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**Public version** 

# Proposed amendments to input methodologies: Incremental Rolling Incentive Scheme

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#### **Executive summary**

#### Purpose of paper

- X1 This paper seeks feedback on proposed amendments to input methodologies that would affect the incentives that suppliers have to control expenditure when their prices are regulated. By providing your views, you will help inform our final decision on these matters.
- X2 Details of how you can provide your views can be found in Chapter 7. Our final decision will be published as soon as practicable after responses have been received.
  - X2.1 Submissions are due by **Friday, 29 August 2014**.
  - X2.2 Cross-submissions are due by Friday, 12 September 2014.
- X3 Alongside this paper, we have published:
  - X3.1 Proposed drafting for the amendment to input methodologies; and
  - X3.2 Models that show the impact of applying the proposed amendments.
- X4 A question and answer session on the models will be held on 25 July 2014.

#### Incentives to control expenditure

- When subject to a price-quality path, a supplier is rewarded with higher profits if expenditure is controlled.
  - X5.1 At the end of the regulatory period, the benefits of any efficiency gains can be shared with consumers, including through lower prices.
  - X5.2 Ultimately, the prospect of a beneficial impact on prices is a key reason why we provide an incentive to suppliers to control expenditure in the first place.
- At present, the benefit sharing arrangements in place under Part 4 primarily depend on the type of regulation applying to each type of service. Table X1 matches each type of price-quality regulation to each type of service.

Table X1: Price-quality regulation applying to each type of service

Type of regulation	Type of service(s)
Default/customised price-quality regulation	<ul> <li>Electricity distribution services provided by 17 electricity distributors</li> </ul>
	<ul> <li>Gas distribution services provided by three gas distributors</li> </ul>
	<ul> <li>Gas transmission services provided by two gas transmission businesses</li> </ul>
Individual price-quality regulation	Electricity transmission services provided by     Transpower New Zealand

- X7 For each of the four types of service shown in Table X1, we have determined up-front rules, requirements, and processes of regulation, which are collectively referred to as 'input methodologies'.
- Amongst other things, the input methodologies include an Incremental Rolling Incentive Scheme (or 'IRIS'). The IRIS provides a mechanism by which suppliers can retain the benefits of efficiency gains beyond the end of a regulatory period. This mechanism is the subject of the proposed amendments discussed in this paper.
- X9 The existing IRIS:
  - X9.1 only affects incentives under customised and individual price-quality paths; and
  - X9.2 is often described as 'asymmetric'; and
  - X9.3 only affects incentives to control operating (not capital) expenditure.

This IRIS was set under s 52T(1)(c).

The existing IRIS can result in revenues being higher in the next regulatory period than they would have been in the absence of an IRIS; but revenues cannot be reduced by more than they would have been in the absence of an IRIS.

#### 'Process and Issues Paper' considered incentives under existing arrangements

- X10 In September 2013, we published a paper to invite submissions and cross-submissions on the incentives that suppliers have to control expenditure under the existing arrangements.<sup>3</sup> We also hosted a workshop after publishing that 'Process and Issues Paper' to allow people to ask questions about our analysis.
- X11 The analysis in the 'Process and Issues Paper' showed that:
  - X11.1 Efficiency gains are rewarded differently depending on the year in which the gain is made ('time inconsistency'); and
  - X11.2 Efficiency gains are rewarded differently depending on whether the gain is made in capital or operating expenditure.
- X12 In addition, efficiency gains and efficiency losses are not treated symmetrically, ie, the reward for making a gain is not equal to the penalty for making a loss of similar size.

#### Perverse incentives created by time inconsistency

- X13 Time inconsistency creates perverse incentives for suppliers to delay efficiency improvements. This perverse incentive was demonstrated in a number of worked examples in the 'Process and Issues Paper'. We showed that the profitability of an efficiency enhancing investment could be increased by altering its timing.<sup>4</sup>
- We also highlighted a special case of this type of perverse incentive, which is created when prices are reset based on a forecast that is reliant on a 'base year'. In particular, we demonstrated that the use of a base year creates perverse incentives for suppliers to shift operating activities into the 'base year'; and/or find other ways of inflating operating expenditure in that year.

#### Suppliers are exposed to the full cost of responding to one-off events

- X15 The analysis in the 'Process and Issues Paper' demonstrated that, under the existing arrangements, a supplier may be exposed to:
  - X15.1 100% or more of the costs of responding to events that have a temporary impact on expenditure; and
  - X15.2 Less than 50% of the costs of events that have a permanent impact on expenditure.

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Refer: Commerce Commission, *Incentives for Suppliers to Control Expenditure During a Regulatory Period: Process and Issues Paper*, 20 September 2013.

<sup>&</sup>lt;sup>4</sup> Refer, for example: Figure 9, above n 3.

X16 In our view, there is little reason why supplier profitability should be affected differently depending on whether the effects of the event are temporary or permanent in nature.

Asymmetry complicates the incentive facing suppliers — incompatible with time consistency

- In addition to the time inconsistency issue, and the treatment of one-off events, the asymmetric nature of the existing IRIS significantly complicates the incentives facing suppliers. This is because with an asymmetric IRIS, the efficiency incentive facing a supplier is dependent on:
  - X17.1 How the supplier expects to perform relative to the baseline in the year of the gain or loss; and
  - X17.2 How the supplier has performed relative to the baseline in the years preceding the gain or loss.
- X18 To provide an incentive that is constant over time, the IRIS must be symmetric.

Trade-off between operating and capital expenditure

- X19 Submitters on the 'Process and Issues paper' also tended to recognise the benefit of better aligning the incentives for operating expenditure and capital expenditure.<sup>5</sup>
- Aligning the incentive strength would be consistent with the recommendations from the Electricity Networks Association (ENA) working group on Energy Efficiency. For example, the report published by the group in April 2014 stated that: "The costs of providing electricity lines services should be treated equally (whether opex or capex), with incentives that are consistent over time."

Unison noted that: "On the first issue, if there are different retention strengths associated with opex and capex efficiencies, then at the margin regulation may affect incentives to make efficient opex / capex trade-offs." Refer: Unison Networks Limited, Submission on Incentives for Suppliers to Control Expenditure During a Regulatory Period: Process and Issues Paper, 21 October 2013.

Electricity Networks Association (ENA) Energy Efficiency Incentives Working Group, *Options and Incentives for Electricity Distribution Businesses to Improve Supply and Demand-Side Efficiency: Report to the to the Commerce Commission*, April 2014, p. viii.

- X21 Our view is that it is preferable to:
  - X21.1 Avoid large differences in the strength of the incentive to economise on operating relative to capital expenditure, which would occur if a symmetric IRIS is applied to one type of expenditure but not the other; and
  - X21.2 Set the retention factor for capital expenditure equal to the retention factor for operating expenditure, except where there are good reasons to prefer a different value.<sup>7</sup>
- X22 For example, we recognise that concerns about forecasting uncertainty, or the scope to manipulate forecasts, could be mitigated by varying the strength of the retention factor for capital expenditure.

#### Our proposal is for a time consistent incentive under all types of price-quality path

- V23 Under all types of price-quality path, we propose to put in place an incentive to control capital and operating expenditure that is the same in each year of the regulatory period.
- X24 A time consistent incentive means that the payoff from improving efficiency is greatest at the time an improvement is identified. Profits would therefore be maximised by making an efficiency improvement as early as possible.
- X25 Amongst other things, applying a time consistent incentive means that:
  - X25.1 Suppliers would no longer be exposed to the full cost of responding to external events that have a temporary impact on expenditure; and
  - X25.2 Suppliers would be unable to boost profits by inflating costs in a particular vear.<sup>9</sup>

are subject to default/customised price-quality regulation currently have an incentive to increase

expenditure in the base year used to determine the baseline for operating expenditure.

The approach is therefore consistent with \$ 52A(1)(b).

The approach is therefore consistent with promoting \$ 52A(1)(d). As noted in Chapter 2, suppliers that

In the recent draft decision on the default price-quality paths for electricity distributors, for example, we have proposed a retention factor of 20% for capital expenditure, to help mitigate the risks associated with low cost forecasts being too high or too low. Refer: Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014).

The approach is therefore consistent with s 52A(1)(b).

#### Approach for operating expenditure

- We propose that savings and losses be retained by the supplier for five years, after the year they are realised, before they are passed with consumers. <sup>10</sup>
- Our reasons for selecting a 5-year retention period were set out in our reasons paper for the existing IRIS. We noted that a 5-year retention period is broadly equivalent to a sharing ratio of 35:65 between suppliers and consumers, which is:
  - X27.1 Comparable to strength of the incentive that occurs naturally in the first year of a 5-year regulatory period; and
  - X27.2 Consistent with the strength of the incentive that is favoured by the Australian Energy Regulator.
- X28 With a retention period of five years:
  - X28.1 The short-term benefit to suppliers of achieving permanent operating efficiencies would be higher than it is under the existing arrangements; and
  - X28.2 The long-term benefit to consumers would always outweigh the short-term benefit to suppliers.<sup>11</sup>
- In addition, the proposed approach is intended to incentivise year-on-year improvements in operating efficiency, which can then be passed onto consumers through prices that are lower than they otherwise would have been. <sup>12</sup> In particular, any reductions in operating expenditure that are revealed by the proposed IRIS would feed into future forecasts of operating expenditure.
- X30 Chapter 5 provides further detail on the operation of the proposed scheme for operating expenditure.

