

## **Submission on**

# Input methodologies review: Dr Lally's expert advice on asset beta adjustments and Black's simple discounting rule

**Date: 24 March 2016** 

## 1. Introduction and summary

- 1. Thank you for the opportunity to respond to Dr Lally's advice on asset beta adjustments and Black's Simple Discounting Rule. We understand that the Commission will publish Dr Lally's advice on the cost of debt, RAB indexation and inflation risk in due course.
- 2. Enclosed with this submission is a report from HoustonKemp<sup>1</sup> that responds to Dr Lally's advice on asset beta adjustments. That report, which provides new empirical evidence to support retention of the current asset beta for gas pipeline businesses, forms part of our submission. This submission also incorporates our previous submission<sup>2</sup> to the Commission's cost of capital update paper of 5 February 2016, which explained that:
  - 2.1 There are strong theoretical and empirical reasons suggesting that the form of regulatory control will have an immaterial effect on the systematic risk and asset beta of a supplier; and
  - 2.2 There is evidence that the use and transport of gas in New Zealand is subject to greater systematic risk than the use and transport of electricity. Consequently, an asset beta of 0.44 for gas pipeline businesses, compared to 0.34 for electricity networks, should be maintained.
- 3. We also noted our support for the submission by the Electricity Networks Association and the accompanying expert report by CEG, which provides a detailed critique of Black's Simple Discounting Rule.
- 4. Dr Lally's conclusions are consistent with our views on two issues:
  - 4.1 No adjustment should be made to the asset beta to reflect the form of regulatory control; and
  - 4.2 There are significant limitations in using Black's Simple Discount Rule in a regulatory context.

We reiterate our support for these positions.

- 5. This submission focuses on Dr Lally's advice that the current 0.1 differential between the asset betas for the New Zealand gas distribution and electricity pipeline businesses is no longer warranted.
- 6. Dr Lally's latest advice is markedly different from the position he adopted in 2004 and 2008, in which he recommended a 'modest' upward adjustment of 0.1 to the gas asset beta to reflect the higher systematic risk. Dr Lally's reasons for changing his opinion are not compelling. In particular his new position is simply a change of opinion that is not supported by new facts.
- 7. HoustonKemp explain that Dr Lally introduces an algebraic framework to inform the magnitude of the appropriate asset beta differential for gas and electricity network businesses. Dr Lally uses this framework to show that the different proportions of gas and electricity usage by residential and commercial/industrial customers cannot support the current beta differential.
- 8. However, Dr Lally's analysis incorrectly assumes that the income elasticity of demand for residential customers is the same for gas and electricity. In fact, HoustonKemp's analysis of New Zealand data shows that the income elasticity of demand for gas in New Zealand is approximately 4.5 times the value for electricity. HoustonKemp incorporates the

<sup>&</sup>lt;sup>1</sup> HoustonKemp, Asset beta for gas pipeline businesses, A Report for Powerco, March 2016.

<sup>&</sup>lt;sup>2</sup> Powerco letter dated 5 February 2016 and supporting report from HoustonKemp titled *Comment on the Commerce Commission's cost of capital update paper*, 5 February 2016.

