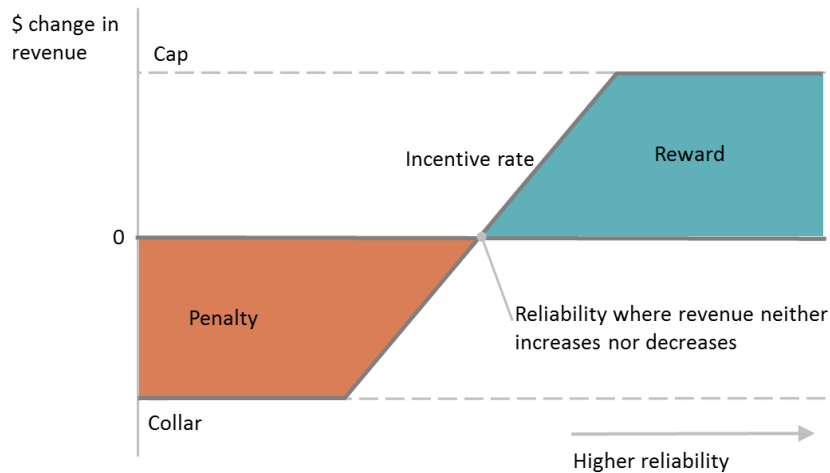
Revenue linked to average reliability of network

- 6.3 Under the proposed incentive scheme, a distributor's revenue would be dependent on the average reliability of the network. If reliability was better than the target, then future revenues would be increased. Likewise, if reliability was worse than the target, then future revenue would be reduced.
- 6.4 We have focussed on reliability because it is often found to be the aspect of quality that is most valued by consumers.⁴⁶ For example, the 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.⁴⁷
- 6.5 As discussed in the Process and Issues Paper, the proposed incentive scheme would apply to both the average frequency (SAIFI) and duration (SAIDI) of interruptions. Figure 6.1 provides an example of how a revenue-linked incentive scheme would operate in practice.

⁴⁶ The ENA notes that commercial consumers place more importance on the duration and number of interruptions than residential customers.

⁴⁷ System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI).

Figure 6.1: Example of an incentive scheme that links revenue to network reliability



- 6.6 Under the proposed incentive scheme the revenue a distributor receives as a reward for outperforming the reliability target increases up to a maximum reliability level known as the ‘cap’. The maximum penalty a distributor receives from underperforming the reliability target is also subject to a limit that corresponds to a level of reliability known as the ‘collar’.⁴⁸
- 6.7 The size of the revenue reward or penalty, 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.
- 6.7.1 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.
- 6.7.2 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.⁴⁹
- 6.8 Revenue would increase and decrease by the same amount for the given reliability change—ie, the scheme is symmetric. Similar schemes elsewhere usually limit the amount of ‘revenue at risk’—ie, the maximum amount by which a suppliers’ revenue can go up or down depending on its performance.

⁴⁸ There would be no revenue reward or penalty when a distributor’s reliability was equal to the target.

⁴⁹ 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; for example, where a distributor underperforms below the collar. We will not take enforcement action where a distributor’s underperformance is between the target and the collar.

Linking revenue to reliability will help improve incentives

- 6.9 A revenue-linked incentive for reliability will provide better incentives for each distributor to:
- 6.9.1 Understand the cost-quality trade-off on their network; and
 - 6.9.2 Manage reliability levels recognising the costs and benefits to consumers.⁵⁰
- 6.10 In order to maximise its economic return a distributor will be incentivised to improve or maintain its 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 reward provided (or penalty avoided) for the expected outcome in reliability.
- 6.11 The proposed incentive scheme will also encourage a distributor to take action to deliver a level of reliability that better reflects consumer demands. For example, the reward and penalty provided by the incentive rate could depend on the characteristics of the network and, potentially, consumer demands.⁵¹
- 6.12 We recognise that, in the short term, a distributor may not be able to control all the determinants of reliability. For example, a distributor may have limited control over the number of interruptions caused by extreme weather. However, the distributor will have more control over how long it takes to resolve each outage.
- 6.13 A benefit of a revenue-linked incentive scheme is that it helps reduce uncertainty for distributors and consumers. Distributors and consumers will likely have more certainty on how the Commission will assess and enforce compliance with reliability standards and other quality measures.⁵² The financial outcome of a distributor's deviation in quality from the quality target will be calculable year to year.

⁵⁰ These benefits generally appear to be recognised by the ENA working group on quality of service.

⁵¹ Whether a distributor is incentivised to provide a level of reliability that reflects consumer demands will depend on the parameter settings of the mechanism.

⁵² We also expect there to be limited, if any, increase in compliance costs for distributors, and a reduction in the amount of resources the Commission has to dedicate to assessing compliance with the quality path.

Improvement on existing 'pass/fail' approach

- 6.14 In our view, a revenue-linked quality scheme would represent an improvement on the existing approach, under which enforcement action may be taken if a distributor exceeds the reliability limit for any two out of three years.⁵³ A distributor does not receive a financial reward for having a greater reliability than the reliability limit. The existing approach is therefore frequently described as a 'pass/fail' approach.
- 6.15 The ENA quality of supply and incentives working group and other submissions generally support moving to a more incentive based approach to the quality standard.⁵⁴
- 6.16 The reliability limit was set with reference to performance from 2005 to 2009, with an allowance included for sampling variability. Broadly, the allowance was equal to one standard deviation from the mean during this 'reference period'. This allowance:
- 6.16.1 Significantly reduced the likelihood of wrongly identifying a worsening in underlying reliability when in fact there was no deterioration (ie, a false positive); but
 - 6.16.2 Increased the likelihood that underlying reliability may materially deteriorate without being non-compliant with the quality standard.
- 6.17 In addition, we have identified a number of other weaknesses with the existing approach. We discussed the adverse incentives in the Process and Issues Paper. For example, the use of a two out of three year assessment rule may have provided incentives for distributors to exceed the reliability limit once but not two times in a row.

⁵³ Average duration and frequency of interruption measures are susceptible to variation resulting from extreme events and natural variability. Without measures to mitigate these factors, quality breaches may occur despite there being no material deterioration in underlying reliability performance. As a solution we used buffers to calculate the reliability limit, normalisation to adjust for maximum event days and a multi-year assessment to reflect performance over time and further mitigate data variability.

⁵⁴ 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. & Alpine Energy Limited "Submission to the Commerce Commission on Default Price-Quality Paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" 30 April 2014, paragraph 2.2. 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.

Parameters of the incentive scheme that links revenue to network reliability

- 6.18 Our draft parameters for the interruption duration and frequency revenue linked incentive scheme are contained in Tables 6.1 and 6.2, respectively.
- 6.19 In order to implement the revenue linked quality incentive scheme we must identify:
- 6.19.1 The amount of revenue at risk;
 - 6.19.2 The reliability target;
 - 6.19.3 The caps and collars;
 - 6.19.4 The incentive rate; and
 - 6.19.5 The normalisation methodology for maximum event days (used both to calculate the reliability targets and normalise actual performance).
- 6.20 We have adopted a cautious approach to setting the parameters of the revenue linked quality incentive scheme. We anticipate that as further information becomes available over future resets the quality of service incentives will be refined.
- 6.21 The amount of revenue at risk per year is proposed to be set as 1% of the starting price maximum allowable revenue. We consider this the minimum level of revenue at risk such to create managerial incentives. This is also consistent with our recent draft decision on Transpower's individual price quality path.

What our proposed reliability targets are based on

- 6.22 We applied a 10 year historic average from 2005 to 2014. The 10 year historic average best reflects the current underlying level of reliability performance.
- 6.23 An adjustment for quality breaches has been applied for those distributors that breached their quality standard under the current default price-quality path. This adjustment is made when calculating the target for the next regulatory period. We adjust for breaches by reducing the normalised annual value by the same proportion as any breach that exceeded the old limit. We consider that distributors should not receive a higher (less challenging) target due to past quality breaches.
- 6.24 A 50% de-weighting to planned interruptions. This weighting recognises that customers are much less inconvenienced by planned interruptions compared to unplanned interruptions, as they are likely to know about them in advance.