For operating expenditure, the approach we proposed to apply is based on that applied by the Australian Energy Regulator under the Efficiency Benefit Sharing Scheme. Refer, for example: Australian Energy Regulator, *Electricity distribution network service providers: Efficiency benefit sharing scheme*, June 2008. http://www.aer.gov.au/node/6851

<sup>11</sup> The proposed approach is therefore consistent with promoting s 52A(1).

The proposed approach is therefore consistent with promoting s 52A(1)(c).

#### Approach for capital expenditure

X31 This section outlines and explains the general approach we propose for capital expenditure. Notable features include:

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- X31.1 The approach we propose for capital expenditure is similar to the approach for Transpower's base capital expenditure;
- X31.2 Unlike the approach proposed for operating expenditure, we propose to specify a retention 'factor' for capital expenditure, rather than specifying a retention period; and
- X31.3 The choice of retention factor would generally be decided at the time of each reset.
- We have proposed that the recoverable cost for capital expenditure would be calculated and applied in full in the second disclosure year of each regulatory period for the default or individual price-quality path. In practice, this means that all suppliers will determine the adjustment term at the same time, regardless of whether they are subject to a default, individual or customised price-quality path.<sup>13</sup>
- As explained in this paper, amongst other things, we expect that the proposed amendment would also solve two problems identified by stakeholders about the asset life assumption(s) relied on when setting price-quality paths. The two issues that have been identified, and which would be addressed, are as follows.
  - X33.1 The first issue is that the average asset lifetime assumption is an approximation and will not be accurate for all suppliers.
  - X33.2 The second issue is that, irrespective of the assumed asset life, suppliers currently have an incentive to invest in longer lived assets.
- Chapter 6 provides further detail on the operation of the proposed scheme for capital expenditure. Attachment B provides further detail on the retention factor that we propose to apply in situations in which the reset has already occurred, ie, for Orion New Zealand, and for suppliers of gas pipeline services.

If a supplier has transitioned between a default and a customised price-quality path during the regulatory period for the default price-quality path, the baseline for assessing gains and losses would reflect this transition, ie, for any years that the supplier is subject to a default price-quality path, the baseline is equal to the forecast of capital expenditure for those years that was determined when setting the default price-quality path; for the years that the supplier is subject to a customised price-quality path, the baseline is equal to the forecast of capital expenditure for those years that was determined when setting the customised price-quality path.

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#### When the new incentive properties would come into effect

- The amended incentive properties would come into effect as soon as practicable after the proposed amendment to input methodologies is made. However, the price-quality path will not be affected until the next regulatory period, ie, when recoverable costs will be calculated based on the amounts carried forward.
- X36 To give effect to the desired incentive properties in a timely manner, gains and losses would be carried forward from: 14
  - X36.1 1 October 2014 for gas distribution businesses;
  - X36.2 1 October 2014 for gas transmission businesses.
  - X36.3 1 April 2015 for Transpower New Zealand; and
  - X36.3 1 April 2015 for electricity distributors that are subject to the default price-quality path.
- In addition, the baseline used to calculate gains and losses would be consistent with any forecast determined by the Commission when setting the price-quality path for the supplier. At present, these forecasts are included in the financial model used set starting prices. In future, we intend to set out these amounts in the price-quality path determination.<sup>15</sup>

These dates may change depending on the timing of any amendment to IRIS. Further discussion of the treatment of gas pipeline businesses and Orion New Zealand can be found in Attachment B.

An example of this approach can be found in Schedule 7 of the customised price-quality path determination for Orion New Zealand. Refer: *Orion New Zealand Customised Price-Quality Path Determination 2013* [2013] (NZCC 21).

#### 1. Introduction

#### Purpose of paper

- This paper seeks feedback on proposed amendments to input methodologies that would affect the incentives that suppliers have to control expenditure when their prices are regulated. Details of how you can provide your views can be found in Chapter 7.
  - 1.1 Submissions are due by Friday, 29 August 2014.
  - 1.2 Cross-submissions are due by Friday, 12 September 2014.
- 2. By providing your views, you will help inform our final decision on these matters. Our final decision will be published as soon as practicable after responses have been received.

#### Incentives to control expenditure

- Under Part 4 of the Commerce Act 1986, we are periodically required to make decisions that affect the price that certain suppliers can charge for transporting energy in New Zealand. Each 'price-quality path' also specifies targets for service quality.
- 4. Each supplier has an incentive to economise on expenditure when subject to a price-quality path. This is because we place a limit on the average price the supplier can charge, or the total revenue that can be recovered. That limit is fixed for up to five years before it is reset at the end of the 'regulatory period'.
  - 4.1 During the regulatory period, the supplier is rewarded with higher profits if expenditure is controlled.
  - 4.2 At the end of the regulatory period, the benefits of any efficiency gains can be shared with consumers, including through lower prices.
- 5. Ultimately, the prospect of a beneficial impact on prices is a key reason why we provide suppliers with an incentive to control expenditure in the first place. <sup>16</sup>

Refer: s 52A(1). For a full discussion of how price-quality paths promote the purpose of Part 4, please see: Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper" (22 December 2010).

Sharing of benefits between suppliers and consumers

6. At present, the benefit sharing arrangements in place under Part 4 primarily depend on the type of regulation applying to each type of service. Table 1 matches each type of price-quality regulation to each type of service.

Table 1: Price-quality regulation applying to each type of service

Type of regulation	Type of service(s)
Default/customised price-quality regulation	<ul> <li>Electricity distribution services provided by 17 electricity distributors</li> </ul>
	<ul> <li>Gas distribution services provided by three gas distributors</li> </ul>
	<ul> <li>Gas transmission services provided by two gas transmission businesses</li> </ul>
Individual price-quality regulation	Electricity transmission services provided by     Transpower New Zealand

- 7. For each of the four types of service shown in Table 1, we have determined up-front rules, requirements, and processes of regulation, which are collectively referred to as 'input methodologies'. Input methodologies promote certainty in relation to a range of matters specified in the Act.
- 8. Amongst other things, the input methodologies include an Incremental Rolling Incentive Scheme (or 'IRIS').<sup>17</sup> The IRIS provides a mechanism by which suppliers can retain the benefits of efficiency gains beyond the end of a regulatory period. This mechanism is the subject of the proposed amendments discussed in this paper.
- 9. An IRIS was included in input methodologies to help address an issue that occurs when price-quality paths are reset at periodic intervals. In particular, as we explained in December 2010, periodic resets create a 'natural incentive' to achieve efficiency gains that declines as the regulatory period progresses.<sup>18</sup>
- 10. In an attempt to counteract the declining strength of the natural incentive, the existing IRIS was designed to allow suppliers to 'carry forward' the benefit of a saving in operating expenditure after the end of the regulatory period. In the absence of a carry forward mechanism, the natural incentive applies.

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<sup>&</sup>lt;sup>17</sup> This IRIS was set under s 52T(1)(c).

Refer: Commerce Commission, Input Methodologies (Electricity Distribution and Gas Pipeline Services) - Reasons Paper, December 2010.

#### Existing Incremental Rolling Incentive Scheme

- 11. The existing IRIS:
  - 11.1 only affects incentives under customised and individual price-quality paths;
  - 11.2 is often described as 'asymmetric'; and
  - 11.3 only affects incentives to control operating expenditure.
- 12. Incentives are affected under customised and individual price-quality paths because, when an individual or customised price-quality path comes to an end, the existing IRIS means that suppliers may be able to retain the benefit of efficiency gains for a set period of time.<sup>19</sup>
- 13. The existing IRIS does not apply to default price-quality paths because, at the time the IRIS was set, we had not developed a low cost approach for forecasting expenditure. An 'expenditure baseline' is needed because it provides the basis for assessing whether a gain or loss has been made.
- 14. The existing IRIS is said to be 'asymmetric' because:
  - 14.1 The existing IRIS can result in revenues being higher in the next regulatory period than they would have been in the absence of an IRIS; but
  - 14.2 Revenues cannot be reduced by more than they would have been in the absence of an IRIS.
- 15. The existing IRIS only affects incentives to control operating (not capital) expenditure. Therefore, at present, capital expenditure is subject to the natural incentive to achieve efficiencies, ie, the strength of the incentive to control expenditure changes as the regulatory period progresses.

Since any additional rewards are applied after the price-quality path comes to an end, the amounts do not affect the price-quality path that the supplier is subject to at the time any savings are made.