- corrected data in Dr Lally's algebraic framework to show that the current beta differential of 0.1 is easily supported.
- 9. More broadly, it is important to recognise the commercial reality that the demand for gas and electricity are fundamentally different. In New Zealand, gas is a non-essential, discretionary fuel that faces significant competition from electricity and new technology. Gas customers can choose to disconnect from the network, whereas electricity customers cannot. These factors translate into higher risks for investors in gas pipeline businesses, which means a higher asset beta.
- 10. This consultation raises an important question regarding the evidence required by the Commission in order to change the current IMs. Investors have understood that this review will only consider changes to the IMs in response to new evidence or changed circumstances, and which promote the long term interests of consumers. Dr Lally's advice on the asset beta differential is simply a revision of his earlier opinions and therefore falls a long way short of the appropriate test.
- 11. Investors require certainty in order to commit funds to long-lived assets such as gas pipelines. Section 52R of the Act recognises these objectives by providing that the purpose of the Input Methodology is to promote certainty for suppliers and consumers in relation to the rules, requirements, and processes applying to the regulation of goods or services under Part 4.
- 12. This is an opportunity for the Commission to follow through on its assurances to the industry that the IM Review will strike the right balance between investor certainty and making improvements to the IMs where the Commission is confident that would be for the long term benefit of consumers. In doing so it could send a valuable signal to investors about the stability of the Part 4 regime.
- 13. In summary, the Commission's current IM which applies a 0.1 upward adjustment to the gas asset beta should be maintained. The key points in support of the status quo are:
  - 13.1 The nature of gas demand is fundamentally different to electricity, and exposes investors in gas pipeline businesses to increased systematic risk;
  - 13.2 HoustonKemp's report shows that Dr Lally's algebraic framework supports the current beta differential.
  - 13.3 The Commission's reasoning in support of an asset beta differential in its 2010 Input Methodology decision was comprehensive and carefully balanced.
  - 13.4 There is no new evidence or changed circumstances that would support a change to the current IM; and
  - 13.5 The Part 4 Purpose and IM Purpose are promoted by maintaining the Commission's current approach to asset betas.

### 2. Matters for the Commission to consider

- 14. Dr Lally's 2016 advice raises some important questions about the nature of the IM Review, and when the Commission should consider making changes to the current IMs.
- 15. As discussed in section 4 below, Dr Lally has given four arguments in 2016 for changing his position from what it was in 2008:
  - 15.1 The first that the Commission's 2010 decision rests solely on two factors raised by him is factually incorrect. For this reason Dr Lally is mistaken as to the implications of his change in view for the current IMs.

- 15.2 The second that there has been a change in the nature of the regulation of gas distribution businesses is factually incorrect. For this reason it introduces no new facts or advice.
- 15.3 The third assessing the different industrial / commercial customer mix in gas distribution resiles from his 2008 advice that this factor is material. But in any event the advice now offered by Dr Lally is inconclusive when it comes to assessing whether to change the current asset beta differential. The advice that the Commission has in 2016 from Dr Lally is that this one factor alone will not support the full differential. That is the position that Dr Lally took in 2008 and the Commission took in 2010. For this reason it introduces no new facts or advice.
- 15.4 The fourth the observation that the empirical evidence from other jurisdictions is inconclusive repeats the observation Dr Lally made in 2008, but now draws the opposite inference, without acknowledging or explaining his change. For this reason it introduces no new facts or advice.
- 16. The Commission must consider this advice in the context of all available relevant information. This includes:
  - 16.1 There are principled reasons to expect that New Zealand gas networks will have a higher asset betas than electricity networks, given the role of gas in the New Zealand market as a discretionary fuel. This is explained in section 3.
  - 16.2 The attached report from HoustonKemp, which demonstrates there is a difference in income elasticity of demand at the residential customer level. This factor is an additional source of systematic risk for Powerco's gas pipeline business, which has not been considered by Dr Lally.
  - 16.3 HoustonKemp show that Dr Lally's algebraic framework does not demonstrate that the current differential in the asset beta cannot be supported (as claimed by Dr Lally). In fact, if appropriate estimates of the differentials between gas and electricity income elasticity of demand are incorporated in Dr Lally's framework, HoustonKemp demonstrate that the current beta differential is easily supported.
  - 16.4 HoustonKemp's estimates of the income elasticities of demand for gas and electricity are derived from New Zealand data. HoustonKemp's econometric analysis has carefully considered data limitations and conducted appropriate statistical tests. The results of HoustonKemp's analysis are closely aligned with an earlier study conducted in Australia, which provides further confidence in HoustonKemp's conclusions.
  - 16.5 The Council of European Energy Regulators (CEER), as recently as March 2016, have commented that direct comparison of specific cost of capital parameters across Member States is difficult and should only be done in the context of the whole regulatory system<sup>3</sup>. Notwithstanding this important caveat, CEER's analysis of 22 Member States shows that the asset beta values for gas networks generally exceed those for electricity networks. The CEER concludes that the analysis of beta values could lead to the conclusion that the gas sector carries more risk than the electricity sector<sup>4</sup>.

