

**IN THE HIGH COURT OF NEW ZEALAND
WELLINGTON REGISTRY**

**I TE KŌTI MATUA O AOTEAROA
TE WHANGANUI-A-TARA ROHE**

**CIV-2024-485-64
[2026] NZHC 1224**

UNDER	Part 4 of the Commerce Act 1986
IN THE MATTER	of an appeal against an Input Methodologies Determination of the Commerce Commission
BETWEEN	FIRST GAS LIMITED Appellant
AND	COMMERCE COMMISSION Respondent
Hearing:	5 to 8 August 2025
Counsel:	T D Smith, S D J Peart, E N L Peart and L J Green for Appellant J D Every-Palmer KC, T G Bain, J W Harrell and A A Cox for Respondent
Judgment:	7 May 2026

**JUDGMENT OF RADICH J
AND LAY MEMBERS DR J WALKER AND PROFESSOR S KING**

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[1] Part 4 of the Commerce Act 1986 provides for the regulation of the price and quality of goods or services in markets where there is little or no competition and little or no likelihood of a substantial increase in competition.¹ It introduces machinery of a type that does not feature in workably competitive markets in order to produce outcomes of a kind that are produced in workably competitive markets.²

[2] Gas pipeline businesses (GPBs) operate in markets that are regulated by Part 4.³ Part of the regulation for which the Commerce Commission (Commission) is responsible under Part 4 involves it determining input methodologies. Input methodologies are descriptions of the methodologies, processes, rules or other mechanisms that will be used in making decisions about the cost-based pricing that is implicit in Part 4.⁴

[3] A key component of input methodologies is the weighted average cost of capital (WACC).⁵ The WACC estimates the capital costs that regulated GPBs would face in a workably competitive market. The methodology for determining the WACC is designed to estimate the true cost of capital for regulated suppliers. It needs to be high enough to allow them to recoup the cost of efficient investments, but not so high as to enable the generation of excessive profits.

¹ Commerce Act 1986, s 52.

² *Major Gas Users' Group Inc v Commerce Commission* [2024] NZHC 959 [*Major Gas Users*] at [13] and [14].

³ Commerce Act, s 52B(3)(b). Gas pipeline businesses include both gas transmission businesses and gas distribution businesses.

⁴ Sections 52C and 52T. *Wellington International Airport v Commerce Commission* [2013] NZHC 3289 [*Wellington International Airport*] at [43]; *Major Gas Users*, above n 2, at [26].

⁵ Section 52T(1)(a)(i).

[4] The true WACC of a regulated business cannot be observed and so it must be estimated. The values used in the estimation process are subject to error. Accordingly, as part of the WACC calculation, the Commission determines the “standard error”, which is a measure of dispersion or ‘accuracy’ of the estimated WACC around the mid-point, the best unbiased estimate. The Commission may, in the input methodologies, set the estimate for the WACC at the mid-point, given it is to be an unbiased estimate of the true WACC. However, the Commission might also consider that the long-term interests of consumers are better met by choosing a different WACC estimate, for example, if there are possible asymmetric costs to consumers of setting a WACC that is higher or lower than the true WACC.

[5] The Commission has in the past set the WACC above the mid-point estimate for GPBs on the basis of an underlying principle that the long-term interests of consumers are best served by mitigating the risks of under-investment – which might result from setting a WACC that is below the true WACC – despite this approach resulting in higher prices.

[6] When the Commission reviewed its input methodologies for GPBs in 2023, it decided that the methodology for determining the WACC for GPBs should use the mid-point, without further adjustment.⁶

[7] First Gas Limited (First Gas) challenges that decision. It says, in short, that having since 2014 relied on evidence and analysis to set a WACC percentile above the mid-point for each of electricity distribution businesses (EDBs), Transpower and GPBs, the 2023 Determination, which maintains that approach for electricity lines businesses⁷ but not for GPBs, is not sustainable. There was, First Gas says, no independent expert assistance or even moderately robust empirical inquiry to support

⁶ *Gas Transmission Services Input Methodologies (IM Review 2023), Amendment Determination 2023* [2023] NZCC 36; *Gas Distribution Services Input Methodologies (IM Review 2023) Amendment Determination 2023* [2023] NZCC 37, both dated 13 December 2023 and Commerce Commission *Cost of Capital Topic Paper, Part 4 Input Methodologies Review 2023 – Final Decision* (13 December 2023) [2023 Final Decision Paper]. Unless otherwise described, both determinations and the final decision paper are referred in this decision collectively as the Determination and the final decision paper alone is referred to as the 2023 Final Decision Paper.