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Potential amendments to the Incremental Rolling Incentive Scheme

- 16. On 30 April 2013, we issued a notice of intention to begin work on potential amendments to the IRIS.<sup>20</sup> This is because our decisions in December 2010 for the existing IRIS reflected a cautious approach to the new Part 4 regime. We noted at the time that the asymmetric approach was likely to be interim, and we contemplated revisiting the IRIS at a later date, once the regime was operational.<sup>21</sup>
- 17. Since input methodologies were determined in December 2010, we have:
  - 17.1 reset the 2010–2015 default price-quality paths for 16 electricity distributors after developing low cost approaches for forecasting expenditure, at which point some submitters repeated their request that we amend the IRIS to carry forward gains from one default price-quality path to another;
  - 17.2 set a customised price-quality path for Orion New Zealand that applied the existing IRIS but noted that it may be amended during the regulatory period; and
  - 17.3 determined the input methodology for Transpower's capital expenditure proposals, which included an incentive mechanism for 'base capital expenditure'. <sup>22</sup>
- 18. Notably, the input methodology for Transpower's capital expenditure proposals ensures Transpower will have a symmetric and equal incentive to control base capital expenditure in each year of future regulatory periods.

The High Court has also stated that it expects us to reconsider the IRIS. Clifford J's decision (sitting with Davey and Shogren) in *Wellington International Airport Ltd and others v Commerce Commission* [2013] NZHC 3289, delivered on 11 December 2013, noted that the Court expects the Commission to review the existing IRIS, as indicated at the hearing – see paragraph 1937.

Regulators in other jurisdictions have also made incremental improvements to incentive mechanisms as their regulatory regime matures. In the United Kingdom, for example, Ofgem first introduced an equalised incentive on in 2009. More recently, the Australian Energy Regulator has introduced an incentive mechanism similar to the EBSS for capital expenditure in order to strengthen incentives for suppliers to deliver capital projects efficiently. The Capital Expenditure Sharing Scheme results in suppliers retaining 30% of any underspend or overspend. Refer: Australian Energy Regulator, Capital expenditure incentive guidelines for electricity network service providers, November 2013.

'Base capital expenditure' includes the majority of capital investment programmes that are due for completion, except large-scale capacity driven programmes that cost more than \$20 million. The specific definition of base capital expenditure can be found in: *Transpower Input Methodologies Determination* 2012 [2012] (NZCC 17).

'Process and Issues Paper' considered incentives under existing arrangements

- 19. In September 2013, we published a paper to invite submissions and cross-submissions on the incentives that suppliers have to control expenditure under the existing arrangements.<sup>23</sup> We also hosted a workshop after publishing that 'Process and Issues Paper' to allow people to ask questions about our analysis.
- 20. The analysis in the 'Process and Issues Paper' showed that:
  - 20.1 Efficiency gains are rewarded differently depending on the year in which the gain is made; and
  - 20.2 Efficiency gains are rewarded differently depending on the category of expenditure in which the gain is made.
- 21. In addition, efficiency gains and efficiency losses are not treated symmetrically, ie, the reward for making a gain is not equal to the penalty for making a loss of similar size.

#### Amendment proposed in this paper

22. Having reflected on the responses received on our 'Process and Issues Paper', we now consider that an amendment may be required. The amendments proposed in this paper would result in an incentive to control capital and operating expenditure under all price-quality paths that is the same in each year of the regulatory period.

Material released alongside this paper

- 23. Alongside this paper, we have published:
  - 23.1 Proposed drafting for the amendment to input methodologies (draft amendment determination) as required under s 52V(2); and
  - 23.2 Models that show the impact of applying the proposed amendments, and which follow a similar format as the models released alongside our 'Process and Issues Paper'. 24
- 24. We encourage you to consider the models alongside this paper and the draft amendment determination. As discussed in Chapter 7, we also intend to host a question and answer session on the models on 25 July 2014.

Refer: Commerce Commission, *Incentives for Suppliers to Control Expenditure During a Regulatory Period: Process and Issues Paper*, 20 September 2013.

These models demonstrate that the formulas in the draft amendment determination give effect to the desired retention factors.

#### 2. Scope to improve existing incentives

#### **Purpose of chapter**

- 25. In this chapter, we set out our view on why there is scope to improve the existing incentives that suppliers have to control expenditure under each type of price-quality path. Following discussions at the workshop, and reviewing submissions, we have identified four main themes.
  - 25.1 Perverse incentives created by time inconsistency.
  - 25.2 Treatment of events that are outside a supplier's control.
  - 25.3 Complications caused by an asymmetric IRIS.
  - 25.4 Trade-off between capital and operating expenditure.
- 26. We invite you to provide your views on our current thinking about the incentives in place under the existing arrangements.

#### Perverse incentives created by time inconsistency

- 27. The analysis we presented in the 'Process and Issues Paper' demonstrated that, under the existing arrangements, efficiency gains and losses are rewarded differently depending on the year in which they occur. Most submitters agreed with our analysis. Some said the existing incentives were 'not time consistent'. 26
- 28. Time inconsistency creates incentives for suppliers to delay efficiency improvements. This perverse incentive was demonstrated in a number of worked examples in the 'Process and Issues Paper'. We showed that the profitability of an efficiency enhancing investment could be increased by altering its timing.<sup>27</sup>

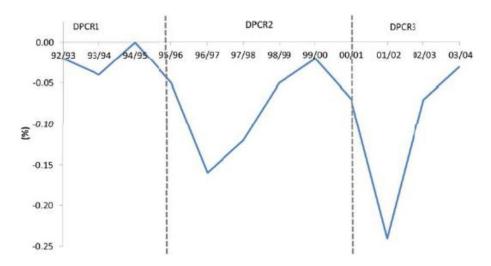
The analysis and terminology relied on in this paper is explained in detail the Process and Issues Paper. For example, we assumed for simplicity that a supplier achieves an efficiency gain in a year if the actual level of expenditure for that year differs from the expenditure forecast. The change in expenditure is referred to as a 'saving' or 'loss' (respectively).

Refer: Electricity Networks Association, *Comment on the Commerce Commission's Incentives Paper*, 18 October 2013.

Refer, for example: Figure 9, Process and Issues Paper.

- 29. We also highlighted a special case of this type of perverse incentive, which is created when prices are reset based on a forecast that is reliant on a 'base year'. In particular, we demonstrated that the use of a base year creates incentives for suppliers to:
  - 29.1 Shift operating activities into the 'base year'; and/or
  - 29.2 Find other ways of inflating operating expenditure in that year.
- 30. A number of submissions recognised that time inconsistent incentives could have an impact on the timing of expenditure.<sup>28</sup> For example, Vector illustrated the impact of regulatory incentives in its cross-submission.<sup>29</sup> The analysis illustrated clear changes in operating expenditure by UK distributors in line with the regulatory timeframes.

Vector cross-submission on process and issues paper (p. 2): Growth in real unit operating expenditure (UK distribution)



31. In light of this issue, our view is that it would be preferable to change the existing incentives to remove any time inconsistencies. Suppliers would then have a financial incentive to achieve efficiencies as soon as they are identified.

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For example, Wellington Electricity argued that "The strength of the incentives should be consistent across each year of the regulatory period. This is important so that suppliers spend or invest when it is efficient to do so, and are not encouraged to inefficiently defer or advance projects within or across regulatory periods". Refer: Wellington Electricity Lines Limited, *Expenditure Incentives Process and Issues Paper*, 21 October 2013, p. 2. Similarly, the ENA stated that "it is desirable that the strength of incentives are broadly time consistent".

Refer: Vector Limited, *Cross-submission to the Commerce Commission on Incentives for Suppliers to Control Expenditure During a Regulatory Period*, 1 November 2013, p. 2.

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#### Temporary and permanent changes in operating expenditure are treated differently

- 32. The analysis presented in the 'Process and Issues Paper' also demonstrated that, for operating expenditure, gains and losses are treated differently depending on whether they are temporary or permanent in nature.
- 33. The differential treatment is important because, as noted by a number of submitters, incentives are not the only influence on expenditure decisions; other factors are also relevant. For example, expenditure is often affected by events that occur that are outside a supplier's control. By way of example, Powerco's submission noted that "most expenditure is driven by the practical needs of the businesses concerned and is not discretionary". 30
- 34. The analysis in the 'Process and Issues Paper' demonstrated that, under the existing arrangements, a supplier may be exposed to:
  - 34.1 100% or more of the costs of responding to events that have a temporary impact on expenditure; and
  - 34.2 Less than 50% of the costs of events that have a permanent impact on expenditure.
- 35. In our view, there is little reason why supplier profitability should be affected differently depending on whether the effects of the event are temporary or permanent in nature. We do not consider it necessary for suppliers to be fully exposed to "large increases of expenditure (100% or more in a single year) to deal with a newly identified potential hazard in a timely manner". 31

Refer: Powerco Limited, *Re: Incentives for Suppliers to Control Expenditure During a Regulatory Period*, 21 October 2013, p. 2. Eastland Network made similar points in their submission, suggesting (for example) that "any regulatory savings will not be sufficient enough to outweigh the other business factors and therefore does not materially affect any decision making". Refer: Eastland Network, *Submission to Commerce Commission Incentives for Suppliers to Control Expenditure During a Regulatory Period: Process and Issues Paper*, 21 September 2013, p. 1. A final example would be the point raised by Transpower New Zealand: "some expenditure is driven by weather events, regulatory changes, or industry events". Refer: Transpower New Zealand, *Incentives for suppliers to control expenditure*, 21 October 2013, p. 1.

Refer: Maui Development Limited, *Untitled letter (in response to Process and Issues Paper)*, 18 October 2013, p. 2.