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<sup>&</sup>lt;sup>3</sup> Council of European Energy Regulators, Report on Investment Conditions in European Countries, 14 March 2016, page 6.

<sup>&</sup>lt;sup>4</sup> Ibid, page 83.

- 17. When weighing this information the Commission must exercise independent judgment. The Commission must weigh the evidence presented and consider whether it justifies a change in the current approach. In fact, the Commission is very practiced at using expert advice as an input but then exercising its own judgment. Importantly, this is demonstrated by the Commission's current approach to the gas asset beta and the 2010 IM Reasons the Commission gave for it.
- 18. In its 2010 IM Reasons, the Commission accepted Dr Lally's advice that a 'modest' increase in the asset beta for gas pipeline businesses should be adopted to reflect the increased systematic risk<sup>5</sup>. The Commission's concluding comments are set out below<sup>6</sup>:

"When estimating the asset beta for GPBs in prior decisions, the Commission has added 0.10 to the raw asset beta estimated from comparable companies. This increment was intended to reflect GPB's perceived greater exposure to systematic risk. While the Commission considers there are theoretical reasons to expect a higher beta for gas, at least in New Zealand (relating to growth options, operating leverage, the nature of the product and the composition of customers), this was not evident in the Commission's empirical analysis of overseas data. This analysis tends to show slightly lower asset betas for gas companies. Given the theoretical argument for higher gas asset betas for New Zealand GPBs, the Commission retains the 0.10 uplift for GPBs. While this could be seen as a concession in favour of GPBs, and notwithstanding the submissions which encourage the Commission to limit the use of ad hoc adjustments, the IM provides for the uplift to continue. While the Commission uses empirical methods wherever possible, the Commission's approach is not mechanical. Rather the Commission weighs the empirical results against other considerations, and exercises its judgement to best estimate the cost of capital and satisfy the Part 4 Purpose. Accordingly, in the Commission's judgement, 0.10 uplift in the asset beta will continue to apply for GPBs, resulting in an adjusted asset beta for GPBs of 0.44."

19. The Commission also recognised that its IM decision in relation to gas asset betas would differ from the approach adopted by the Australian Energy Regulator<sup>7</sup>:

"The AER appears to consider that GPBs have similar systematic risk to EDBs, and the empirical evidence seems to indicate that international gas utilities either face very similar or slightly lower systematic risks than electricity utilities.

The Commission nevertheless accepts that in New Zealand, GPBs may face higher systematic risk than EDBs, due to the considerations highlighted in previous advice provided to the Commission by Dr Lally (and summarised above) in relation to the differences between New Zealand GPBs and EDBs. At present, there is no evidence in New Zealand to suggest that this situation has changed. Therefore, the Commission considers that it is appropriate to apply the upward adjustment of 0.1 used in past decisions to the asset beta estimate, after any other adjustments have been made."

20. Powerco's submission is that the Commission's reasoning in 2010 remains valid today. The Commission accepted there are theoretical reasons for a higher asset beta for gas pipelines in New Zealand, acknowledged the empirical data from other jurisdictions is inconclusive, noted this is not a mechanical exercise and the Commission must exercise

<sup>7</sup> Ibid, paragraphs H8.178 and H8.179.

<sup>&</sup>lt;sup>5</sup> Commerce Commission, Input Methodologies Reasons Paper, December 2010, paragraphs H8.172.

<sup>&</sup>lt;sup>6</sup> Ibid, paragraph 6.5.29.

judgment, and decided that in its judgment the theoretical reasons for the difference prevail and the differential of 0.1 is appropriate. HoustonKemp's report provides further theoretical support for the Commission's current approach.

- 21. The Commission has explained<sup>8</sup> that it will only propose a change in the IM where this appears likely to:
  - 21.1 Promote the Part 4 purpose in s 52A more effectively;
  - 21.2 Promote the IM purpose in s 52R more effectively (without detrimentally affecting the promotion of the s 52A purpose); or
  - 21.3 Significantly reduce compliance costs, other regulatory costs or complexity (without detrimentally affecting the promotion of the s 52A purpose).
- 22. When the Commission suggested that it would commence the current IM Review one year earlier than investors expected, the Commission stated:9

We set the original input methodologies after extensive engagement with interested parties, and there was a subsequent merits appeal process that reviewed the majority of those input methodologies.