- 6.25 The caps and collars are set symmetrically as one standard deviation plus and minus the target of reliability. A one standard deviation cap and collar is appropriate because:
- 6.25.1 We consider a symmetric cap and collar as appropriate for this default price-quality path reset;
 - 6.25.2 It can be objectively applied across all distributors; and
 - 6.25.3 It provides a suitable range over which a distributors reliability performance faces a positive marginal incentive.⁵⁵
- 6.26 The normalisation methodology has been refined for the draft decision. Changes to the normalisation methodology which is currently in place for this regulatory period include:
- 6.26.1 The frequency of interruptions is used as the trigger for a maximum event day, in place of the duration of interruptions; and
 - 6.26.2 The calculation of the boundary value for SAIDI and SAIFI has been modified to reflect the prevalence of zero event days for some distributors.
- 6.27 We use the SAIFI limit as the trigger for identifying maximum event days for both SAIDI and SAIFI revenue linked incentive schemes.
- 6.27.1 SAIFI is used as the normalisation trigger in order to mitigate the possible incentive distributors may face after an event to allow the duration of an interruption to exceed the SAIDI boundary value, and therefore be normalised.
 - 6.27.2 SAIFI may also be a better measure of the size of an event that impacts on network, ie extreme weather, as it is related to the number faults that occur on the network.
- 6.28 We have based our calculation of boundary values for normalisation on the methodology published by the Institute Electrical and Electronics Engineers, Inc in its standard IEEE Std 1366-2003, but with a change the better meets the situation in New Zealand.

⁵⁵ A cap and collar that is too narrow could result in a distributor's performance bouncing between the maximum revenue reward and penalty. This would not be effective in creating the marginal incentives on reliability.

- 6.29 Table B.2 on page 32 of the standard is critical to our view that the methodology needs to be modified for the New Zealand situation due to the significant number of days in which no interruption days occur in a year.⁵⁶
- 6.30 Our modified approach starts with the assumption in the standard of 2.3 major event days per year, and divides this by the number of interruption days in a year. That gives us a modified p value, being the probability of an interruption day being a major event day. We then infer the number of standard deviations that gives us this probability using an inverse normal distribution function.
- 6.31 We seek submitter's views on the proposed normalisation methodology. In particular:
- 6.31.1 using the SAIFI boundary value as the trigger for identifying maximum event days for both SAIDI and SAIFI
 - 6.31.2 The use of a modified IEEE method to normalising maximum event days; and
 - 6.31.3 Replacing the actual reliability performance with the boundary value for maximum event days.
- 6.32 In principle, we consider that marginal incentives to reduce the duration of an interruption should be present after normalisation. For example, the duration of interruptions may be normalised to some value below the boundary but, as actual duration increases past the boundary, the normalised duration continues to also grow. We seek submitter's views if we should adopt this approach for this reset or defer until we have more information on the outcomes under our proposed approach.

⁵⁶ The discussion in Section B.5 of the standard relates to a probability distribution of interruption statistics for only the days in a period in which a supply interruption occurs. Days on which no interruption occurs are explicitly excluded from the distribution. The number of sample points in a year will be the number of interruption days in the year, not a fixed value of 365. In Table B.2, k represents the number of standard deviations from the mean and the values in the p column are the standard single tail tests for those numbers of standard deviations. The MEDs/yr column clearly has been derived from the p column by multiplying the p values by 365. The implication is that the network is exposed to the probability p of a major event day on 365 days a year rather than only being exposed to the probability p on interruption days.

Table 6.1: Table for SAIDI

Distributor	Revenue at Risk (\$000)	SAIDI Target	SAIDI Collar	SAIDI Cap	Incentive rate (\$/SAIDI)	SAIDI Boundary
Alpine Energy	183	147.6	78.8	216.4	1328	14.03
Aurora Energy	284	86.8	61.4	112.2	5594	10.92
Centralines	52	137.2	100.9	173.4	715	9.67
Eastland Network	106	246.6	206.0	287.2	1308	17.13
Electricity Ashburton	156	139.6	109.3	169.8	2579	8.98
Electricity Invercargill	67	29.2	17.5	40.8	2879	4.18
Horizon Energy	107	170.6	124.5	216.7	1158	17.85
Nelson Electricity	32	15.1	5.6	24.7	1679	2.12
Network Tasman	140	126.0	102.5	149.5	2972	19.02
OtagoNet	116	233.6	171.5	295.7	935	13.43
Powerco	1205	222.3	166.2	278.4	10738	11.31
The Lines Company	169	238.8	201.3	276.3	2258	15.84
Top Energy	206	446.0	364.2	527.7	1258	39.56
Unison Networks	465	111.4	87.5	135.3	9740	10.95
Vector Lines	1897	106.6	81.5	131.8	37749	9.88
Wellington Electricity	495	37.1	24.9	49.3	20313	6.85

Table 6.2: Table for SAIFI

Distributor	Revenue at Risk (\$000)	SAIDI Target	SAIDI Collar	SAIDI Cap	Incentive rate (\$/SAIDI)	SAIFI Boundary
Alpine Energy	183	1.37	1.09	1.65	325549	0.13
Aurora Energy	284	1.37	1.14	1.60	631153	0.26
Centralines	52	4.05	2.72	5.38	19482	0.48
Eastland Network	106	3.15	2.82	3.47	162592	0.21
Electricity Ashburton	156	1.41	1.11	1.71	258743	0.11
Electricity Invercargill	67	0.65	0.41	0.89	138544	0.12
Horizon Energy	107	2.04	1.76	2.32	193886	0.25
Nelson Electricity	32	0.20	0.11	0.28	183332	0.04
Network Tasman	140	1.34	1.17	1.52	398459	0.16
OtagoNet	116	2.30	1.87	2.74	134367	0.16
Powerco	1205	2.17	1.69	2.65	1260639	0.13
The Lines Company	169	3.21	2.47	3.95	114348	0.26
Top Energy	206	5.59	3.97	7.21	63362	0.64
Unison Networks	465	2.05	1.50	2.61	418962	0.19
Vector Lines	1897	1.33	0.99	1.66	2865614	0.14
Wellington Electricity	495	0.53	0.37	0.69	1543347	0.11

Further developments in future regulatory periods

- 6.33 Further developments of our approach may be possible in future regulatory periods. Areas for development include:
- 6.33.1 increasing the breadth of measures of service quality; and
 - 6.33.2 refining the measures of reliability.
- 6.34 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 capture a greater variety of dimensions of service quality.
- 6.35 Using customer surveys and collective experience, the ENA compiled a list of quality aspects that consumers most value.⁵⁷ In addition to the frequency and duration of interruptions, additional dimensions of quality are:
- 6.35.1 providing high quality power supply;
 - 6.35.2 the time it takes to respond to a power cut;
 - 6.35.3 the time taken to answer the telephone;
 - 6.35.4 providing information on reasons for and the likely duration and the extent of a power cut;
 - 6.35.5 processing applications for new connections including those for connection of distributed generation; and
 - 6.35.6 providing sufficient notice of shutdowns.
- 6.36 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. We consider that disaggregation of the average duration and frequency of interruption measures and customer service measures to be the potential next steps in this regard.
- 6.37 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.

⁵⁷ For further discussion refer to: Electricity Networks Association “Pathway to quality – quality of supply and incentives working group report” February 2014, pages 38–39.

- 6.38 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 not already be collecting a given measure outside of the information disclosure regime.

7. Other incentive mechanisms

Purpose of chapter

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

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

- 7.2 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

- 7.3 Due to the technical nature of the topic we were interested in receiving industry recommendations on how incentives for energy efficiency could be improved. Industry input was provided through the ENA Energy Efficiency Incentives Working Group with Commission staff attending in an observer role.
- 7.4 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.
- 7.5 The key issues and recommendations in the ENA working group report include:
- 7.5.1 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;
 - 7.5.2 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;
 - 7.5.3 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;
 - 7.5.4 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';

- 7.6 The ENA report and recommendations were supported by a number of submissions.⁵⁸

Proposed approaches to meet our obligations under s 54Q

- 7.7 Having considered the ENA Working Group report in depth, we propose to expand our approach to s 54Q. In addition to monitoring under information disclosure, we propose to:
- 7.7.1 Introduce a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives (the D-factor);
 - 7.7.2 Neutralise 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;
 - 7.7.3 Provide guidance in response to real world examples of instances in which the definition of ‘electricity lines services’ is unclear; and
 - 7.7.4 Minimise the impact of the approach we use to assess compliance with the price limit on the ability of distributors to transition to pricing structures that improve the incentives for demand side management.
- 7.8 In addition we have considered the options available for reducing the difference in strength between operating and capital expenditure incentives:
- 7.8.1 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 would be consistent across the regulatory period; and
 - 7.8.2 Setting a retention factor for capital expenditure at 20% would significantly reduce the maximum differences between capital and operating expenditure incentives that have existed in the current regulatory period.
- 7.9 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).

⁵⁸ 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.