⁷ In this decision when we refer to electricity lines businesses, the term encompasses both EDBs and Transpower’s electricity transmission services.

the distinction. It says that a materially better input methodology (which, as will be explained, is the relevant appeal test here) would have continued to set the WACC for GPBs at the 67th percentile adopted for both GPBs and electricity lines businesses in the 2014 Determination or, alternatively, at the 65th percentile adopted for electricity lines businesses in 2023.

The legislative scheme

The purpose and nature of Part 4 regulation

[8] In determining an appeal against an input methodology determination, a Court may only exercise its powers if it is satisfied that an amendment, or a substituted input methodology, will be “materially better” in meeting the purpose of Part 4 of the Act or the purpose of input methodologies themselves, or both.⁸

[9] Because Part 4 provides for the regulation of goods or services in markets in which there is little or no competition and little or no likelihood of a substantial increase in competition, its focus is on providing benefits for consumers in markets of this kind.⁹

[10] The purpose of Part 4 is given in s 52A which is in the following terms:

52A Purpose of Part

- (1) The purpose of this Part is to promote the long-term benefit of consumers in markets referred to in section 52 by promoting outcomes that are consistent with outcomes produced in competitive markets such that suppliers of regulated goods or services—
 - (a) have incentives to innovate and to invest, including in replacement, upgraded, and new assets; and
 - (b) have incentives to improve efficiency and provide services at a quality that reflects consumer demands; and
 - (c) share with consumers the benefits of efficiency gains in the supply of the regulated goods or services, including through lower prices; and
 - (d) are limited in their ability to extract excessive profits.

⁸ Commerce Act, s 52Z(4).

⁹ The “consumers” whose benefits are to be promoted under Part 4 are consumers of goods or services that are regulated under that part, rather than the broader interests of those consumers as participants in New Zealand’s wider economy, or the interests of consumers of unrelated goods and services: *Wellington International Airport*, above n 4, at [14] and [686].

- (2) In this Part, the purpose set out in subsection (1) applies in place of the purpose set out in section 1A.

[11] The term “competitive markets” in s 52A(1) means “workably competitive markets”.¹⁰ A workably competitive market is one that provides outcomes that are reasonably close to those found in strongly competitive markets; a market in which prices reflect efficient costs – including the cost of capital – and in which only a reasonable level of profit is produced.¹¹

[12] Because markets regulated under Part 4 are not workably competitive, Part 4 seeks to produce outcomes of a kind that are produced in workably competitive markets.¹² It does not do so by seeking to mimic features of, or behaviours in, workably competitive markets. Rather, it introduces machinery to produce the outcomes that are sought.

Input methodologies – and reviews

[13] The purpose of input methodologies is given in s 52R in the following terms:

52R Purpose of input methodologies

The purpose of input methodologies is to promote certainty for suppliers and consumers in relation to the rules, requirements, and processes applying to the regulation, or proposed regulation, of goods or services under this Part.

[14] Under s 52T, input methodologies relating to particular goods or services must include methodologies for evaluating or determining a range of matters relating to the supply of goods or services, including, for example, the cost of capital, the valuation of assets and the allocation of costs.¹³

[15] In determining input methodologies, the Commission is to follow a prescribed process which sees it publishing a draft methodology and giving interested people a reasonable opportunity to give their views.¹⁴ When completed, an input methodology

¹⁰ Through the terms of s 3(1) of the Act.

¹¹ *Wellington International Airport*, above n 4, at [14] and *Major Gas Users*, above n 2, at [13].

¹² *Major Gas Users*, above n 2, at [14].