We therefore suggest that substantial changes of the current input methodologies are unlikely to be desirable, particularly in light of the purpose of input methodologies in section 52R.

- 23. Section 52R expressly directs the Commission to have regard to the need to promote certainty for suppliers and consumers. Certainty, in the context of the IMs, is intended to provide conditions that incentivise innovation and investment by suppliers and consumers, for the long term benefit of consumers.
- 24. The Commission is well aware of the disruptive effects of regulatory change, and conversely the benefits to both consumers and suppliers of predictability and certainty. Predictability and certainty in regulatory arrangements incentivise investment and reward long-term planning, both of which are of critical importance to consumers.
- 25. When considering whether or not to pursue an amendment to the IMs, the Commission should therefore bear in mind that the objectives of the Act may be best served by maintaining the status quo. The rationale for implementing a change to the IMs must be weighed against the inherent value of maintaining stability, and sending a signal that the IMs should not be changed lightly.
- 26. This concern to send the right signal as to when the current IMs will be changed seems particularly acute in the context of the cost of capital. As the Commission is aware the cost of capital is an area of real importance to investors. It is also an area particularly vulnerable to the temptation to tweak an assumption or a theory or a survey of empirical work. However once the tweak is made there is no greater certainty that the overall result represents the true cost of capital but it will cause a material loss of certainty in the regulatory signals sent to investors.

<sup>&</sup>lt;sup>8</sup> Developing decision-making frameworks for the current input methodologies review and for considering changes to the input methodologies more generally – discussion draft – 22 July 2015, paragraph 16 [note: not finalised]

<sup>&</sup>lt;sup>9</sup> Proposed scope, timing and focus for the review of input methodologies – Open Letter - 27 Feb 2015, paragraphs 27 and 28

- 27. As explained above, Powerco does not accept that Dr Lally's latest advice supports a reversal of the Commission's current approach to the gas asset beta. The Commission's reasoning in its 2010 IM decision (pages 542 546) explored in detail all of the information and the issues relating to the gas asset beta. Dr Lally's 2016 advice is well short of what is required to change that position. In addition, HoustonKemp has pointed to another source of systematic risk not contemplated by Dr Lally.
- 28. From the perspective of gas pipeline investors, a change in the asset beta on the basis of the evidence presented would not be consistent with the promotion of the Part 4 purpose. In particular, a change to the gas asset beta would substantially undermine the incentives to innovate and to invest in gas assets for the long term benefit of consumers. It would also be contrary to the IM purpose, which is to promote certainty for suppliers and customers.

## 3. Nature of gas demand

- 29. In its earlier report for Powerco, Concept Consulting highlighted the following fundamental differences between gas and electricity demand:<sup>10</sup>
  - 29.1 gas is a discretionary fuel for the vast majority of gas consumers; whereas
  - 29.2 electricity is an essential service, with no practicable alternative to grid-supplied electricity for the majority of consumers.
- 30. Being suppliers of a fuel of choice, gas pipeline businesses are subject to greater demand volatility than electricity networks. Customers can more easily decide to disconnect from their gas supply in times of financial hardship, or reduce gas consumption in response to competition from other energy sources or electricity based technologies (e.g. heat pumps, solar hot water and hot water heat pumps). Gas distribution is also more exposed to externally driven risks, and is more sensitive to macro-economic shocks than electricity distribution.
- 31. Powerco's marketing expenditure through its Gas Hub provides tangible evidence of the discretionary nature of gas demand and the competitive pressure from other energy sources. The purpose of Powerco's gas marketing is to promote improved asset utilisation, which reduces the average network costs for gas customers and encourages growth. This is particularly important given Powerco's greater reliance on residential gas demand compared to other NZ gas pipelines, as shown in the figure below.

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<sup>&</sup>lt;sup>10</sup> Concept Consulting, Relative long-term demand risk between electricity and gas networks, Prepared for Powerco, 27 January 2016, page 8.