#### Complications caused by an asymmetric Incremental Rolling Incentive Scheme

36. In addition to the time inconsistency issue, and the treatment of one-off events, the asymmetric nature of the IRIS significantly complicates the incentives facing suppliers. This is because the incentive facing a supplier is dependent on:

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- 36.1 How the supplier expects to perform relative to the baseline in the year of the gain or loss; and
- 36.2 How the supplier has performed relative to the baseline in the years preceding the gain or loss.
- 37. We therefore disagree with the view expressed by Transpower New Zealand that, under an asymmetric IRIS, a bad year would not wipe out good work in previous years. This is because, under an asymmetric IRIS, a bad year would still reduce or eliminate any positive amounts carried forward from previous periods.
- 38. Rather, to provide an incentive that is constant over time, the IRIS must be symmetric. An asymmetric IRIS would mean that the incentive is not constant over time because it would depend on the expenditure relative to the allowance.

#### Trade-off between two types of expenditure

- 39. Finally, the existing arrangements provide an incentive to prefer one type of expenditure over another. <sup>32</sup> The analysis presented in the 'Process and Issues Paper' outlined how cost savings made by distributors can be rewarded differently depending on the whether they are classified as operating expenditure or capital expenditure.
- 40. 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.

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.

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- 41. The submissions received generally recognise the benefit of aligning the incentives for operating expenditure and capital expenditure.<sup>33</sup> It is considered that this is more likely to lead to a better overall outcome without inefficient operating/capital expenditure substitutions.
- 42. There was also an indication by some submitters that this issue was not of primary importance due to limits on the amount of possible substitution. For example, the ENA submit that aligning incentives for controlling operating and capital expenditure should not be the primary focus as "The opportunities for an electricity networks business (ENB) to substitute capex for opex are modest."<sup>34</sup>
- 43. Equally, however, better aligning the incentive strength would be consistent with the recommendations from an ENA working group on Energy Efficiency. The report published by the group in April 2014 stated that: "The costs of providing electricity lines services should be treated equally (whether opex or capex), with incentives that are consistent over time." 35
- 44. Our view is that it is preferable to:
  - 44.1 Avoid large differences in the strength of the incentive to economise on operating relative to capital expenditure, which would occur if a symmetric IRIS is applied to one type of expenditure but not the other; and
  - 44.2 Set the retention factor for capital expenditure equal to the retention factor for operating expenditure, except where there are good reasons to prefer a different value.<sup>36</sup>

Refer: above n 26, p. 2

Wellington Electricity stated that: "Incentives should be balanced between opex and capex. Suppliers should make decisions on opex and capex substitutions based on the most efficient outcome (in terms of both expenditure and reliability) expected over the long term. It is essential that suppliers are not encouraged to make inefficient opex and capex substitutions as a result of significantly different rewards/penalties available under the applicable incentives schemes." Similarly, Unison noted that: "On the first issue, if there are different retention strengths associated with opex and capex efficiencies, then at the margin regulation may affect incentives to make efficient opex / capex trade-offs." Refer: Unison Networks Limited, Submission on Incentives for Suppliers to Control Expenditure During a Regulatory Period: Process and Issues Paper, 21 October 2013.

<sup>&</sup>lt;sup>34</sup> Refer: above n 26, p. 2.

Electricity Networks Association (ENA) Energy Efficiency Incentives Working Group, *Options and Incentives for Electricity Distribution Businesses to Improve Supply and Demand-Side Efficiency: Report to the to the Commerce Commission*, April 2014, p. viii.

In the recent draft decision on the default price-quality paths for electricity distributors, for example, we have proposed a retention factor of 20% for capital expenditure, to help mitigate the risks associated with low cost forecasts being too high or too low. Refer: Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014).

- 45. For example, we recognise that concerns about forecasting uncertainty, or the scope to manipulate forecasts, could be mitigated by varying the strength of the retention factor for capital expenditure. There is a trade-off between:
  - 45.1 aligning the strength of the incentive for capital expenditure relative to operating expenditure; and
  - 45.2 mitigating risks associated with the approach used to forecast capital expenditure.
- 46. The uncertainty associated with expenditure forecasts are higher for default price-quality paths than they are for individual or customised price-quality paths. This is because we are required to rely on low cost forecasting techniques when setting default price-quality paths, rather than applying full audit, verification, and approval processes. It may therefore be appropriate to adopt a more cautious approach when setting the retention factor for capital expenditure under a default price-quality path.

#### 3. Proposed incentive properties

#### **Purpose of chapter**

47. This chapter outlines and explains the incentives that we propose to put in place by amending the existing Incremental Rolling Incentive Scheme.

#### Time consistent incentive under all types of price-quality path

- 48. Under all types of price-quality path, we propose to put in place an incentive to control expenditure that is the same in each year of the regulatory period. Unlike the existing asymmetric IRIS for operating expenditure, the proposed IRIS would provide incentives that are the same in each year.
- 49. In contrast to the existing IRIS, the proposed IRIS would result in suppliers retaining the same proportion of a saving or a loss, irrespective of:
  - 49.1 The year of the saving or the loss;
  - 49.2 Expenditure relative to the baseline in the year of the saving or loss; and
  - 49.3 Expenditure relative to the baseline in any previous year.
- 50. Importantly, as explained in Chapter 3, a symmetric approach is the only one in which incentives are 'time consistent', ie, where the incentive to control expenditure remains constant throughout the regulatory period. Amongst other things, applying a time consistent incentive also means that:
  - 50.1 Suppliers would no longer be exposed to the full cost of responding to external events that have a temporary impact on expenditure; and
  - 50.2 Suppliers would be unable to boost profits by inflating costs in a particular year.<sup>37</sup>
- 51. A time consistent incentive also means that the payoff from improving efficiency is greatest at the time an improvement is identified.<sup>38</sup> The proposed approach therefore helps to minimise the perverse incentive that currently exists to delay efficiency improvements. Instead, profits would be maximised by making an efficiency improvement as early as possible.

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The proposed approach is therefore consistent with promoting s 52A(1)(d) of the Act. As noted in Chapter 2, suppliers that are subject to default/customised price-quality regulation currently have an incentive to increase expenditure in the base year used to determine the baseline for operating expenditure.

Consistent with s 52A(1)(b).

#### Time consistent incentive for operating and capital expenditure

- 52. The proposed amendment would provide a time consistent incentive to control both operating expenditure and capital expenditure. As noted above, a time consistent approach will result in incentives that are the same in each year of the regulatory period.
- 53. However, as explained in Chapter 4, the strength of the incentive applying to capital expenditure may be varied relative to the incentive strength applying to operating expenditure. The choice of retention factor for capital expenditure would be decided at the time of each reset.

#### When the new incentive properties would come into effect

- 54. The amended incentive properties would come into effect as soon as practicable after any amendment is made. However, the price-quality path will not be affected until the next regulatory period, ie, the regulatory period that the gains or losses are carried into.
- 55. To give effect to the desired incentive properties in a timely manner, gains and losses would be carried forward from:<sup>39</sup>
  - 55.1 1 October 2014 for gas distribution businesses;
  - 55.2 1 October 2014 for gas transmission businesses.
  - 55.3 1 April 2015 for Transpower New Zealand; and
  - 55.4 1 April 2015 for electricity distributors that are subject to default price-quality paths.
- The baseline used to calculate gains and losses would be consistent with any forecast determined by the Commission when setting the price-quality path for the supplier. At present, these forecasts are included in the financial model used to set starting prices. In future, we intend to set out these amounts in the price-quality path determination.<sup>40</sup>

These dates may change depending on the timing of any amendment to IRIS. Further discussion of the treatment of gas pipeline businesses and Orion New Zealand can be found in Attachment B.

An example of this approach can be found in Schedule 7 of the customised price-quality path determination for Orion New Zealand. Refer: *Orion New Zealand Customised Price-Quality Path Determination 2013* [2013] (NZCC 21).

#### 4. General approach for each type of expenditure

#### **Purpose of chapter**

57. This chapter outlines and explains the general approach we propose to apply to each type of expenditure to give effect to the desired incentives.

#### General approach for operating expenditure

- 58. This section outlines and explains the general approach we propose for operating expenditure. Notable features include:
  - 58.1 The approach we propose for operating expenditure is based on the Australian Energy Regulator's Efficiency Benefit Sharing Scheme, but we have tailored it to Part 4 to give effect to equivalent incentives; and
  - 58.2 The proposed retention period for savings and losses is five years following the year of the gain and loss, which is equivalent to a retention factor of around 35% for a supplier.
- 59. The proposed approach is intended to incentivise year-on-year improvements in operating efficiency, which can then be passed onto consumers through prices that are lower than they otherwise would have been. In particular, any reductions in operating expenditure that are revealed by the proposed IRIS would feed into future forecasts of operating expenditure.
- 60. With a retention period of 5 years:
  - 60.1 The short-term benefit to suppliers of achieving permanent operating efficiencies would be higher than it is currently; and
  - 60.2 The long-term benefit to consumers would always outweigh the short-term benefit to suppliers.<sup>41</sup>
- 61. Chapter 5 provides further detail on the operation of the proposed scheme for operating expenditure.

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<sup>&</sup>lt;sup>41</sup> Consistent with s 52A(1).