¹³ Commerce Act, s 52T(1).

¹⁴ Section 52V.

is secondary legislation.¹⁵ The Commission must review each input methodology at intervals of not more than seven years.¹⁶

Types of regulation

[16] There are four different types of regulation under Part 4:

- (a) Information disclosure regulation, under sub-pt 4;
- (b) Negotiate/arbitrate regulation, under sub-pt 5;
- (c) Default/customised price-quality regulation, under sub-pt 6; and
- (d) Individual price-quality regulation, under sub-pt 7.

[17] GPBs are subject to both information disclosure regulation and price-quality regulation.¹⁷

Price-quality regulation

[18] Default price-quality regulation enables, through the application of input methodologies, a relatively low-cost way of setting price-quality paths for suppliers of regulated goods or services. Alternatively, an opportunity is available, through customised price-quality regulation, for individual regulated suppliers to have alternative price-quality paths set.¹⁸ First Gas, as a GPB, is subject to a default price-quality path. Every price-quality path must specify:¹⁹

- (a) in relation to prices, either or both of the following for a specified regulatory period:
 - (i) the maximum price or prices that may be charged;

¹⁵ Section 52W.

¹⁶ Section 52Y.

¹⁷ Sections 55C and 55D.

¹⁸ Section 53K.

¹⁹ Section 53M.

- (ii) the maximum revenues that may be recovered; and
- (b) the quality standards that must be met by the regulated supplier; and
- (c) the regulatory period.

[19] Default price-quality paths are to be provided in determinations of the Commission which:²⁰

- (a) set out the requirements that apply to each regulated supplier;
- (b) set out time frames that apply; and
- (c) specify the input methodologies that apply.

[20] Under the price-quality regulation scheme for GPBs, revenues and/or prices are capped for periods of up to five years.²¹ For each regulatory period, the cap is set on the basis of a forward-looking assessment of the revenue they need to earn in order to cover their efficient costs over that period. Those costs include their return on, and the return of, their investment: a return on investment is achieved through allowing an appropriate cost of capital on assets, while a return of investment is achieved through an allowance for depreciation of assets.

[21] The first regulatory period ran from 1 July 2013 to 30 September 2017,²² the second ran from 1 October 2017 to 30 September 2022²³ and the current regulatory period runs from 1 October 2022 to 30 September 2026.

[22] Alongside price-quality regulation, the information disclosure regulation to which GPBs are subject is used to assess whether the purpose of Part 4 is being met.²⁴

²⁰ Section 52P.

²¹ Under s 53M(1)(a) the Commission may set either or both the maximum revenue that may be earned or the maximum prices that may be charged.

²² *Gas Distribution Services Default Price-quality Path Determination 2013* [2013] NZCC 4 and *Gas Transmission Services Default Price-quality Path Determination 2013* [2013] NZCC 5.

²³ *Gas Distribution Services Default Price-quality Path Determination 2017* [2017] NZCC 15 and *Gas Transmission Services Default Price-quality Path Determination 2017* [2017] NZCC 14.

²⁴ Commerce Act, ss 53A and 53B.

The Commission's input methodologies structure

The building blocks method

[23] Input methodologies under s 52T, essentially, describe the rules for determining elements of what is known as the “building blocks” method of economic regulation.²⁵ The building blocks method is based upon the notion that workably competitive markets produce prices based on costs. The method enables suppliers to recover their costs and to earn a normal rate of return on their capital.

[24] The building blocks method calculates regulated revenue on the following basis:

$$\begin{aligned} & \text{regulatory asset base} \times \text{cost of capital} \\ & + \text{depreciation} + \text{operating expenditure} + \text{tax} \\ & - \text{revaluation gains (or} + \text{revaluation losses)} \\ & - \text{other income} \end{aligned}$$

[25] One of the input methodologies determined by the Commission under s 52T relates to the cost of capital component of the building blocks method. The cost of capital is the cost that is incurred by a company in financing its operations. It includes the cost of borrowing money from creditors and of raising funds from investors. It reflects the return that is required to incentivise investment, given the level of systematic risk associated with businesses in a given industry sector.