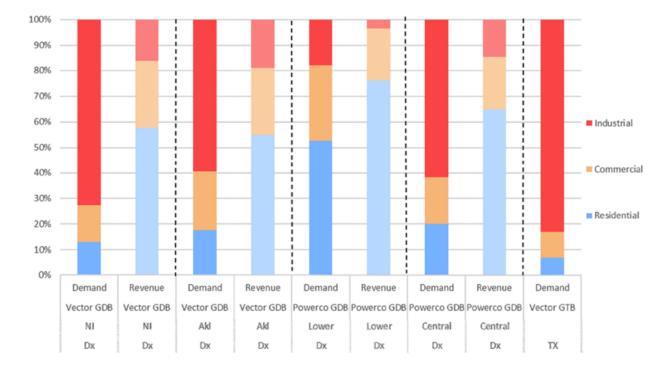


Figure 1: Demand and revenue split across consumer segments for gas pipelines<sup>11</sup>

- 32. As explained in the accompanying report from HoustonKemp, Powerco's reliance on residential gas demand points to a higher asset beta. This is because residential customers exhibit a much higher income elasticity of demand compared to electricity, which means that Powerco's gas business is more sensitive to macro-economic conditions.
- 33. Figure 1 also illustrates the diverse composition of the customer base across New Zealand's gas pipeline businesses. While the customer composition varies, each network is likely to face higher systematic risks when compared to electricity networks. For example, gas transmission is more dependent on demand from electricity generation and large industrial customers, which will depend on macro-economic conditions.
- 34. While expressed as theoretical reasons such as higher income elasticity of demand HoustonKemp's analysis reflects the commercial reality that the nature of gas demand exposes gas pipeline investors to higher risk. Powerco is not aware of any material changes in these commercial risks that would warrant a change in the Commission's approach.
- 35. The only significant change since the Commission's 2010 IM decision is that Dr Lally no longer supports his earlier view that a modest adjustment of 0.1 to the gas asset beta is warranted. The next section examines the development of Dr Lally's views from 2004, and examines the reasons he gives for changing his opinion.

# 4. Review of Dr Lally's Advice

### Dr Lally's advice - May 2004

36. In 2004, the Commission was considering whether gas pipeline businesses should be subject to increased regulatory control. In this context, Dr Lally discussed 9 factors that

<sup>&</sup>lt;sup>11</sup> Concept Consulting, Relative long-term demand risk between electricity and gas networks, Prepared for Powerco, 27 January 2016, page 8.

may affect the asset beta, including the nature of the product; customer mix; the presence of regulation; and the degree of monopoly power.

37. In relation to the presence of regulation, Dr Lally explained<sup>12</sup>:

"In respect of the gas pipeline businesses, there are no price controls in force. However they have operated for some time in the knowledge that excess profits might induce price controls. Thus they face a quasi-regulatory regime."

- 38. Following a discussion of these factors, Dr Lally focused on three conceptual arguments for a higher asset beta for gas pipelines:
  - 38.1 A large proportion (30%) of gas is used as an intermediate product in the petrochemical industry, in particular for the production of methanol.
  - 38.2 The use of gas in electricity generation (particularly for non-base load), indicates that gas demand may be more sensitive to macro-economic conditions.
  - 38.3 The gas networks serve a higher proportion of industrial and commercial customers compared to electricity.
- 39. In 2004, Dr Lally emphasised the third point in concluding that the asset beta for gas pipeline businesses should be "modestly higher" 13:

"Taking account of these three points, particularly the latter one, the gas pipeline businesses would seem to warrant a modestly higher asset beta than the lines businesses. I therefore suggest an asset beta for the gas pipeline businesses of .40-.60, with a point estimate of .50."

#### Dr Lally's advice - October 2008

40. In 2008, the Commission asked Dr Lally to revisit his earlier advice following the Commission's decision to implement formal price control. Dr Lally explained the context for his 2008 advice as follows<sup>14</sup>:

"The Commerce Commission has recently undertaken an inquiry into the question of whether gas pipeline businesses (transmission and distribution) should be subject to regulatory control. Inter alia, this involved an assessment of the excess profits of these businesses, and therefore estimation of an appropriate Weighted Average Cost of Capital (WACC) for them. As a result of that inquiry, it has been determined that the gas pipeline businesses of Vector and Powerco should be controlled. Accordingly, their output prices will be controlled and this will require estimation of an appropriate WACC for these businesses for the purpose of price control. The purpose of this paper is to estimate this WACC, for the purpose of assessing excess profits and also for price control..."