Approach for operating expenditure based on that of the Australian Energy Regulator

- 62. For operating expenditure, the approach we proposed to apply is based on that applied by the Australian Energy Regulator under the Efficiency Benefit Sharing Scheme. <sup>42</sup> In particular, we propose that suppliers should retain the benefits of each saving, and be exposed to each loss, for a set period of time before sharing it with consumers.
- 63. A number of factors have caused us to modify the approach used by the Australian Energy Regulator to achieve similar incentives. Amongst other things, we have had to address the following features:
  - 63.1 At the start of a default price-quality path, prices may be adjusted or rolled over, so we cannot assume that efficiencies will necessarily be shared with consumers at the time of the reset;<sup>43</sup>
  - 63.2 Except for Transpower New Zealand, suppliers may transition between default and customised price-quality paths, while others may remain on a default price-quality path throughout;
  - 63.3 Price-quality paths can be of varying lengths, including the possibility of returning to a default price-quality path with only one or two years remaining;
  - When setting an individual or customised price-quality path, the forecast of operating expenditure is based on a detailed review of future expenditure requirements, so there is not a direct link with actual expenditure in a base year; and
  - 63.5 For suppliers of gas pipeline services, there are mismatches between disclosure years, financial years, and pricing years, which require some values to be determined on a pro rata basis.
- Our focus has been on simplifying the calculations that are required in the most likely scenarios, such as for suppliers that remain on a default price-quality path for multiple regulatory periods. The calculations are less straightforward in situations that are less likely. However, we have modelled the impact of the calculations to demonstrate how they operate in practice.

Refer, for example: Australian Energy Regulator, *Electricity distribution network service providers: Efficiency benefit sharing scheme*, June 2008. http://www.aer.gov.au/node/6851

Alternatively, we could assume that prices will only ever be rolled over if an appropriate sharing occurs. In this case, the formula for a roll over would be the same as the formula for a starting price adjustment. However, we have provided a mechanism that will provide an equalised incentive irrespective of whether efficiencies are shared when prices are rolled over.

#### Proposed retention period of five years for gains and losses

- 65. Consistent with the approach used by the Australian Energy Regulator, we propose to allow suppliers to retain the benefits of savings and losses for 5 years following the year in which they are realised. This approach matches the current retention period for efficiency gains under the asymmetric IRIS for individual and customised price-quality paths.
- 66. Notably, the length of the 'retention period' determines the proportion of any savings or losses that are retained by the supplier, ie, before being shared with consumers. In other words, the length of the retention period determines the 'retention factor'.<sup>44</sup>
- 67. Our reasons for selecting a 5 year retention period were set out in our reasons paper for the existing IRIS. We noted that a 5 year retention period is broadly equivalent to a sharing ratio of 35:65 between suppliers and consumers, which is:
  - 67.1 Comparable to strength of the incentive that occurs naturally in the first year of a 5 year regulatory period; and
  - 67.2 Consistent with the strength of the incentive that is favoured by the Australian Energy Regulator.
- 68. We invite you to provide your views on whether a longer or shorter retention period would be appropriate. When we considered this matter previously, a number of submitters indicated support for a 10 year retention period (equivalent to a sharing ratio of 55:45). However, little evidence was provided to demonstrate that real life expenditure decisions could be perversely affected in the absence of a longer retention period.<sup>45</sup>

This approach contrasts with the approach we propose for capital expenditure, where the retention factor would be specified directly (refer Chapter 5).

In the Process and Issues Paper, we relied on stylised examples to demonstrate the impact of incentives on investment decisions. If submitters are of the view that a longer retention period would be appropriate, a similar approach, supported by facts and figures, could be used to help demonstrate that.

#### General approach for capital expenditure

69. This section outlines and explains the general approach we propose for capital expenditure. Notable features include:

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- 69.1 The approach we propose for capital expenditure is similar to that applied to Transpower's base capital expenditure;
- 69.2 Unlike the approach proposed for operating expenditure, we propose to specify the retention factor directly for capital expenditure, rather than specifying a retention period; and
- 69.3 The choice of retention factor would generally be decided at the time of each reset.
- 70. Chapter 6 provides further detail on the operation of the proposed scheme for capital expenditure. Attachment B provides further detail on the retention factor that we propose to apply in situations in which the reset has already occurred, ie, for Orion New Zealand, and for suppliers of gas pipeline services.

Approach for capital expenditure similar to that used for Transpower New Zealand

71. For capital expenditure, we propose to provide a time consistent incentive that is similar to the incentive on base capital expenditure for Transpower New Zealand. At present, for services provided by other suppliers, the existing IRIS does not require savings or losses to be carried forward for capital expenditure.

Retention factor would be specified directly rather than through a retention period

- 72. Unlike the approach we propose for operating expenditure, in which the retention period implies a retention factor, we propose to specify the retention factor for capital expenditure directly. This approach is similar to the approach applied to Transpower's base capital expenditure.
- 73. The approach for capital expenditure would therefore operate in a slightly different way than the approach for operating expenditure, but with a similar effect. The difference in approach from operating expenditure is due to differences in the way capital expenditure is recovered over time, ie, through a return *on* and *of* capital.
- 74. In keeping with the approach that applies to Transpower, the proposed IRIS would require the Commission to determine a retention factor for each supplier at the time of each reset. Suppliers would therefore have certainty that the retention factor would be specified in advance of any efficiency improvements being achieved.

We do not propose to amend the incentives on capital expenditure for Transpower New Zealand.

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Choice of retention factor at the time of each reset

- 75. When specifying the retention factor, a number of considerations could be taken into account at the time of each reset. For example, the retention factor could be aligned to the retention factor implied for operating expenditure, which might help address the issues identified in Chapter 2. Another option would be to vary the retention factor for capital expenditure in light of consultation on the reset, eg, in combination with the setting of the capital expenditure allowance.<sup>47</sup>
- 76. Alternatively, rather than requiring that the retention factor be determined at the time of each reset, we could:
  - 76.1 Specify the retention factor in input methodologies; or
  - 76.2 Specify the approach that we will use to determine the retention factor.
- 77. We note, however, that regulators in overseas jurisdictions often vary the strength of the incentive, from one regulatory period to another, in light of consultation with stakeholders between each reset. For example:
  - 77.1 In the UK, Ofgem have applied an approach known as 'menu regulation', in which the retention factor varies from one regulatory period to another, and across suppliers; and
  - 77.2 In the UK and other jurisdictions, regulators have introduced incentive mechanisms similar to the proposed IRIS, as the regulatory regime matures, which can lead to changes in the strength of the incentive from one regulatory period to another.
- 78. We therefore do not consider it necessary or desirable to specify the retention factor in the input methodologies. The benefit of this approach is that it ensures the retention factor can be set in the most appropriate way at each reset, without sacrificing the up-front certainty that is provided to suppliers and consumers by knowing the retention factor that will apply before spending is incurred.

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As noted in paragraph 44, our current view is that the retention factor for capital expenditure would be set equal to the retention factor for operating expenditure, except where there were good reasons to prefer a different value.

79. In our recent draft decision on the default price-quality paths for electricity distributors, we proposed a retention factor for capital expenditure of 20%. The reasons for that proposal are explained in the paper published on 4 July 2014. We invite submissions on that proposal as part of consultation on default price-quality paths.

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

#### 5. Proposed scheme — operating expenditure

#### **Purpose of chapter**

80. This chapter sets out and explains the approach we propose to apply to operating expenditure.

#### How adjustments to allowed revenue are calculated

81. This section explains the method for calculating the recoverable cost term that would be allowed under the proposed IRIS for operating expenditure. <sup>49</sup> The intention behind applying this method is to ensure that, in each year of the regulatory period, suppliers would retain the same proportion of any incremental saving or loss in operating expenditure.

#### 82. The steps in this method are:

- 82.1 Amounts that are generally equal to the incremental change in operating expenditure are carried forward from earlier years in which the savings or losses are made; and
- 82.2 The amounts carried forward into each year are added together to determine the recoverable cost term.
- 83. In the second full year after the price-quality path started to apply to the supplier, a one-off adjustment is made after the carry forward amounts are added together. As explained further below, this adjustment is required to give effect to the desired sharing of benefits between suppliers and consumers.
- 84. The adjustment that must be made to the carry forward amounts differs depending on the situation the supplier is in. For example, the adjustment is different if the supplier is subject to a customised price-quality path rather than a default price-quality path.
- 85. This approach is designed to make compliance as straight forward as possible for suppliers. The amounts to be carried forward are always calculated the same way. The adjustments are calculated infrequently, and have been designed to be the simplest for the situations that are likely to arise most often, eg, suppliers that remain on default price-quality paths for multiple regulatory periods.

Consistent with the existing IRIS, the adjustment to allowed revenue would be provided through a recoverable cost term.

The requirements for information disclosure could be amended so that suppliers would disclose the carry forward amounts on an annual basis.

Generally the adjustment amounts will be calculated once every five years.