[26] Several key economic principles underlie the Commission's approach to implementing the building blocks method.²⁶ One of them is the financial capital maintenance principle. It is the principle that regulated suppliers should be given the *ex ante* (or forecast) expectation of earning normal returns and maintaining their financial capital in real terms, over timeframes longer than a single regulatory period. The principle is sometimes expressed on the basis that the net present value of an

²⁵ *Wellington International Airport*, above n 4, at [43].

²⁶ Commerce Commission *Part 4 Input Methodologies Review 2023 – Framework Paper* (13 October 2022) [2023 Framework Paper] at [X24].

investment should equal zero, meaning that, in net present value terms, suppliers will earn no more than their cost of capital.

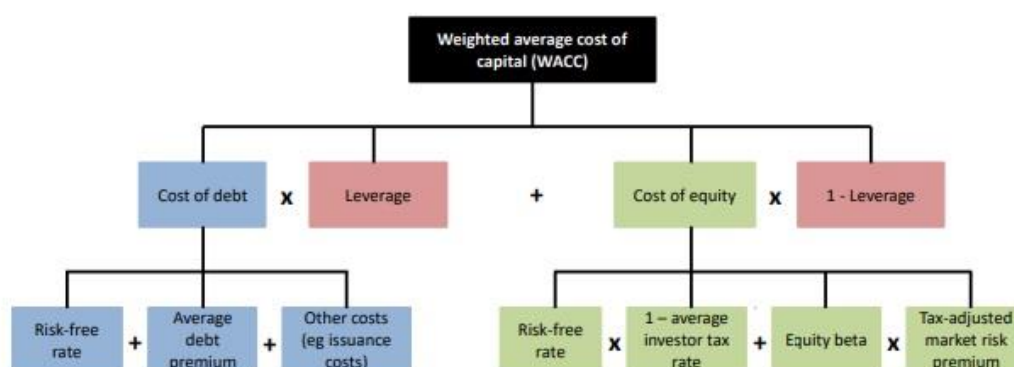
[27] Another primary principle is the allocation of risk. Unless inconsistent with the Part 4 purpose, risks to suppliers, on the one hand, or consumers, on the other, should, generally, be allocated depending on who is best placed to manage the risk.

[28] Finally, and of particular relevance for this appeal, is the potential asymmetric consequences of over or under investment. That is, the consequences to consumers of regulated services, over the long term, of under-investment could be more adverse than the consequences of higher prices and/or over-investment.

The cost of capital input methodology

[29] The WACC is an estimate of one of the costs of doing business. As noted in [3] above, the WACC estimates the capital costs that regulated GPBs would face in a workably competitive market. It needs to be set at a level that is high enough to attract investment and provide incentives to invest²⁷ but not set so high as to enable a regulated supplier to extract excessive profits.²⁸

[30] In calculating a WACC in a regulated market, in such a way as to reflect the cost of capital that would be faced by firms in workably competitive markets, the following approach is used:



²⁷ Section 52A(1)(a).

²⁸ Section 52A(1)(d).

[31] The WACC estimate is calculated using these parameters, the result of which is expressed as a percentage. This is the best unbiased estimate of the true cost of capital. However, like any estimate, it is subject to error.

[32] The final step in the methodology for calculating the WACC is to consider whether an adjustment to the mid-point estimate is warranted. The Commission estimates, separately, a standard error for the WACC calculation and then uses the estimate to construct a normally distributed curve with the unbiased WACC estimate at the mid-point. This point, at the top of the curve, has the highest probability of being the true WACC but it could, equally, be too high or too low.

[33] The mid-point of the range of estimates for the WACC is the best “unbiased” point estimate. In other words, it is the 50th percentile estimate of the true WACC: there is an equal chance that the true WACC lies above or below the midpoint. The Commission may set the mid-point estimate for the WACC in the input methodologies, given it is an unbiased estimate of the true WACC. However, the Commission also might consider that the long term interests of consumers are better met by choosing a different WACC estimate, for example, if there are possible asymmetric costs to consumers of setting a WACC that is higher or lower than the true WACC. The standard error can be used to estimate the likelihood that the true WACC lies within a certain range of values, for example, that the true WACC has a 65 percent likelihood of being below a particular value. The Commission could then set this 65th percentile WACC in the input methodologies if it considers that this best promotes the purpose of Part 4, the purpose of the input methodologies or both.