41. Dr Lally's 2008 advice repeated the three reasons previously cited in support of a higher asset beta for gas pipelines. In addition, he identified a new point of difference between gas and electricity businesses<sup>15</sup>:

<sup>&</sup>lt;sup>12</sup> Martin Lally, Weighted Average Cost of Capital for Gas Pipeline Businesses, 14 May 2004, page 26.

<sup>&</sup>lt;sup>13</sup> Martin Lally, Weighted Average Cost of Capital for Gas Pipeline Businesses, 14 May 2004, page 34.

<sup>&</sup>lt;sup>14</sup> Martin Lally, Weighted Average Cost of Capital for Gas Pipeline Businesses, 28 October 2008, page 4.

"First, unlike the lines businesses, which have largely exhausted the opportunity to expand their networks, the gas businesses have significant options to expand their networks. This may raise their asset betas relative to the lines businesses."

42. Dr Lally draws the following conclusions<sup>16</sup>:

"Taking account of these four points, particularly the first [expansion opportunities] and the last [customer mix], the gas pipeline businesses would seem to warrant a modestly higher asset beta than the lines businesses. My point estimate here is .10."

43. Dr Lally's advice also included the following footnote, which highlighted that empirical data from the US conflicted with his recommendation to apply an upward adjustment of 0.1 to the gas asset beta<sup>17</sup>:

"...this margin of .10 for gas pipeline businesses relative to electric utilities appears to conflict with the US results, which suggest that the two types of businesses warrant the same asset beta. However, the considerations that point to a higher asset beta for the gas pipeline businesses in New Zealand do not seem to be applicable to the US situation."

### Dr Lally's advice - February 2016

- 44. In contrast to his earlier advice in 2004 and 2008, Dr Lally's 2016 advice concludes that no upward adjustment to the gas asset beta is warranted. In support of this revised opinion, Dr Lally argues that:
  - 44.1 The systematic risks associated with expansion of the gas network are no longer relevant because the businesses are now subject to formal control, rather than the threat of regulation.
  - 44.2 While gas pipelines are more dependent on industrial and commercial customers compared to electricity distribution businesses, the impact on the asset beta is likely to be small (0.03).
  - 44.3 The empirical evidence on the extent of any gas asset beta differential is inconclusive.
- 45. Given the importance of Dr Lally's updated opinion, it is useful to quote his conclusion in full<sup>18</sup>:

"Firstly, the Commission currently adds 0.10 to its estimate of the asset beta for electricity distribution businesses to obtain its estimate for gas pipeline businesses, in recognition of two points of distinction identified earlier by me that are relevant to beta: the option to expand the gas pipeline network and the higher proportion of gas being used by industrial and commercial customers rather than retail customers. The stronger of these two points is the expansion option (because the difference in the proportions of usage across the two user groups was not large). However my earlier analysis was conducted at the time these

<sup>&</sup>lt;sup>15</sup> Martin Lally, Weighted Average Cost of Capital for Gas Pipeline Businesses, 28 October 2008, page 62

<sup>&</sup>lt;sup>16</sup> Ibid, page 64.

<sup>&</sup>lt;sup>17</sup> Ibid, footnote 67, page 64.

<sup>&</sup>lt;sup>18</sup> Martin Lally, Capital Financial Consultants Ltd, Review of WACC Issues, 25 February 2016, page 37.

gas businesses were only subject to the threat of formal regulation rather than formal regulation per se. By contrast, they are now subject to formal regulation, this undercuts the value of expansion options in the regulated area, and therefore the argument for a higher asset beta for gas pipeline businesses is now significantly weaker. Furthermore, empirical evidence on the extent of any such beta differential is inconclusive. In view of all this, I do not favour a differential between the asset betas for the New Zealand electricity distribution and gas pipeline businesses in the present regulatory situation."