Definition of regulated services

- 7.10 The ENA have pointed out that energy efficiency activities subject to regulation should be clearly defined so that distributors know how their efficiency investments will be treated.
- 7.11 If energy efficiency investments fall within the definition of ‘electricity lines services’ they would be 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 would also be able to earn alternative (unregulated) revenue sources in addition to that associated with its price path.
- 7.12 In our Process and Issues Paper, we requested real world examples of instances in which clarification would be helpful. We note the helpful submission received from which provides a list of real world examples of this type.⁵⁹
- 7.13 We welcome further submissions setting out examples of instances in which clarification would be helpful. Clarification of regulated services could be provided through a variety of channels, but is likely to be achieved through additional guidance and/or amendments to information disclosure requirements.
- 7.14 Any amendments to information disclosure requirements would be subject to a process of consultation.

Incentives to control expenditure

- 7.15 Through an amendment to input methodologies, we propose to put in place an incentive to control capital and operating expenditure that has a constant strength in each year of a default or customised price-quality path. Amongst other things, applying a ‘time consistent’ incentive means that:
- 7.15.1 Distributors would no longer be exposed to the full cost of responding to external events that have a temporary impact on expenditure; and
- 7.15.2 Distributors would be unable to boost profits by inflating costs in a particular year.

⁵⁹ Powerco, “Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper”, 30 April 2014.

X46 The proposed amendment will be outlined and explained in a paper released shortly after this paper.⁶⁰ Notably, for operating expenditure, the proposed retention factor would be 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.

Choice of retention factor for capital expenditure

- 7.16 In keeping with the approach that applies to Transpower New Zealand, the proposed incentive mechanism for capital expenditure would require the Commission to determine a retention factor for each distributor at the time of each reset. Distributors would therefore have certainty that the retention factor would be specified in advance of any efficiency improvements being achieved.
- 7.17 For this reset, we propose to apply a retention factor of 20%, ie, distributors would retain 20% of each dollar of capital expenditure they save. A constant 20% 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.
- 7.18 Our reasons for favouring a retention factor of 20% are related to our low cost forecasting approach, which may not reflect the prudent and efficient level of capital expenditure. A retention factor above 20% may therefore result in significant gains to distributors over and above those that arise from genuine efficiencies in capital expenditure.⁶¹

⁶⁰ It is worth noting that the incentive scheme we propose 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).

⁶¹ A lower retention factor reduces the financial impact on a distributor needing to spend more than our forecast of capital expenditure.

7.19 Our concerns are based on the following:⁶²

7.19.1 Our low cost approach is reliant on using the capital expenditure forecasts provided by the distributors and, as set out in the 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

7.19.2 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.

7.20 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.

Impact on incentives to invest in energy efficiency and demand side management

7.21 At present, distributors have an incentive to prefer one type of expenditure over another and that incentive changes over the course of the regulatory period.⁶³ The analysis presented in a previous Commission paper on incentives to control expenditure outlined how cost savings made by distributors can be rewarded differently depending on whether they are classified as operating expenditure or capital expenditure.⁶⁴

7.22 An important element in achieving efficiency is to make the correct decision on whether operating or capital expenditure is appropriate. The existing arrangements can provide incentives to undertake operational expenditure, eg, asset maintenance, when capital expenditure, eg, asset replacement, might be more appropriate, or vice-versa.

⁶² 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.

⁶³ In the Process and Issues Paper we stated that there was a risk suppliers would attempt to reclassify costs if there was a different retention factor for operating efficiencies relative to capital efficiencies. However, we acknowledge that distributors have limited opportunity to reclassify costs due to GAAP, as noted by some submitters. The real issue at hand is whether or not suppliers have an incentive to prefer one type of expenditure over another.

⁶⁴ Commerce Commission "Incentives for Suppliers to Control Expenditure During a Regulatory period: Process and Issues Paper" (20 September 2013).

- 7.23 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.
- 7.24 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.⁶⁵ For example, concerns about forecasting uncertainty, or the scope to manipulate forecasts, could be mitigated by varying the strength of the retention factor.
- 7.25 As discussed in the Forecasting Paper, we intend to apply a 20% 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 would not equalise the incentive between capital expenditure and operating expenditure, but it would represent an improvement relative to the existing arrangements.
- 7.26 In addition, under the proposed approach, the difference in incentives between capital and operating expenditure would:
- 7.26.1 remain consistent over the course of the regulatory period; and
 - 7.26.2 be significantly lower than the maximum difference in incentives seen during the course of the current regulatory period.
- 7.27 We invite views on the appropriate retention factor to apply to capital expenditure for this reset. The retention factor could potentially be different for each distributor.

Neutralising incentive to invest in long lived assets

- 7.28 Due to the way we propose to implement a constant strength capital expenditure, we expect to solve one of the barriers identified by the ENA Energy Efficiency Incentives Working Group about the that 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 would initially be a wash up for the difference between forecast and actual return *on* and *of* capital. This wash up would correct 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.

⁶⁵ 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%.

- 7.30 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.

Other issues related to s 54Q

- 7.31 A number of other issues that affect the incentives to develop the energy efficiency initiatives under 54Q have been identified and considered:

7.31.1 Pricing structures that incentivise behaviour change;

7.31.2 Low user fixed charge;

7.31.3 Incentives for distributed generation; and

7.31.4 Loss reduction.

Pricing structures that incentivise behaviour change

- 7.32 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.
- 7.33 We are interested in any concerns about our proposed approach to compliance which may impact on the ability for a distributor to transition to pricing structures that improve the incentives for demand-side efficiency in New Zealand.
- 7.34 Where possible we will look to minimise any issues that impact on the ability of distributors to transition to different pricing structures.

Low user fixed charge

- 7.35 The ENA report set out the following concerns with the Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations. In particular they note:⁶⁶

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.

- 7.36 We agree with submitters who note that these regulations are outside our area of responsibility. For example Contact note:⁶⁷

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.

- 7.37 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

- 7.38 There are specific requirements under the Electricity Code on distributors to ensure that avoided transmission and distribution charges are paid to distributed generation connected to their network.⁶⁸

- 7.39 We are currently consulting on an amendment to input methodologies that is intended to future proof the existing recoverable cost term in order to improve incentives associated with the payment of avoided transmission costs.⁶⁹

⁶⁶ Electricity Networks Association, "Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper", 30 April 2014.

⁶⁷ 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.

⁶⁸ Electricity Industry Participation Code 2010, Part 6.

⁶⁹ This will be discussed further in our companion paper covering compliance issues ('Compliance Paper'). This companion paper is among other material that we will publish on our website alongside this paper.

7.40 In addition we agree with Pioneer generation who submitted that:⁷⁰

In addition to recognising and paying DG owners for the benefits from distributed generation, EDBs can facilitate DG by offering a straightforward, timely and low cost process for connection of DG, as well as fair pricing of the connection assets and application of appropriate operational standards.

7.41 We also expect this may be a potential area for development when considering quality measures for future resets.

Losses

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

7.42.1 Distributors are best placed to lead in this area;

7.42.2 Losses are indirectly limited through requirements to maintain voltage at premises at 230V with a tolerance band of +/- six percent.⁷¹ 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

7.42.3 Minimum Energy Performance Standards and Energy Efficiency (Energy Using Products) Regulations 2002 set requirements for energy performance levels of a number of products.⁷²

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

⁷⁰ Pioneer Generation, "Cross submissions on issues and process paper for DPP from 2015", 15 May 2014.

⁷¹ 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%)

⁷² 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_rese&sr=1

8. Reconsideration of path following a catastrophic event

Purpose of chapter

8.1 This chapter outlines how we are progressing an amendment to input methodologies to allow reconsideration of the default price-quality path, and our general approach to risk sharing and compensation, following a catastrophic event.

Amendment to input methodologies to allow reconsideration after a catastrophic event

8.2 The High Court has directed an amendment to the input methodologies to allow distributors to request that the default price-quality path be reconsidered in response to a catastrophic event.⁷³ The terms of that amendment are being finalised.

8.3 In this section, we outline and explain:

8.3.1 Our general approach under both default and customised price-quality paths, which is intended to share risks appropriately between distributors and consumers; and

8.3.2 Our proposed approach to allowing recovery of additional costs through a recoverable cost term if a default price-quality path is re-opened following a catastrophic event.

8.4 We also note that distributors can also apply for a customised price-quality path if a catastrophic event occurs.⁷⁴ In November 2013, for example, we determined a customised price-quality path for Orion New Zealand after the Canterbury earthquakes.

⁷³ In the event that a default price-quality path is re-opened, we agree with the ENA that it would be desirable for the Commission to be able to modify quality standards. Refer: 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 6.4.2. While final orders have not yet been made by the High Court, the Commission anticipates that the provisions addressing reconsideration of the default price-quality path following a catastrophic event will include provision for amendment of quality standards to the extent necessary to mitigate the effect of the catastrophic event. Refer: Wellington International Airport Ltd & Ors v Commerce Commission [2013] NZHC [11 December 2013].