#### Calculation of amounts to be carried forward

- 86. For operating expenditure, the amounts carried forward are calculated in a similar way to the way that they would be calculated under the approach used by the Australian Energy Regulator, and under the existing IRIS. The amount carried forward from a year would calculated as the difference between (or 'increment') between:
  - 86.1 The saving or loss experienced in the current year, relative to the expenditure baseline; and
  - 86.2 The saving or loss experienced in the previous year, relative to the expenditure baseline.
- 87. The reasons for calculating incremental savings and losses in this way are explained in the reasons paper that accompanied the existing IRIS.<sup>52</sup> In summary, operating expenditure is generally recurring. For example, if a supplier reduces staff numbers in year one of the regulatory period, then operating expenditure will likely be lower than forecast not just in that year but in subsequent years too.
- 88. As a result, when assessing the extent of a gain relative to the forecast, it is appropriate to focus on incremental changes from one year to another, rather than simply the performance relative to the forecast in that year. This approach ensures that suppliers have an incentive to improve performance year-on-year, while also ensuring that past gains or losses are not double counted.

Simplifying assumptions in the first and final years of a price-quality path

89. Simplifying assumptions are required in the first and the final years of a price-quality path. These assumptions are explained by the fact that, at the time prices are set at the start of a new price-quality path, a supplier's actual expenditure in the final year of the previous price-quality path will not be known. Consequently, it is not possible to calculate the amount carried from the final year of the previous price-quality path.

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Refer: Commerce Commission "Input Methodologies (Electricity Distribution and Gas Pipeline Services)
Reasons Paper" (22 December 2010).

- 90. Recognising this issue, and consistent with the approach used by the Australian Energy Regulator, under the proposed IRIS:<sup>53</sup>
  - 90.1 The incremental change in the final year of a price-quality path is assumed to be nil, ie, the carry forward amount is zero; and
  - 90.2 After the first year of the subsequent price-quality path, an adjustment must be made to correct for the incremental change that actually occurred in the final year.
- 91. Notably, where a supplier is only subject to a price-quality path for one year or less, that period of time is treated as the final year of the price-quality path (rather than the first). This is because information about expenditure will not be available at the time the supplier sets prices at the start of the next price-quality path.

One-off adjustment in second full year of a price-quality path

- 92. As noted above, a one-off adjustment must be made in the second full disclosure year to give effect to the desired incentives. The 'adjustment amount' is added to the sum of any amounts carried forward from previous years. In general, the adjustment amount will be calculated the same way by all suppliers; however, the method for calculating the adjustment amount does vary in a number of situations.
- 93. Most obviously, the one-off adjustment in the second year is required to correct for the difference between the actual and assumed level of operating expenditure in the final year of the preceding price-quality path. This adjustment is required because the incremental change in the final year of a price-quality path is assumed to be nil.
- 94. However, the adjustment amount will vary depending on the specific situation that the supplier is in. For example, the adjustment amount depends on:
  - 94.1 What type of price-quality path the supplier is subject to, which affects how the incremental change in the final year must be assessed;
  - 94.2 How starting prices for the price-quality path were set, ie, whether efficiency gains were shared with consumers through a starting price adjustment;<sup>54</sup> and
  - 94.3 Whether the supplier was subject to the preceding price-quality path for two consecutive years immediately before it came to an end.

The same approach is adopted under the EBSS but the formulas differ for the reasons given at paragraph 63.

Irrespective of whether prices are adjusted or rolled over at the start of a default price-quality path, we expect to determine a baseline for operating expenditure by projecting forward an initial level of operating expenditure from a single year.

- 95. The proposed adjustment amount would be included in recoverable costs in the year in which it is calculated, ie, the second year of the price-quality path. This contrasts with the approach used by the Australian Energy Regulator, in which the adjustment treated like a carry forward amount, ie, carried forward for five years following the date of the adjustment.<sup>55</sup> We have achieved a similar outcome by making the adjustment sooner but with an adjustment for the time value of money.<sup>56</sup>
- 96. The calculations for the adjustment amount vary in each situation and are set out in the accompanying draft amendment determination. More detail on the reasons why the various adjustments are required can be found in Attachment A.

What happens when a supplier is not subject to a price-quality path for two years in a row

- 97. If a supplier is not subject to the same price-quality path for two years in a row, the adjustment amount is calculated in the second full year of the next price-quality path. Orion New Zealand, for example, would first be expected to calculate an adjustment amount in the disclosure year 1 April 2022 to 31 March 2023.<sup>57</sup>
- 98. Under default/customised price-quality regulation, there are a number of circumstances in which a supplier may not be subject to a price-quality path for two consecutive years. For example, when Orion New Zealand's customised price-quality path comes to an end, there will likely be one year remaining in the regulatory period for the default price-quality path.

#### Baseline for assessing gains and losses based on Commission forecast

99. The baseline used to assess gains and losses would be consistent with any forecast determined by the Commission when setting the price-quality path for the supplier. This forecast will be determined consistent with the input methodologies for the type of service, and the type of price-quality path applying the supplier.

We have taken this approach because of the complications caused by possible transitions between default and customised price-quality paths, which affect the time at which carry forward amounts materialise in recoverable costs. For example, if a supplier transitions to a customised price-quality path, then the amounts carried forward under the default price-quality path will materialise in recoverable costs during the term of the customised price-quality path, rather than during the next regulatory period for the default price-quality path.

In the models that we published alongside this paper, we have included both approaches to help demonstrate how both approaches compare.

Extending the example further, if Orion New Zealand were to apply for another customised price-quality path to start from 1 April 2022, then the adjustment term would be nil until the second disclosure year of the customised price-quality path.

Baseline for operating expenditure for individual and customised price-quality paths

100. For an individual or customised price-quality path, the baseline for operating expenditure is set by reviewing a supplier's forecast in detail. A range of techniques may be used, including full audit, verification, and approval processes.

Baseline for operating expenditure for default price-quality paths

- 101. For suppliers that are subject to default price-quality paths, we would be required to set out the expenditure baselines irrespective of:
  - 101.1 Whether starting prices are set under s 53P(3)(a) or (b); and
  - 101.2 Whether the distributor transitions from a customised price-quality path.
- 102. The approach we have applied in the draft amendment determination assumes that, if starting prices are set under s 53P(3)(a), then no efficiencies are shared with consumers. In other words, the supplier's actual level of operating expenditure has no impact on the revenue in the next period when prices are rolled over.
- 103. Therefore, in the draft amendment determination, we have assumed that the baseline will be determined by projecting forward the (historic) level of operating expenditure that was used the last time efficiency gains were shared with consumers. In other words, the Commission's forecasting model would be extended by five years, and the initial level would remain the same, ie, it would not reflect recent actual expenditure.
- 104. If starting prices are reset under s 53P(3)(b), the Commission's forecasting model would be used to determine the baseline. This means that the forecast will be developed by projecting forward an initial level of operating expenditure. This initial level would be the most recently disclosed data prior to the reset.
- 105. In case of the supplier moving from a customised price-quality path to a default price-quality path, our preference would be to project forward the allowance in the penultimate year of the customised price-quality path. We invite views on whether an alternative approach would be more appropriate.

# 6. Proposed scheme — capital expenditure

# **Purpose of chapter**

106. This chapter sets out and explains the approach we propose to apply to capital expenditure.

#### Calculation and application of adjustment for capital expenditure

- 107. We have proposed that the adjustment for capital expenditure would be calculated and applied in full in the second year of each regulatory period for the default or individual price-quality path. In practice, this means that all suppliers will determine the adjustment for capital expenditure at the same time, regardless of whether they are subject to a default, individual or customised price-quality path.<sup>58</sup>
- 108. We invite views on the timing of the adjustment. In particular, we are interested in views on whether the adjustment should be spread over time, or applied in full in a single year. If the adjustment is to be spread over time, we would propose to spread it in equal amounts across the remainder of the regulatory period.
- 109. Notably, irrespective of the timing of the adjustment, the short-term impact on prices is more than offset by the long-term impact. In particular, the present value of the amount retained by suppliers is lower than the present value of the amount shared with consumers.

#### Calculation of required adjustment

110. For capital expenditure, the required adjustment should reflect the amount of capital expenditure incurred in each year. The proposed amendment would ensure that suppliers share a certain percentage of each additional dollar spent with consumers.

If a supplier has transitioned between a default and a customised price-quality path during the regulatory period for the default price-quality path, the baseline for assessing gains and losses would reflect this transition, ie, for any years that the supplier is subject to a default price-quality path, the baseline is equal to the forecast of capital expenditure for those years that was determined when setting the default price-quality path; for the years that the supplier is subject to a customised price-quality path, the baseline is equal to the forecast of capital expenditure for those years that was determined when setting the customised price-quality path.

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- 111. The calculation is complicated by the fact that capital expenditure is recovered over time, ie, through the return *on* and *of* capital. Consequently, in calculating the required adjustment, it is important to correct (or 'wash up') for the difference between:<sup>59</sup>
  - 111.1 The revenue we allow, over the regulatory period, based on the forecast of capital expenditure relied on when setting the price-quality path;<sup>60</sup> and
  - 111.2 The revenue required, over the regulatory period, based on the supplier's actual capital expenditure after the price-quality path started.
- 112. By first calculating the adjustment required to wash up for this difference, the penalty/reward is more straightforward to calculate. In particular, after the wash up, the penalty/reward is simply the retention factor multiplied by the loss/gain.
- 113. In addition, as a result of performing the wash up outlined above, we expect to solve two problems identified by stakeholders about the asset life assumption(s) relied on when setting price-quality paths. The two issues that have been identified are as follows.
  - 113.1 The first issue is that the average asset lifetime assumption is an approximation and will not be accurate for all suppliers.
  - 113.2 The second issue is that, irrespective of the assumed asset life, suppliers currently have an incentive to invest in longer lived assets because depreciation will be lower before prices are reset.
- 114. The proposed wash up would address both of these issues. This is because the proposed wash up is based on actual depreciation, which is based on the actual life of the installed asset.