## Powerco's assessment of Dr Lally's advice

- 46. Dr Lally has considered the gas asset beta issue on three occasions:
  - 46.1 In 2004 and 2008, Dr Lally supported an upward adjustment of 0.1; and
  - 46.2 In 2016, Dr Lally no longer supported an upward adjustment.
- 47. As noted above, the reasons given by Dr Lally for his change of opinion are:
  - 47.1 The Commission's 2010 decision rests solely on two factors raised by him.
  - 47.2 The businesses are now subject to formal control, whereas previously they were subject to the threat of regulation.
  - 47.3 The effect of the higher industrial/commercial customer composition on the asset beta for gas pipelines is likely to be small (0.03).
  - 47.4 The empirical evidence in support of an upward adjustment is inconclusive.
- 48. Dr Lally's reasons for changing his opinion are not well founded, as explained below:
  - 48.1 The Commission's 2010 decision was made after considering a range of factors and available information, not just the two factors now focused on by Dr Lally. For this reason Dr Lally is mistaken as to the implications of his change in view for the current IMs.
  - 48.2 Dr Lally's 2008 paper explained that his advice was given in the context of the Commission's decision to implement formal control. It is not valid, therefore, for Dr Lally to claim that his earlier opinion reflected a different form of regulation. In addition, regulation should provide gas pipeline businesses with incentives for efficient expansion, which will expose the business to systematic risk.
  - 48.3 Dr Lally's advice in 2004 and 2008 did not depend solely on the greater proportion of industrial and commercial customers. Therefore, even if Dr Lally is correct that the customer mix only contributes an additional 0.03 to the gas asset beta, it does not follow that the existing 0.1 adjustment is too high. Furthermore, Dr Lally's analysis does not support his conclusion that no adjustment is warranted.
  - 48.4 HoustonKemp's analysis of New Zealand data confirms the findings from an earlier Australian study, which indicates that the residential gas customers exhibit an income elasticity of demand which is 4.5 times greater than electricity. This is an important conclusion that provides a further reason (not contemplated by Dr Lally) for an upward adjustment to the gas asset beta. Furthermore, HoustonKemp shows that Dr Lally's algebraic framework supports the current asset beta differential, providing that it incorporates appropriate estimates of the income elasticity of demand.

48.5 HoustonKemp also comment on the reasons that Dr Lally provides for his change of opinion<sup>19</sup>:

"In his 2008 report, Dr Lally [...] also had regard to an additional factor, being the existence of growth options for gas networks that did not exist (or were less extensive) for electricity networks. Dr Lally's 2008 report states that this factor, and the relative use of energy by different customer types, were together particularly relevant in supporting his view in favour of a higher asset beta for GPBs.

In both his 2004 and 2008 reports, Dr Lally recommended an asset beta for GPBs that was 0.10 higher than for electricity lines businesses. The fact that his recommendation did not change as between these two reports implies that the growth options proposition introduced in Dr Lally's 2008 report was not determinative for his conclusion. This implication, in combination with the weight given to both considerations in his 2008 report, sits uneasily with Dr Lally's claim now that the growth options rationale was the most important consideration in favour of a higher asset beta for GPBs."

- 49. Dr Lally has now reached a different conclusion compared to the views he expressed in 2004 and 2008, without any material change in evidence or circumstances. While it is open to Dr Lally to change his opinion, the Commission must exercise its own judgment, as explained above, having regard to all the evidence and the desirability of the Commission's decisions sending a robust signal as to when a change in the current IMs will be made.
- 50. In summary, Powerco submits that the Commission should confirm in its June draft decision that the Commission's reasoning and approach in relation to gas asset betas in its 2010 IM decision remain valid and will be maintained.
- 51. If you wish to discuss this submission and / or the accompanying submission from Houston Kemp, please contact Richard Fletcher (General Manager Regulation and Government Affairs), at <a href="mailto:richard.fletcher@powerco.co.nz">richard.fletcher@powerco.co.nz</a>. or on (04)978 9910, in the first instance.

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<sup>&</sup>lt;sup>19</sup> HoustonKemp, Asset beta for gas pipeline businesses, A Report for Powerco, March 2016, page 6.