⁷⁴ After a request for the default price-quality path to be reconsidered, an application for a customised price-quality path may still be made, provided it falls within the timeframes for making a proposal following a catastrophic event. We therefore agree with the views of PwC and the ENA that applying for a less resource intensive option should not preclude a distributor from proposing a customised price-quality path at a later date. Refer: Electricity Networks Association “Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper” 30 April 2014, and PwC “Submission to the Commerce Commission on Default price-quality paths from 1 April 2015 for 17

Our general approach reflects risk sharing between distributors and consumers

- 8.5 As outlined in November 2013, in determining Orion's customised price-quality path, our view is that the risks of future catastrophic events should be shared between distributors and consumers. This statement applies irrespective of whether a distributor applies for a customised price-quality path, or a reconsideration of the default price-quality path.
- 8.6 In particular, after a catastrophic event:
- 8.6.1 Distributors should be compensated for prudent additional net costs incurred before the price-quality path is reset;
 - 8.6.2 Distributors should be compensated for prudent additional net costs that are forecast to be incurred after the price-quality path is reset; and
 - 8.6.3 Distributors should be cushioned against changes in future demand, by factoring in up-to-date forecasts when the price-quality path is reset.
- 8.7 Our proposed approach means that distributors bear only the demand risk of a catastrophic event from the time of the event to the reset of the path. However, we note that across a balanced portfolio, the demand risk associated with catastrophic events to a diversified investor would be small. A diversified investor would benefit from positive demand shocks that would offset to some extent negative demand shocks from catastrophic events (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).
- 8.8 A diversified investor could still face a small downside demand risk from catastrophic events that is not fully removed by diversification.⁷⁵ In principle, we could take this risk into account under the default price-quality path, by adjusting our demand forecasts when we are calculating constant revenue growth (as suggested by Unison). However, the size of any such adjustment for a diversified investor would be insignificant in the context of the uncertainties associated with demand forecasts when averaged over the country and possible catastrophic events. As we noted in November 2013, the Canterbury earthquakes had an insignificant impact on the level of return and risk to our hypothetical diversified investor.⁷⁶

electricity distributors: Process and issues paper - Made on behalf of 20 Electricity Distribution Businesses" 30 April 2014.

⁷⁵ Wellington Electricity suggested that diversification of catastrophic risk is impossible because it is a type 1 asymmetric risk for which there is no countervailing upside risk and so no offsetting investment available.

8.9 In response to our Process and Issues Paper, distributors repeated similar arguments to those that were raised and responded to during consultation on the customised price-quality path for Orion New Zealand. For example:

8.9.1 Powerco argued that geographic diversification is impractical for electricity distributors.⁷⁷

8.9.2 Vector outlined how in its view the purpose of using the 75th percentile of the estimated WACC is only to account for uncertainty in WACC estimates and not to compensate for catastrophic risk.

8.10 Our responses to these issues can be found in the reasons paper we published in November 2013. By way of example, we responded to Powerco's argument about the impracticality of diversification for an electricity distributor by noting that:

Our approach to claw-back recognises that it would not be appropriate to impose additional costs on consumers where an EDB's owners have chosen an ownership arrangement that precludes diversification.⁷⁸

8.11 We also note that Powerco's investors are diversified. It is the investors, not the companies, that can diversify. We believe that investors are adequately compensated for the risks they bear in providing capital to the businesses.

8.12 For responses to other submissions on catastrophic risk, please refer to the paper we published in November 2013.⁷⁹

Compensation after a catastrophic event provided through a recoverable cost term

8.13 We have proposed an amendment to input methodologies to ensure appropriate recovery of additional costs after a catastrophic event. In particular, we propose to introduce a new recoverable cost term that will enable recovery of prudent

Refer: Wellington Electricity Lines Ltd, *Submission on process and issues paper for DPP from 2015*, 30 April 2014, pg 16-17.

⁷⁶ Refer: Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013), paragraph B40.

⁷⁷ Powerco, *Submission on process and issues paper for DPP from 2015*, 30 April 2014, pg 24.

⁷⁸ Commerce Commission, *Setting the customised price-quality path for Orion New Zealand Limited*, 29 November 2013, Paragraph B100.

⁷⁹ Refer: Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013).

additional net costs incurred between a catastrophic event and a default price-quality path being reset following a reconsideration.⁸⁰

⁸⁰ The proposed recoverable cost term is therefore similar to the approach in place for Orion New Zealand, in the event that the customised price-quality path is re-opened.

9. Process from here

Purpose of chapter

- 9.1 This chapter outlines and explains the process from here, including indicative dates for the main milestones in the run up to the reset that we expect to announce on 28 November 2014.

Overview of process to 28 November 2014

- 9.2 As with our previous processes for resetting default price-quality paths, the key milestones in our process to 28 November 2014 include:⁸¹
- 9.2.1 issuing information gathering notices for targeted pieces of information;
 - 9.2.2 providing an opportunity for interested parties to provide submissions and cross-submissions on our draft determination and reasoning; and
 - 9.2.3 providing a second opportunity for interested parties to provide submissions on the drafting of the determination before it is finalised.
- 9.3 Table 9.1 sets out an indicative timetable of our proposed process from here.

Table 9.1: Indicative timetable of process from here

Indicative date	Publication or event
18 July 2014	Draft determination and companion papers
25 July 2014	Question & answer session on models
2 August 2014	Information gathering request (if required)
10 October 2014	Updated determination for consultation on drafting
28 November 2014	Final determination

- 9.4 In addition, we will be separately considering amendments to the input methodologies for default price-quality paths to be made prior to our determination. We set out the timeframes for these amendments in Table 9.2.

⁸¹ These include the reset of default price-quality paths for electricity distribution businesses in 2012, following a change to the relevant input methodologies, and the setting of default price-quality paths for gas distribution businesses in 2013.

Draft determination

- 9.5 We propose to allow interested parties six weeks for submissions and two weeks for cross-submissions on the proposed drafting of the determination.
- 9.6 At this stage, we propose to include placeholders in some parts of the draft determination for interested parties to provide suggestions for the drafting of the determination. In these parts, we would be seeking drafting suggestions to test whether industry proposals can be implemented.
- 9.7 In the absence of workable solutions, it may be that some options will have to be ruled out on the basis that they cannot be implemented. We therefore encourage respondents to provide proposed drafting for any options they propose through this process.

Companion papers published alongside our draft determination

- 9.8 Alongside the draft determination, on 18 July 2014, we intend to publish:
- 9.8.1 Quality Targets and Incentives Paper; and
 - 9.8.2 Compliance Paper.
- 9.9 These papers will provide responses to submission on the proposed targets and incentives for service quality, and the proposed compliance requirements for default price-quality path.
- 9.10 We will allow six weeks for submissions and two weeks for cross-submissions on each of these companion papers, from the date of publication.

Specific round of consultation on the proposed drafting of the determination

- 9.11 In early October 2014, we intend to publish an updated version of the draft determination to allow stakeholders a final chance to provide feedback on the proposed drafting of the determination. This version of the determination will include proposed drafting for all sections, following our review of any suggestions on our draft determination.
- 9.12 However, the updated version of the draft determination will not include any values that are specific to distributors, eg, starting prices, or rates of change. These amounts will be included in the final version of the determination.

Question & answer sessions on the models

- 9.13 We propose to hold a question and answer session on the models published on our website alongside this paper. We propose to hold this session three weeks from the release of this paper. The proposed question and answer sessions would allow interested parties an opportunity to submit questions in advance, for discussion with Commission staff, about any of the models relied on in reaching our draft decision.
- 9.14 We request that any questions be submitted one week in advance of the session, by using the same address used for submissions on this paper. If no questions are submitted one week before the session, we will consider cancelling the session.

Information gathering request (if required)

- 9.15 In setting the default price-quality paths, additional information is required to be provided in accordance with information gathering requests issued under s 53ZD of the Act. This additional information is used, for example, to inform our decision on forecast operating and capital expenditure.
- 9.16 We also make substantial use of data disclosed under our information disclosure regulation. For example, we will rely on:
- 9.16.1 regulatory asset values;
 - 9.16.2 historic levels of expenditure; and
 - 9.16.3 drivers of expenditure.
- 9.17 An information gathering request was issued under section 53ZD of the Act on 12 March 2014. That request included information in the following categories:
- 9.17.1 price adjustments;
 - 9.17.2 transmission assets; and
 - 9.17.3 reliability.
- 9.18 We will issue a further information gathering request shortly after we publish our draft decision. The content of that request will allow us to implement the proposed changes in approach for default price-quality paths from 1 April 2015. We have initiated discussions with ENA representatives on this additional request and will continue to engage on the content, format and audit requirements.
- 9.19 However, in case it was not clear previously, we would like to clarify that distributors should contact the Commission directly (rather than through ENA representatives) in the event that further guidance is required about the information we are seeking.