#### Link between expenditure incentives, quality incentives, and the cost of capital

115. Before reaching our final decision on the proposed IRIS for capital expenditure, we are interested in stakeholder's views on the linkages between expenditure incentives, quality incentives, and the cost of capital. In particular, we are interested in views on the following observations, recognising that these are not the full interactions between these variables.

For capital expenditure, the revenue allowed, and the revenue required, are dependent on the return *on* and *of* capital *less* any revaluation gains. We invite views on whether it would be appropriate to take into account the effect on the deferred tax balance when assessing the difference between the required and allowed return *on* capital.

In practice, the amounts used in the calculation are for the aggregate value of commissioned assets, which is dependent on capital expenditure.

- 116. First, a time consistent incentive would mean that there would be no years in which marginal incentive for investments in capital would so low as to effectively become similar to a pass-through cost. <sup>61</sup> Under a time consistent incentive, a supplier would generally recover much less than 100% of each new investment, including those made in the penultimate year of the regulatory period.
- 117. Therefore, as result of providing a time consistent incentive, the incentive to minimise expenditure on assets would always the same, ie, it would be positive, and never neutral.
- 118. Second, incentives for service quality are important, particularly when the retention factor for capital expenditure is stronger. <sup>62</sup> This is because, the stronger the retention factor for capital expenditure, the higher the incentive that suppliers will have to boost profitability by compromising quality.
- 119. Third, irrespective of whether the incentives to control capital expenditure are time consistent, the strength of the incentive to control capital expenditure depends on:
  - 119.1 The retention factor in each year; and
  - 119.2 The regulatory WACC relative to the supplier's true cost of capital.
- 120. For any given retention factor, a higher regulatory WACC relative to the supplier's true cost of capital will imply higher returns from each new investment. Likewise, if the regulatory WACC is below the supplier's true cost of capital, then returns on new investments will be lower for any given retention factor. Either way, the return earned on existing sunk assets will be affected by the difference between the regulatory WACC and the supplier's true cost of capital.
- 121. For any given uplift in the regulatory WACC relative to the supplier's true cost of capital, a lower retention factor will reduce the return from each new investment. However, the return earned on existing sunk assets would be unaffected by changes in the retention factor.

As explained in our Process an Issues Paper, under the natural incentive, the retention factor is lowest in year 4.

This link was identified by a number of submitters on the 'Process and Issues Paper'. For example, Wellington Electricity submitted that expenditure incentives "should be complemented with quality incentives to balance suppliers' incentives to maintain reliability while seeking efficiency savings".

# 7. How you can provide your views

# **Purpose of chapter**

122. 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

123. You are invited to provide your views on any aspect of our draft amendment determination and reasons.

#### Timeframes for responses

- 124. We welcome your views in the timeframes set out below.
  - 124.1 Submissions are due by Friday, 29 August 2014.
  - 124.2 Cross-submissions are due by Friday, 12 September 2014.
- 125. A number of other consultation steps are being conducted in parallel as part of the reset of the default price-quality paths for electricity distributors. <sup>63</sup> As well as allowing parties to consider each aspect of the proposals simultaneously, we have allowed 6 weeks for submissions on each publication, and 2 weeks for cross-submissions.
- 126. We do not intend to take into account any material that is provided outside of the timeframes provided. Any party that is concerned about the time to engage with the material should contact us with a request for an extension outlining their specific concerns.

#### Address for responses

127. You should address responses to:

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

# Format for responses

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

Refer: Commerce Commission "Proposed default price-quality paths for electricity distributors from 1 April 2015" (4 July 2014), Chapter 9.

#### Question & answer session

129. On 25 July 2014, we propose to hold a question and answer session on the IRIS models published on our website alongside this paper. Commission staff will provide an overview of the IRIS models and there will be an opportunity to ask questions. Questions on the IRIS models do not need to have been submitted in advance.

#### Requests for confidentiality

- 130. While we discourage requests for non-disclosure of submissions, we recognise that there may be cases where parties that make submissions wish to provide information in confidence. 64 We offer the following guidance.
  - 130.1 If it is necessary to include confidential material in a submission, the information should be clearly marked.
  - 130.2 Both confidential and public versions of the submission should be provided.
  - 130.3 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.
- 131. We request 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'.

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Parties 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 key 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: Calculation of adjustments for operating expenditure

#### **Purpose of attachment**

132. This attachment explains the adjustments required in the second year of a price-quality path.

## Calculation of adjustment amount

133. The formula for calculating the adjustment amount varies depending on whether the supplier is subject to default/customised price-quality regulation or individual price-quality regulation.

Adjustment amounts under default/customised price-quality regulation

- 134. Under default/customised price-quality regulation, the formula for calculating the adjustment amount varies depending on a number of factors. For example, the adjustment amount depends on:
  - 134.1 What type of price-quality path the supplier is subject to, which affects how the incremental change in the final year must be assessed;
  - 134.2 How starting prices for the price-quality path were set, ie, whether efficiency gains were shared with consumers through a starting price adjustment; 65 and
  - 134.3 Whether the supplier was subject to the preceding price-quality path for two consecutive years immediately before it came to an end.
- 135. First, we explain the treatment under a default price-quality path; second, we explain the treatment under a customised price-quality path.

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Irrespective of whether prices are adjusted or rolled over at the start of a default price-quality path, we expect to determine a baseline for operating expenditure by projecting forward an initial level of operating expenditure from a single year.

#### Adjustment amounts under a default price-quality path

- 136. Under a default price-quality path, the formula will primarily depend on whether prices were adjusted based on the current and projected profitability of each supplier, or rolled over from the prices that previously applied.<sup>66</sup>
  - 136.1 If starting prices were adjusted based on the current and projected profitability of each supplier, then efficiency gains from the previous period will have been explicitly shared with consumers.
  - 136.2 If starting prices were rolled over from the preceding regulatory period, then efficiency gains from the previous period will not have been shared with consumers.
- 137. In the case of a starting price adjustment, the adjustment amount would generally just correct for the delay in discovering information about actual expenditure in the final year of the preceding price-quality path. In these cases, the 'base year adjustment term' is calculated in a way that is consistent with the approach used by the Australian Energy Regulator.
- 138. In the case of a roll over, the adjustment amount would also ensure that efficiency gains under the previous price-quality path are shared with consumers. In the draft amendment determination, this adjustment term is referred to as the 'roll over adjustment term'. It is added to the base year adjustment term when determining the overall adjustment amount.
- 139. Additional adjustments are required if the supplier was subject to the previous default price-quality path for one year or less immediately before the next default price-quality path, eg, Orion New Zealand. In the models that we published alongside this paper, we show how these additional adjustments would operate in practice.

## Adjustment amounts under a customised price-quality path

140. Under a customised price-quality path, the analysis is complicated somewhat because the baseline for operating expenditure is not determined by projecting forward an initial level of operating expenditure from a single year. A discontinuity therefore arises that breaks the link between expenditure in one period and the next.

Notably, additional adjustments are required if the supplier was only subject to the previous price-quality path for one year or less immediately before their existing price-quality path. This is because the carry forward amount will have been assumed to be nil for two consecutive years in a row, eg, in the final year of Orion New Zealand's customised price-quality path, and in the final year of the regulatory period for the default price-quality path. Consequently, the adjustment amount must correct for the difference between the assumed and actual level of expenditure in both years.

- 141. We have proposed a formula for calculating the adjustment amount in the second year of a customised price-quality path, which is intended to re-establish the link between expenditure in one period and the next. This formula assumes that, in setting the baseline for operating expenditure during the customised price-quality path, we will take into account permanent efficiency gains that are achieved up to and including the year of the proposal.
- 142. The proposed 'conditional' formula effectively determines whether, in the two years immediately preceding a customised price-quality path, any under- or over-expenditure is permanent or temporary in nature. In other words, the formula determines whether any over- or under-expenditure is reversed from one year to the next.
- 143. We recognise that these formulas are not very intuitive, so we have modelled the impact of applying the formulas to allow interested parties to assess whether they achieve the desired outcomes. We also invite views on any ways in which these formulas could be simplified.
- 144. Additional adjustments are required if the supplier was subject to a price-quality path for one year or less prior to the start of the customised price-quality path. In the models that we published alongside this paper, we show how these additional adjustments would operate in practice.<sup>67</sup>

Adjustment amounts under individual price-quality regulation

145. For Transpower New Zealand, the conditional formula used to calculate the adjustment amount is similar to that used to calculate the adjustment amount under a customised price-quality path. This is because the forecasts of operating expenditure are determined in a similar way, ie, there is not a link with expenditure in a base year.