[34] To date, for GPBs, the WACC has been set above the mid-point estimate on the curve in order to reflect the potentially asymmetric costs to consumers of setting a WACC that is too low. But the WACC, and the parameters that lead to it being set, is reconsidered at each seven-year input methodology review.

The background to and nature of the 2023 WACC Determination

[35] Since Part 4 was introduced, the Commission has set a WACC for both GPBs and electricity lines businesses at a percentile above the mid-point to reflect the

potential asymmetric costs to consumers of setting a WACC that is higher or lower than the true WACC. Initially, it selected the 75th percentile of the WACC range.

[36] In its 2013 decision on the Commission's first set of input methodologies, the Court upheld the Commission's decision on this point but criticised the sufficiency of the evidence on which the Commission had relied in selecting the 75th percentile.²⁹ Following the Court's decision, the Commission, in 2014, conducted a review of available evidence on the issue and, following a consultative process, adopted a 67th percentile WACC estimate for the energy sector – both electricity lines businesses and GPBs. In its final decision, the Commission expressed confidence in the position it had reached on the WACC percentile, which tied up the most significant loose end following the Court's decision in *Wellington International Airport* and put the WACC percentile on the same footing as other parameters in the input methodologies.³⁰

[37] In its final decision on the 2016 input methodologies review,³¹ the Commission reaffirmed its adoption of a WACC percentile above the mid-point for the energy sector – both electricity lines businesses and GPBs. It found there to be no evidence before it that would convince it to change the percentile.³² But it went on to say that, at the time of the next review, it intended to examine carefully the evidence on whether a WACC percentile uplift had delivered benefits to consumers in both the electricity and gas sectors.³³

[38] In its final decisions for the 2023 input methodology reviews on 13 December 2023, the Commission decided to apply an uplift to the 65th percentile for electricity lines businesses but to adopt the mid-point estimate, with no uplift, for GPBs.³⁴ The primary bases for the Commission's decision would appear to be these:

²⁹ *Wellington International Airport*, above n 4, at [1462].

³⁰ Commerce Commission *Amendment to the WACC Percentile for Price-quality Regulation for Electricity Lines Services and Gas Pipeline Services – Reasons Paper* (30 October 2014) [2014 Reasons Paper] at 1.34.

³¹ The seven-yearly input methodology review required by s 52Y.

³² Commerce Commission *Input Methodologies Review Decisions, Topic Paper 4: Cost of Capital Issues* (20 December 2016) at [666].

³³ At [671].

³⁴ 2023 Final Decision Paper, above n 6.

- (a) It saw itself as being able to adopt a different approach having regard to the s 52A purpose and guided by the economic principle that there may be an asymmetry between costs and benefits of over and under investment.³⁵
- (b) A view that, unlike the case for electricity networks, there was no sound basis for estimating the cost of gas outages.³⁶ However, while it considered there was no sound empirical basis for estimating a magnitude, there was an expectation that the cost of gas outages was likely to be lower than for electricity.³⁷
- (c) A view that under-investment in gas pipelines is less likely to go undetected and less likely to lead to outages as compared to electricity networks.³⁸
- (d) It considered there to be clear evidence that gas pipelines are more reliable than electricity networks and the loss analysis model used to determine a range of potential uplifts for electricity networks could not accommodate these reliability differences.³⁹

The appeal

[39] In this appeal, First Gas says that the Commission reached this conclusion despite:

- (a) Its decisions over the previous decade, supported by expert analysis, that adopted a percentile above the mid-point for both GPBs and electricity lines businesses.
- (b) Expert evidence put forward by the GPBs, in consultation on the 2023 Determination, said to demonstrate the existence and magnitude of

³⁵ At [6.212].

³⁶ At [6.219] and [6.220].