9.20 Given time constraints, we also invite you to include in your submission any information that you think we should consider in reaching our final decision. It would be prudent to ensure that any data necessary to implement an option that you propose, or to correct an error with previous data, is accompanied by audit and certification.

Potential amendments to input methodologies

9.21 We are also consulting on a number of proposed amendments to input methodologies and our draft determination. These proposed amendments are grouped as follows:⁸²

9.21.1 Amendments that would specifically affect the structure of the financial model (a finalised version of which is likely to be used to set starting prices based on current and projected profitability of each electricity distributor).⁸³

9.21.2 Amendments that would specifically affect the Incremental Rolling Incentive Scheme (IRIS).

9.21.3 Amendments that would affect other aspects of default price-quality paths.

9.22 In addition, we will soon be consulting on potential amendments to the input methodologies for determining the weighted average cost of capital, and in particular on the choice of percentile. Any amendments to input methodologies will be reflected in our final determination of default price-quality paths.

Table 9.2: Indicative dates for proposed amendments to input methodologies

Indicative date	What the proposed amendment would affect
24 June 2014	Structure of the financial model (already published)
11 July 2014	Incremental Rolling Incentive Scheme (IRIS).
22 July 2014	Choice of percentile for the weighted average cost of capital
18 July 2014	Other aspects of default price-quality paths.

⁸² Some of these amendments will be reflected in the drafting of the s 52P determination.

⁸³ Commerce Commission "Proposed amendments to input methodologies for electricity distribution services – consultation paper" (24 June 2014).

- 9.23 The paper due to be published on 18 July 2014 will propose amendments to:
- 9.23.1 give effect to the quality incentive scheme we propose to implement under section 53M(2);
 - 9.23.2 give effect to the incentives for energy efficiency and demand side management initiatives we propose to implement, consistent with section 54Q;
 - 9.23.3 introduce a 'wash-up' for capital expenditure in the final year of the current default price-quality path, ie, 1 April 2014 to 31 March 2015, in order to more accurately reflect the regulatory asset base used to forecast return on and of capital during the next regulatory period;
 - 9.23.4 introduce a 'wash-up' for additional expenditure provided in a regulatory period for spur asset purchases that were forecast to be completed prior to the reset, but which were not concluded;
 - 9.23.5 allow for the recovery of prudent expenditure incurred in response to a catastrophic event prior to the re-opened price path taking effect;
 - 9.23.6 allow for pass-through of any levy or other charges or costs associated with any automatic under-frequency load shedding (AUFLS) programme that the Electricity Authority (EA) may implement during the regulatory period;
 - 9.23.7 update the recoverable cost term for transmission costs avoided as a result of distributed generation in the event the EA introduces any changes in approach; and
 - 9.23.8 allow for a one-off recovery of additional revenue for four suppliers (Alpine Energy, Top Energy, Centralines) to address the NPV-negative impact of our decision at the 2012 reset to limit price increases in the last two years of the current regulatory period.
 - 9.23.9 limit the risk of under or over-recovery of pass-through and recoverable costs.

10. How you can provide your views

Purpose of this chapter

- 10.1 This chapter outlines the timeframes, address, and format for responses, as well as explaining how submissions can be made on a confidential basis.

Responding to this paper

- 10.2 As noted in the Introduction, we welcome your views on any aspect of this paper and the companion papers. We also invite you to provide any other material that you think should be considered in reaching our final decision.

Timeframes for responses

- 10.3 We welcome your views in the timeframes set out below.

10.3.1 Submissions are due by **15 August 2014**.

10.3.2 Cross-submissions are due by **29 August 2014**.

- 10.4 Material provided outside of the timeframes shown may not be considered in reaching our final decision. Any requests for extensions to the timeframe for providing a submission on this process should be provided for consideration, by using the address shown below.

Address for responses

- 10.5 Responses to this paper should be addressed to:

John McLaren (Chief Advisor, Regulation Branch)
c/o regulation.branch@comcom.govt.nz

Format for responses

- 10.6 We prefer responses in a file format suitable for word processing, rather than the PDF file format.

Requests for confidentiality

- 10.7 We encourage full disclosure of submissions so that all information can be tested in an open and transparent manner. However, if it is necessary to include confidential material in a submission, we offer the following guidance:⁸⁴
- 10.7.1 Both confidential and public versions of the submission should be provided; and
- 10.7.2 The responsibility for ensuring that confidential information is not included in a public version of a submission rests entirely with the party making the submission.
- 10.8 We request that you provide multiple versions of your submission if it contains confidential information or if you wish for the published electronic copies to be 'locked'. This is because we intend to publish all submissions and cross-submissions on our website. Where relevant, please provide both an 'unlocked' electronic copy of your submission, and a clearly labelled 'public version'.

⁸⁴ You can also request that we make orders under s 100 of the Act in respect of information that should not be made public. Any request for a s 100 order must be made when the relevant information is supplied to us, and must identify the reasons why the relevant information should not be made public. We will provide further information on s 100 orders if requested by parties. A benefit of such orders is to enable confidential information to be shared with specified parties on a restricted basis for the purpose of making submissions. Any s 100 order will apply for a limited time only as specified in the order. Once an order expires, we will follow our usual process in response to any request for information under the Official Information Act 1982.

Attachment A: Treatment of Orion New Zealand

Purpose of this attachment

- A1 This attachment explains our proposed 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. 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 Therefore, by 30 November 2014, we are only required to specify for Orion New Zealand:

A4.1 rate of change; and

A4.2 quality standards.

- A5 Orion New Zealand has also requested clarity on the process that we propose to follow when the customised price-quality path comes to an end.

Proposed approach to starting price for Orion New Zealand

- A6 In our Process and Issues Paper, we explained that the starting price that applies to Orion New Zealand will be either:

A6.1 The price that applied in the final year of the customised price-quality path;
or

A6.2 A price advised by the Commission four months before the end of the customised price-quality path.

- A7 Consistent with our view in the Process and Issues Paper, we do not consider that we are required to determine starting prices for Orion New Zealand at this time.⁸⁵ A number of distributors agreed with this approach in their submissions on our Process and Issues Paper.⁸⁶
- A8 Some distributors have requested clarity on the parameters we would use to reset starting prices for Orion New Zealand in November 2018, if we were to reset starting prices based on current and projected profitability. For example, Powerco submitted that if we were to decide that the starting prices to apply to Orion should be different to those applying in the last year of the customised price-quality path, then:⁸⁷
- [t]he Commission should explicitly state whether or not the assumptions it will use (e.g. WACC, CPI, population growth) will be updated with the latest available information, or [whether] it will use the same assumptions that were originally used to reset the DPP for other EDBs. For reasons of equity and certainty we believe that, in these circumstances, the inputs used to determine the final year prices for the transitioning EDB should be the same as those used to determine the DPP for all other EDBs that are subject to it.
- A9 Our current view is that we would:
- A9.1 Apply input methodologies for WACC, which currently require us to apply the same WACC for all distributors under a default price-quality path;
 - A9.2 Apply a forecast of inflation for revaluations that is consistent with the timing of the WACC determination;
 - A9.3 Rely on up-to-date forecasts of operating and capital expenditure that take into account efficiency gains achieved under the customised price-quality path.
- A10 For forecast changes in revaluations, the proposed approach ensures that the implied real return during the regulatory period is consistent with the inflation expectations that are embedded in our estimate of the cost of capital.

⁸⁵ Commerce Commission “Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper” (21 March 2014), paragraph D4.

⁸⁶ Refer: 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, paragraph 6; Powerco “Submission on Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper” 30 April 2014, paragraph 107; 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.

⁸⁷ Powerco “Submission on Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper” 30 April 2014, paragraph 108.

Proposed approach to the rate of change for Orion New Zealand

- A11 When the customised price-quality path comes to an end, Orion New Zealand will have the productivity-based rate of change that is generally applicable to distributors (CPI + 0%).⁸⁸ Attachment C outlines and explains our proposed approach for determining the productivity-based rate of change.
- A12 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.⁸⁹

Proposed approach to setting quality standards for Orion New Zealand

- A13 When the customised price-quality path comes to an end, Orion New Zealand will be subject to the quality standards that we determine before 30 November 2014. The quality standards will only apply between 1 April 2019 and 31 March 2020.
- A14 As indicated in our Process and Issues Paper, we propose that Orion New Zealand should be subject to quality standards that are expressed in terms of the frequency and duration of interruptions, ie, SAIDI and SAIFI.⁹⁰ The same metrics have been proposed for other distributors under this reset of the default price-quality paths.
- A15 At this stage, our preferred approach for setting the values for SAIDI and SAIFI for Orion New Zealand is to roll forward by one year the trend under the customised price-quality path. Notably, by that time, Orion New Zealand's reliability limits will have returned to within 25% of the limits in place before the earthquakes.
- A16 Submitters generally agree that this is a pragmatic approach given the relatively short time period between the end of the customised price-quality path and another reset of the default price-quality paths applicable to distributors.⁹¹

⁸⁸ Commerce Act 1986, s 53X(1).