Helping suppliers comply with the proposed IRIS for operating expenditure

146. We recognise that some of the calculations in the draft amendment determination are relatively lengthy, and we invite views on possible simplifications for compliance purposes. For example, we invite views on whether it would be desirable to publish excel templates to assist suppliers in calculating the required adjustments, whether the formulas could be simplified, and/or whether a flow chart would help suppliers identify the adjustments that are required based on the situation that they are in.

We have not included the formulas for certain situations. These situations are variants of two consecutive one year default price-quality paths. These scenarios have not been included because they are unlikely to occur before the review of input methodologies that must be undertaken within 7 years of input methodologies being determined.

147. We note, however, that the majority of the formulas contained in the draft amendment determination are unlikely to be applied very often in practice, and the formulas that will be applied frequently are relatively straightforward in nature.

#### Models demonstrate formulas for a range of permutations possible under Part 4

- 148. For operating expenditure, the models demonstrate that the formulas work for a range of permutations that are possible under Part 4. For example, we have released separate workbooks that demonstrate the formulas work for:
  - 148.1 Consecutive default price-quality paths that are five years in length;
  - 148.2 Consecutive default price-quality paths in which at least one is only four years in length;
  - 148.3 Customised price-quality paths of varying lengths, in which the supplier transitions back onto the default price-quality path with more than one year remaining;
  - 148.4 Customised price-quality paths of varying lengths, in which the supplier transitions back onto the default price-quality path with only one year remaining, before remaining on the next price-quality path for more than one year; and
  - 148.5 Customised price-quality paths of varying lengths, in which the supplier transitions back onto the default price-quality path with only one year remaining, and then remains on the next default price-quality path for a single year before transitioning onto another customised price-quality path.
- 149. We have also released workbooks that demonstrate how the formulas work for individual price-quality regulation. In these workbooks, we have considered individual price-quality paths of between four and five years in length.

# Attachment B: Treatment of gas pipeline businesses and Orion New Zealand Purpose of attachment

- 150. This attachment outlines and explains the proposed treatment of gas pipeline businesses and Orion New Zealand, namely:
  - 150.1 How recoverable costs will be calculated in the next regulatory period to give effect to the proposed incentives in a timely manner;
  - 150.2 The retention factor proposed for gas pipeline businesses to use in the next regulatory period when calculating recoverable costs for capital expenditure efficiencies; and
  - 150.3 The retention factor proposed for Orion New Zealand to use in the next regulatory period when calculating recoverable costs for capital expenditure efficiencies.

# Dates for initial carry forward

- 151. If the proposed amendments are made, then in calculating the recoverable costs to be applied in the next regulatory period, gas pipeline businesses will have to carry forward gains and losses achieved from the relevant date specified in the determination (1 October 2014). This date would apply to both capital and operating expenditure.
- 152. However, we do not expect that amendments to the existing IRIS would affect the default price-quality path that currently applies to gas pipeline businesses. Rather, any changes to the IRIS would only affect the price-quality path that applies to these suppliers in the next regulatory period.
- 153. After the customised price-quality path comes to an end, Orion New Zealand will be required to calculate recoverable costs for operating expenditure that are consistent with:
  - 153.1 The existing IRIS up to and including the year in which the amendment is made; and
  - 153.2 The proposed IRIS in the years after the amendment is made. <sup>68</sup>

We noted at the time we determined the customised price-quality path for Orion New Zealand that the existing IRIS may be amended during the regulatory period. Refer: Commerce Commission "Setting the customised price-quality path for Orion New Zealand Limited" (29 November 2013). This is because additional penalties and rewards are applied under IRIS in the regulatory period that follows the price-quality path under which the losses or savings are made. The customised price-quality path would therefore be unaffected by any amendment.

154. After the customised price-quality path comes to an end, Orion New Zealand will be required to calculate recoverable costs for capital expenditure by carrying forward gains and losses from 1 April 2015 onwards.

#### Proposed retention factor for gas pipeline businesses

- 155. We propose a retention factor of 35% be used when gas pipeline businesses calculate recoverable costs in the next regulatory period. We propose a retention factor of 35% to align the incentives between capital and operating expenditure. <sup>69</sup>
- 156. We consider that it is necessary to specify the retention factor used in the next regulatory period so that suppliers and consumers know the retention factor that will apply before expenditure is incurred. We invite views on the retention factor that should apply to gas pipeline businesses when calculating recoverable costs in the next regulatory period.
- 157. For future regulatory periods, the retention factor for capital expenditure would be specified in the s 52P determination following consultation on the reset.

# **Proposed retention factor for Orion New Zealand**

- 158. We propose a retention factor of 33% be used when Orion New Zealand calculates recoverable costs in the next regulatory period. We propose a retention factor of 33% to align the incentives between capital and operating expenditure.<sup>70</sup>
- 159. As noted above, we consider that it is necessary to specify the retention factor used in the next regulatory period so that suppliers and consumers know the retention factor that will apply before expenditure is incurred. We invite views on the retention factor that should apply to gas pipeline businesses when calculating recoverable costs in the next regulatory period.
- 160. For future regulatory periods, the retention factor for capital expenditure would be specified in the s 52P determination following consultation on the reset.

The retention factor for operating expenditure can be calculated using the following formula: 1- (1/((1+WACC)<sup>6</sup>). With the WACC of 7.44% that applies to the current regulatory period for gas pipeline services, this equates to a retention factor of 35%.

The retention factor for operating expenditure for Orion New Zealand is based on the WACC of 6.92% that applied to the customised price-quality path determination.

# **Attachment C: Mergers and acquisitions**

# **Purpose of attachment**

161. This attachment sets out our responses to submissions on the treatment of mergers and acquisitions.

#### Retention factors for mergers and acquisitions

- 162. Some submitters argued that suppliers should be able to retain a higher share of any efficiencies resulting from mergers and acquisitions.<sup>71</sup> These submitters considered it necessary to specify how the baselines for merged entities would be calculated.
- 163. Our main reasons for not proposing a higher retention factor for efficiencies resulting from mergers and acquisitions are:
  - 163.1 it is not clear that efficiencies arising from mergers and acquisitions differ significantly from other types of efficiencies;
  - 163.2 practically, it is not possible to distinguish between efficiencies resulting from mergers and acquisitions and other operational efficiencies; and
  - 163.3 in any event, it is not clear that the source of the efficiencies should have any bearing on the extent to which benefits are shared.

For example, the ENA and Unison submitted that a retention period of 10 years (or 50% retention factor) would be appropriate for gains from a merger or acquisition. They argue that these incentives need to be stronger than day-to-day business improvements as there are higher risks and effort required to achieve gains from a merger or acquisition.

# **Attachment D: Other drafting issues**

#### **Purpose of attachment**

164. This attachment sets out our views on other issues relevant to the proposed IRIS.

# **Definition of controllable opex**

- 165. The existing IRIS applies to 'controllable opex' and we propose amending this definition to include all operating expenditure, except where suppliers are able to justify the exclusion of specific costs. Notably, two categories of expenditure are already excluded from this definition: pass-through costs and recoverable costs.
- 166. An amendment to the definition would appear to be appropriate in light of the proposed change to make the IRIS for operating expenditure symmetric. This is because a symmetric approach ensures that suppliers share with consumers any temporary changes in expenditure, irrespective of whether they are controllable or not.

#### Exclusion of inflation from the incremental adjustment amount

- 167. The proposed amendment does not include inflation as part of the adjustment amount. This differs from the existing IRIS, where the inflation rate is applied to the difference between allowed and actual controllable opex.
- 168. We consider this treatment is appropriate as to include the inflation term is an error. As shown in the models accompanying this paper, the value of the retention factor is a result of the WACC and the number of years any efficiency gains or losses are retained for. The nominal WACC captures inflationary effects and to include an inflation term in addition would double-count inflation and increase the retention factor to a higher proportion than intended.

#### Amendment of recoverable cost definition

169. The draft amendment allows suppliers to recover up to the value of the incremental adjustment amount. The use of the term 'up to' in the draft amendment determination reflects that suppliers may wish to recover less than the full adjustment amount, where this is a positive value, ie, a gain to the supplier. For example, Transpower has recently proposed a reduction in the benefit it receives under the IRIS mechanism in RCP2 by \$19 million. It explained this is because much of its historic underspend was due to deferrals in expenditure and scope reduction, rather than efficiency gains. The default will be that the full incremental adjustment amount is included in recoverable costs, unless indicated otherwise by the supplier. The draft amendment does not allow suppliers to recover less than the value of the incremental adjustment amount where this is a negative value.

# Definition of an IRIS year for gas pipeline services

- 170. To implement an IRIS, the amounts carried forward must be calculated for whole years that line up with the year in which prices are reset. However, for suppliers of gas pipeline services (except Powerco), there is a mismatch between the disclosure year, the financial year, and the pricing year.
- 171. As a consequence of this misalignment, we propose to introduce a time period that we refer to as an 'IRIS year'. IRIS years are the consecutive whole years that line up with the start of the next regulatory period.
- 172. Amounts carried forward must be calculated for IRIS years. Therefore, the allowance for each IRIS year will need to be calculated on a pro rata basis, and actual operating expenditure will need to be mapped across from disclosure years.