⁸⁹ Orion'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.

⁹⁰ Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014), paragraphs D19-D20.

⁹¹ 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.

Incentives for service quality

A17 Our current view is that Orion New Zealand should be subject to the revenue-linked incentive, but with the caps and the collars set equal to the reliability target, and 0% revenue at risk. This is because of the uncertain effects of the Canterbury earthquakes will continue to have at that time, and the relatively short period of time in which any incentive would apply.

Proposed process when the customised price-quality path comes to an end

A18 We intend to start consultation on Orion New Zealand's transition back to a default price-quality path at least 24 months before the end of its customised price-quality path, ie, by 31 March 2017.⁹² This proposed timing is important because:

A18.1 Orion New Zealand seeks to be able to make an informed decision on whether to move onto the default price-quality path or apply for another customised price-quality path;

A18.2 Orion New Zealand is unable to propose a customised price-quality path in the 12 months before the default price-quality path is due to be reset; and

A18.3 If Orion decides to apply for another customised price-quality path, statutory timeframes apply for our assessment and evaluation of the proposal (40 working days for a completeness assessment and 150 working days for an evaluation).

A19 In light of these factors, if starting prices were reset under s 53X(2), we invite views on the date on which we should advise Orion New Zealand that different starting prices apply.

⁹² 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, paragraph 8.

Attachment B: Additional allowances for forecasting uncertainty

Purpose of attachment

B1 This attachment outlines and explains the analysis we propose to rely on to determine whether an additional allowance is required for forecasting uncertainty, if we set starting prices based on the current and projected profitability of each distributor.

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 the following distributors will make a customised price-quality path proposal.⁹³

B3 We propose to determine whether an additional allowance is 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:

10.8.1 An additional allowance is unnecessary if the distributor's forecasts imply that there is no probability of a proposal, ie, the distributor's forecasts support our forecasts; and

10.8.2 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.⁹⁴

⁹³ The additional allowance reduces the probability of a proposal by increasing the prices that can be charged under the default price-quality path.

⁹⁴ 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.

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.

Table B1: Difference for each distributor (\$m)

Distributor	Commission forecast	Distributor forecast	Difference
Vector	1,770.8	1,831.9	61.1
Powerco	1,119.8	1,152.4	32.6
Wellington Electricity	439.7	468.6	28.9
Eastland	105.0	114.4	9.5
OtagoNet	104.8	113.8	9.0
Alpine Energy	162.3	169.5	7.2
Unison	435.2	442.0	6.8
Aurora Energy	250.3	255.1	4.9
Horizon Energy	97.1	101.9	4.7
Electricity Ashburton	149.3	153.7	4.4
The Lines Company	154.6	158.9	4.3
Nelson Electricity	30.2	29.0	-1.2
Network Tasman	125.8	123.8	-2.0
Top Energy	173.8	171.0	-2.8
Electricity Invercargill	63.1	59.3	-3.8
Centralines	48.9	42.6	-6.3

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.⁹⁵ 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 \$61 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, and 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 Although we have not applied any additional allowances, we recognise 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 distributors 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.

⁹⁵ We do not propose to reduce starting prices 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 \$1.5m;⁹⁶ and

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

⁹⁶ \$2.5m is our current 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 rate(s) of change in price

Purpose of this attachment

- C1 This attachment explains and seeks views on our proposed approach to setting the allowable rate 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.⁹⁷
- 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,⁹⁸ to minimise any undue financial hardship to the distributor or price shock to consumers.⁹⁹

Productivity-based rate of change

- C5 We propose a productivity-based rate of change of 0% for the upcoming regulatory period. This proposal is 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).

⁹⁷ Refer: s 53P(6) of the Act.

⁹⁸ Refer: s 53P(8) of the Act.

⁹⁹ We do not consider that it would be appropriate to set an alternative rate of change as an incentive to improve quality. We set out our preferred approach to quality incentives in Chapter 6 of this paper, and our companion paper on quality targets and incentives.

- C6 We invite you to provide views on the report by Economic Insights. For example, we are interested in your views on the opinions expressed by Economic Insights:
- C6.1 the most appropriate input and output specifications used to determine the productivity-based rate of change;
 - C6.2 the market conditions faced by the energy supply industry since 2007 and its consistency with the long-term trend; and
 - C6.3 future expectations for demand growth over the forthcoming regulatory period.
- C7 The report prepared by Economic Insights will be published on our website alongside this paper, including accompanying datasets.

Alternative rates of change to minimise price shocks

- C8 Our draft decision proposes to apply an alternative rate of change when the increase in the price limit would otherwise exceeds 5% in real terms. We invite views on whether this threshold is appropriate.
- C9 In addition, we propose to take into account deferred revenue recovery when considering whether an alternative rate of change would be necessary or desirable.¹⁰⁰ 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.
- C10 In choosing an alternative rate of change, we propose to rely on a number that would result in a broadly equivalent adjustment in the first and subsequent years of the regulatory period. However, we invite views from stakeholders on the specific rates of change that should apply to individual distributors.

We invite evidence of undue financial hardship for suppliers

- C11 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 if our draft decision is implemented.

¹⁰⁰ 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.

- C12 Any distributor that believes the proposed price adjustments would cause undue financial hardship must provide evidence to support that, which we expect should include evidence that:¹⁰¹
- C12.1 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
 - C12.2 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.¹⁰²
- C13 Our current view is that it is unlikely that a prudently financed distributor would face financial hardship on the basis of the figures indicated. However, we invite views on this point.

Impact of productivity-based rate of change on allowed revenue

- C14 As noted in the Process and Issues Paper, the effect of the productivity-based rate of change will depend 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.
- C14.1 If starting prices are rolled over, the rate of change will affect the amount of revenue the distributor can expect to earn over the regulatory period.
 - C14.2 If 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.
- C15 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. It may therefore have a significant impact on the size of price changes at the end of each regulatory period.

¹⁰¹ 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.

¹⁰² 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.

- C16 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.

Linkage to estimates of partial productivity

- C17 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 companion paper on low cost forecasting approaches:
- C17.1 We propose to take expected changes in partial operating expenditure productivity into account when forecasting operating expenditure; and
- C17.2 We propose that our partial productivity assumption for operating expenditure be informed by evidence on past trends in productivity, and evidence of whether those trends are likely to continue in future.
- C18 We invite you to provide views on the productivity study undertaken by Economic Insights, which also includes evidence relating to partial productivity for operating expenditure. Consistent with the assumption for overall productivity, we propose to assume that partial productivity for operating expenditure will not change over the upcoming regulatory period.

Attachment D: Treatment of assets purchased from Transpower New Zealand

Purpose of attachment

- D1 This attachment clarifies our proposed 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 in our Process and Issues Paper 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, are proposing to purchase them outright instead.¹⁰³
- 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 proposed decisions within each of these areas in turn.

¹⁰³ Commerce Commission “Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper” (21 March 2014), paragraph C2.

Incentive mechanism applying to asset transfers from Transpower

- D5 The input methodologies and 2012 default price-quality path determination contain an incentive mechanism that applies to purchases of Transpower assets. In this reset, we propose to:
- D5.1 Consider whether to develop mechanisms to reduce the unequal incentives to for Transpower assets purchases over the period; and
 - D5.2 Clarify the calculation of the Avoided Cost of Transmission (ACOT) recoverable cost.¹⁰⁴
- 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 Transpower.¹⁰⁵
- D7 The ability to recover avoided transmission charges for five years after the transfer applies irrespective of the date of the transfer.

Option to reduce the unequal incentives on Transpower assets 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. It is lowest in year one, but much stronger in years four and five (assuming a five year regulatory period).¹⁰⁶
- D9 Submissions on the Process and Issues Paper agreed that in principle that it would be preferable to reduce or eliminate the incentives to purchase Transpower assets at a particular point in time during the regulatory period.¹⁰⁷ We agree that this is a desirable outcome and expect that this would be implemented by amending the input methodologies. One potential option is to develop an 'IRIS type' mechanism. However due to the limited impact this would have on the forthcoming price reset we have decided it is not a priority to introduce a mechanism under the current process.

¹⁰⁴ 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).

¹⁰⁵ *Electricity Distribution Services Input Methodologies Determination 2012* [2012] NZCC 26, clauses 3.1.3(1)(b) and 3.1.3(1)(e).

¹⁰⁶ Commerce Commission "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and issues paper" (21 March 2014).

¹⁰⁷ Transpower, *Consultation on Electricity Distribution 2015 DPP reset*, 30 April 2014

Clarification of the calculation of the Avoided Cost of Transmission

- D10 We note the uncertainty outlined by submitters in regard to calculating the avoided cost of transmission, particularly in light of the ongoing Transmission Pricing Methodology review currently being undertaken by the Electricity Authority.
- D11 We propose that the avoided cost of transmission should be calculated as follows:
- D11.1 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 is then based on the difference between the factual (without the assets) and counterfactual (with the assets) cases.
- D11.2 The cost for years two to five should be the same cost as in year one, held constant in nominal terms.
- D12 Further details on calculating the avoided cost of transmission associated with assets purchased from Transpower can be found in our companion paper on compliance issues.¹⁰⁸

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

- D13 Forecasts of assets purchased from Transpower inform the forecast value of commissioned assets, which in turn affects the value of the regulatory asset base both at the start and in each year of the regulatory period. This is because assets are added to the asset base in the year in which they are commissioned.
- D14 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:¹⁰⁹
- D14.1 The forecast value of the regulatory asset base as at the start of the regulatory period (ie, 1 April 2015); and
- D14.2 The forecast value of any assets expected to be added to the asset base during the regulatory period.

¹⁰⁸ This is discussed further in our companion paper covering our approach to Compliance (‘Compliance Paper’). This companion paper is among other material that we will publish on our website alongside this paper.

¹⁰⁹ The term ‘return *on* capital’ refers to the cost of capital while the term ‘return *of* capital’ refers to depreciation.

D15 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.¹¹⁰

D15.1 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;

D16 Ideally, the value of the regulatory asset base at the start of the regulatory period would be known when we set prices and any asset transfers that occur prior to the start of the regulatory period would be included.

D17 However, we do not know for certain which 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.

D18 Given the scale of some of the proposed asset transfers, we consider it appropriate to seek assurance that a forecast transfer will go ahead as planned and also introduce a mechanism to ensure distributors do not benefit from transfers that do not take place. Therefore we propose that:

D18.1 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;

D18.2 Asset transfers forecast by distributors to occur after 31 March 2014 but before the start of the regulatory period will added to the regulatory asset base when determining its value as at the start of the regulatory period. However we plan to request further information from distributors, eg, contractual arrangements that would provide greater assurance that the planned transfer will go ahead; and

D18.3 We propose to amend the input methodologies to include a new additional recoverable cost term to correct for differences between the forecast and actual value of commissioned assets in the year 2014/2015.

¹¹⁰ Capital expenditure forecasts are discussed further in our companion paper covering our low cost forecasting approaches ('Forecasting Paper'). This companion paper is among other material that we will publish on our website alongside this paper.

- D19 The proposed recoverable cost term would correct 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 in the year 2014/2015.
- D20 The exact amount to be recovered would be determined once actual information is available for the year 2014/2015. Individual distributors would calculate this amount based on the rules in the input methodologies and the default-price path determination, which would then be checked through the compliance process.
- D21 There is a wider uncertainty over all capital expenditure forecasts for the period 2014/2015, not just those relating to assets purchased from Transpower. Therefore we propose to apply the recoverable cost term outlined above to all differences between estimated capital expenditure for 2015 (used to estimate the regulatory asset base as at 1 April 2015) and the actual value of commissioned assets. This approach would ensure the value of assets at the start of the regulatory period would be as accurate as possible.¹¹¹

Capital expenditure forecasts of Transpower asset purchases during the regulatory period

- D22 As outlined in the 'process and issues' paper and consistent with the intent of the incentive provided by the input methodologies we would not include forecast asset transfers that take place after 1 April 2015 in the regulatory asset base during the regulatory period. This is consistent with the approach taken in the recent Orion customised price-quality path decision. The incentive to purchase assets from Transpower is created by the distributor being able to treat the avoided transmission charge of the asset as a recoverable cost for the five years after acquisition.
- D23 This approach to forecast asset purchases from Transpower after the start of the regulatory period was supported by submitters. For example the ENA noted:¹¹²
- The Process and Issues Paper proposes that the DPP MAR will not be adjusted for forecast purchases as the incentive to purchase assets is provided by the five year recoverable cost allowance equivalent to the avoided Transpower charges for the assets. The ENA agrees with this proposal.
- D24 The cost of the asset purchase would be covered by the incentive mechanism applying to asset transfers, until such time that prices are reset and the asset enters the regulatory asset base.

¹¹¹ This recoverable cost term is discussed further in our companion paper covering our low cost forecasting approaches ('Forecasting Paper'). This companion paper is among other material that we will publish on our website alongside this paper.

¹¹² Electricity Networks Association, *Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper*, 30 April 2014.

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

- D25 As we explained in our Process and Issues Paper, a purchase of a Transpower asset may result in increasing interruptions on the distributor’s network solely as a result of owning the asset.¹¹³ This may:
- D25.1 have direct financial consequences for the distributor under the revenue-linked incentive scheme that is being proposed for the upcoming regulatory period; and
 - D25.2 increase the chance of a breach of the quality path under the pass/fail regime.¹¹⁴
- D26 To avoid creating potentially undesirable incentives we propose to include 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.
- D27 An alternative option is that the performance of the purchased asset is excluded until the next reset.

Forecasts of additional operating and capital expenditure required

- D28 Assets purchased from Transpower may require additional expenditure in addition to the transaction cost, such as:
- D28.1 Operating expenditure for operating and maintaining the asset; and
 - D28.2 Capital expenditure for maintaining the asset or increasing the asset’s service potential.

Operating expenditure

- D29 Consistent with the intent of the incentive provided by the input methodologies we propose that there would be no specifically identified allowance for operating expenditure associated with purchased assets. Operating expenditure for purchased assets would be captured as part of our general approach to forecasting operating expenditure.

¹¹³ 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.

¹¹⁴ The area is discussed further in our companion paper covering our quality incentives approaches (‘Quality Paper’). This companion paper is among other material that we will publish on our website alongside this paper.

- D30 Operating expenditure for assets which have not yet been purchased and so are not yet captured by the general forecasting approach should be funded via the incentive for distributors to purchase assets from Transpower.¹¹⁵

Additional capital expenditure

- D31 For Transpower assets purchased up to and including the 2015¹¹⁶, an allowance for identified additional capital expenditure during the regulatory period associated with those assets would be provided in the event that:
- D31.1 The capital expenditure associated with the asset is consistent with any known Transpower forecasts of capital expenditure on that particular asset over the regulatory period; and
 - D31.2 The calculation of the avoided cost of transmission charge does not include a provision for the additional capital expenditure.
- D32 For assets purchased from Transpower in the 2014/2015 year, we are proposing a recoverable cost term which would prevent distributors from recovering revenue for an asset transfer that did not take place.
- D33 For assets purchased from Transpower after the start of the regulatory period no allowance would be made for forecast additional expenditure. Instead, we will rely on the incentive mechanism applying to asset transfers. This is consistent with the previously outlined approach to capital expenditure on Transpower asset purchases.

¹¹⁵ For five years after the purchase of the asset a distributor may treat as a recoverable cost the avoided transmission charge of that asset.

¹¹⁶ This assumes that appropriate assurance is given that a forecast purchase will go ahead.

Attachment E: Compensation for demand side management initiatives

Purpose of attachment

- E1 This attachment outlines and explains the mechanism that we propose to introduce to compensate distributors for revenue foregone as a result of demand side management initiatives.

Introduction of a D-factor mechanism

- E2 As recommended by the ENA, we are proposing to introduce a mechanism that compensates distributors for revenue foregone as a result of demand side management initiatives (the D-factor).
- E3 Castalia on behalf of Vector submitted a helpful report on the operation of a D-factor scheme and we agree with the majority of their recommendations for implementation.¹¹⁷
- E4 The proposed design of the D-factor includes:
- E4.1 A broad scope of activities would be covered, defined as anything that may be considered energy efficiency or demand side management (excluding tariff measures);
 - E4.2 Financial compensation would be limited to foregone revenue of implementing demand side management activities;
 - E4.3 A principles based approach would establish a link between demand side management activities and foregone revenue; and
 - E4.4 The financial adjustment would take place through the annual compliance statements as an additional recoverable cost.

Broad scope of activities covered

- E5 Castalia (on behalf of Vector) consider the activities should be defined as anything that may be considered energy efficiency or demand side management.¹¹⁸

¹¹⁷ Castalia, "Providing a D-Factor Mechanism under the DPP Framework: Report to Vector", April 2014

¹¹⁸ Castalia, "Providing a D-Factor Mechanism under the DPP Framework: Report to Vector", April 2014

- E6 However, we propose to limit this broad definition to:
- E6.1 Cases where distributors can prove energy efficiency purpose and intent; and
 - E6.2 Cases that exclude tariff measures (at least initially).
- E7 Improvements in energy efficiency, demand side management and energy losses 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.

Financial compensation

- E8 Under the proposed approach, distributors would only be compensated for foregone revenue resulting from energy efficiency and demand side management initiatives, ie, excluding compliance costs. We therefore do not propose to compensate for additional operating or capital costs associated with the demand side management activities.
- E9 The proposed approach would address the major issue around volume pricing that was identified by the ENA. In particular, the issue would be mitigated through providing compensation for foregone revenue. This is consistent with the approach recommended by Castalia, Powerco and Vector.¹¹⁹
- E10 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. 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.
- E11 Enernoc suggests allowing distributors to capture some of the benefits that their demand side management activities bring to the wider market as it would promote the outcomes of s 54Q.¹²⁰ We invite views on how such a scheme might work in practice.

¹¹⁹ Castalia, “*Providing a D-Factor Mechanism under the DPP Framework: Report to Vector*”, April 2014, Vector, “*Submission to Commerce Commission on the Default Price-Quality Paths from 1 April 2015: Process and issues paper*”, 30 April 2014, and Powerco, “*Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper*”, 30 April 2014.

¹²⁰ Enernoc, “*Submission in response to process and issues paper for default price-quality paths from 1 April 2015*”, 30 April 2014.

Demonstrating and verifying the link between activities and foregone revenue

- E12 We propose to adopt a principles based approach to establishing the link between energy efficiency and foregone revenue.
- E13 A credible link must be demonstrated between the activity and foregone revenue in order for the D-factor to adequately promote outcomes described in s 54Q. However high costs of demonstrating and verifying such a link may hamper these objectives. We therefore consider that given the recommended broad scope of activities covered by the D-factor, a principles-based approach that provides some discretion as to the level of scrutiny and information required offers a more pragmatic solution.
- E14 We therefore intend to be guided in our approval by the principles provided by Castalia for establishing a link between energy efficiency and demand-side management activities and revenue foregone as a result of those activities. The principles have been adapted from the principles used in the New South Wales D-factor and are provided in Table E1.
- 10.9 Given the principles outlined in Table E1, we intend to follow other recommendations outlined by Castalia to ensure the amount of information required reflects an appropriate standard of confidence in the link between energy efficiency and foregone revenue as part of the D-factor scheme established under the default price-quality path.
- E15 Castalia's recommendations include:¹²¹
- E15.1 requesting further information on the activities, representative samples or the calculations made to establish the link with forgone revenues;
 - E15.2 requesting an independent review of forgone revenue calculations or their basis;
 - E15.3 obtaining director certificates and/or an audit statement declaring the accuracy and veracity of the information presented;¹²²
- E16 It would be up to the Commission to determine which of these justifications, if any, would be required in each case.

¹²¹ Castalia, "Providing a D-Factor Mechanism under the DPP Framework: Report to Vector", April 2014

¹²² Depending on the timing and mode of recovery, these certifications may already accompany the EDB's annual compliance statement.

Table E1: Principles for estimating foregone revenue

Principle 1	Forgone revenue (FR) occurs as a result of a change in quantities to which a value is attributed; the calculation should separately identify the forgone quantity estimate (FQ) and the price estimate (P).
Principle 2	The forgone quantities may include energy consumption, energy demand and/or capacity. In addition, the quantities may relate to a specific time-period such as peak, off peak, or shoulder. Estimates of forgone quantities provided should be consistent with the relevant tariff structure
Principle 3	The energy efficiency initiative should be aimed at a clearly identified target quantity reduction (such as energy demand). This may be different to the actual quantity reduction calculated after the initiative has been implemented. The target quantity reduction for the efficiency initiative should be identified as part of the EDBs' design of the measure. When calculating forgone revenue (<i>ex-post</i>), the actual quantities forgone should be compared with the targeted change in quantities
Principle 4	The estimation process should identify whether other factors (such as weather or economic conditions) may explain part or all of the reduction in demand claimed. The application, or reporting, should state why the energy efficiency initiative provides a credible explanation for forgone revenue
Principle 5	Estimates of forgone quantities may be derived with reference to a representative sample, accompanied with an explanation of how it provides a reasonable estimate of actual aggregate effects of the initiative. The Commission may require independent confirmation of this as part of further information request steps to be detailed below. If the efficiency measure is implemented and managed through an energy performance contract or similar arrangement, the measurement process under the contract may meet this requirement
Principle 6	Estimates of prices to be applied to forgone quantities should be based on the appropriate tariff applying at the time the quantity was forgone. In other words, if an EDB implements an efficiency initiative in year t-1 which results in lower quantities in year t-1, then the relevant price is that tariff that would have applied to the forgone quantity in year t-1
Principle 7	If the efficiency initiative is targeted at a specific customer or project, the actual tariff applying to that customer or project should be used to estimate the forgone revenue. The application of this tariff should be limited to the component related to the use of the distribution network (i.e. price components from generation, transmission and retail should be excluded)
Principle 8	If the efficiency initiative affects quantities associated with more than one tariff, the price can be estimated based on actual quantities or appropriate weightings. The basis for any weighting needs to be shown to be appropriate for an estimate of forgone revenue
Principle 9	The approaches used to estimate changes in quantities should be consistent with the prices used to determine forgone revenues. For example, the same approach and assumptions should be used for weighting quantities and prices

- E17 Distributors would be free to withdraw the application for revenue recovery if the costs of compliance become too high.
- E18 Powerco submitted separately that:¹²³
- E18.1 Investors will need assurance that, in the event of a successful programme materially reducing volumes in the network (and hence volume based revenues) a transparent compensation mechanism will be applied; and
- E18.2 They consider that administration costs incurred by the Commission and the industry should be kept low in order to preserve the benefits of any initiatives and encourage innovation.
- E19 We are committed to ensuring that compliance costs are as low as practical in order to maintain the benefits of any energy efficiency initiatives. However, we would require verification in the form outlined above to allow compensation for foregone revenue under the D-factor.

The timing of financial compensation

- E20 Under the D-factor mechanism distributors will recover foregone revenue two years after the activity. This allows time for our assessment and approval of the amount as part of our review of the annual compliance statement.
- E21 We propose that 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 would obtain compensation through the D-factor 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.

¹²³ Powerco, "Default price-quality paths from 1 April 2015 for 17 electricity distributors: Process and Issues paper", 30 April 2014.

- E22 We determined that D-factor compliance should be assessed via the annual compliance statements because:
- E22.1 Distributors will be able to understand the demonstration and verification process sooner than waiting for a reset of the default price-quality path, creating more certainty for industry and promoting further investment in energy efficiency;
- E22.2 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.¹²⁴
- E23 Wellington Electricity outlined how an ex-ante forecast could be used together with a wash-up while Castalia considered that distributors could be able to select from three options (ex-ante adjustment, annual compliance statements, and default-price quality path resets).¹²⁵
- E24 For the reasons outlined above we have rejected these alternative options in relation to the timing of financial compensation.
- E25 We consider that the appropriate mechanism for recovery of approved foregone revenue is a new recoverable cost term, such as that used for approved avoided transmission charges (clause 3.1.3(1)e)) and approved new transmission contracts (clause 3.1.3(1)(c)).¹²⁶ This will increase certainty for suppliers that any energy efficiency or demand-side management initiative in the last two years of the regulatory control period may still be recovered in the next regulatory period.
- E26 Given the two-year lag, initiatives undertaken in the last two years of the regulatory period will not be recovered until the next regulatory period, following a reset. In order to ensure appropriate incentives are maintained in the last two years of the regulatory period, we consider it would be preferable to have the incentive allowance approved during annual compliance for the regulatory period, so that the recoverable cost amount will have been determined in accordance with the approval process set out in the determination and can be applied in the next regulatory period.

¹²⁴ Electricity Networks Association, "Submission on default price-quality paths from 1 April 2015 for 17 electricity distributors: process and issues paper", 30 April 2014.

¹²⁵ Wellington Electricity Lines Ltd, "Issues paper on 2015-2020 Default Price-quality Path, 30 April 2014 and Castalia, Providing a D-Factor Mechanism under the DPP Framework: Report to Vector", April 2014.

¹²⁶ Electricity Distribution Services Input Methodologies Determination 2012 [2012] NZCC 26.