³⁷ At [6.106].

³⁸ At [6.105].

³⁹ At [6.219]–[6.220] and [6.232].

asymmetric error costs associated with under-estimating the WACC for GPBs.

- (c) The absence of any expert evidence supporting the proposition that there were no asymmetric error costs associated with the WACC estimation for GPBs, or that it was appropriate to assume that they were different from those for electricity lines businesses.
- (d) Not having obtained independent expert analysis of its own to assess the magnitude of asymmetric error costs associated with under-estimating the WACC for GPBs.

[40] In essence, First Gas says that the Determination is contrary to the judgment of the Court in *Wellington International Airport*, to the Commission’s own reasoning and prior determinations, and to the evidence available on the 2023 Determination.

[41] First Gas says that a materially better input methodology would have continued to set the WACC for GPBs at the 67th percentile adopted in the 2014 Determination or, alternatively, at the 65th percentile adopted for electricity networks in 2023.

[42] It says that the use of either of those percentiles would promote consistency, give effect to longstanding legal and economic principles developed by the Commission and endorsed by the Court, reflect the Commission’s own position on the issue before the 2023 Determination and reflect the best evidence before the Commission and the Court on the quantification of likely asymmetric error costs.

The legal framework for the appeal

[43] The unique “materially better” test to be applied in appeals from input methodology determinations is provided in s 52Z(3) and (4) of the Act, in the following terms:

52Z Appeals against input methodology determinations

...

- (3) In determining an appeal against an input methodology determination, the court may do any of the following:

- (a) decline the appeal and confirm the input methodology set out in the determination:
- (b) allow the appeal by—
 - (i) amending the input methodology; or
 - (ii) revoking the input methodology and substituting a new one; or
 - (iii) referring the input methodology determination back to the Commission with directions as to the particular matters that require amendment.
- (4) The court may only exercise its powers under subsection (3)(b) if it is satisfied that the amended or substituted input methodology is (or will be, in the case of subsection (3)(b)(iii) materially better in meeting the purpose of this Part, the purpose in section 52R, or both.

[44] As was said in *Major Gas Users' Group Inc v Commerce Commission*, the test is such that it is not necessary to consider whether the Commission erred in the first instance in determining an input methodology and to only address the materially better question if it has.⁴⁰

[45] In *Wellington International Airport*, the Court put it in the following way:⁴¹

In terms of *Austin Nichols* principles, we think the effect of s 52Z(4) is that the [input methodology] determination under appeal will be wrong in the only sense that matters if we conclude that the amended or substituted [input methodology] will be “materially better” as provided in s 52Z(4). There is, in our view, little point in first looking for error and then applying the materially better test. The important point is that we must be satisfied on the materially better ground before we may allow the appeal.

[46] The Court in *Wellington International Airport* went on to consider the application of the “materially better” test in a practical sense. It said:⁴²

We think something of the practical implication of the phrase “materially better” can be gained from considering the context of these appeals. As will become obvious, for every competing argument before us there is a supporting expert or experts. This is not necessarily a criticism of those experts, but may be a reflection of the complexity of the issues and the nature of economic discourse. Given that context, we think the use of the phrase “materially better” requires us to look through the inevitable conflict and difference of views between experts, all advocating positions which they regard as being materially better, and to determine whether the IM argued for is, indeed, materially better: that is, an IM which, notwithstanding that divergence of

⁴⁰ *Major Gas Users*, above n 2, at [38].

⁴¹ *Wellington International Airport*, above n 4, at [157].

⁴² At [164] (footnotes omitted).

views, is sufficiently compelling to be seen by us as being overly “materially better” than that proposed by the Commission.

[47] The onus is on First Gas to satisfy the Court that a different input methodology would be materially better.⁴³

[48] In undertaking that assessment, a level of deference to the expertise of the members of the Commission is not strictly needed.⁴⁴ While the Commission is a specialist tribunal, so too is this Court, as constituted under s 52ZA, which requires each of its lay members to have relevant expertise.

[49] However, as was said in *Major Gas Users’ Group*, regard may be had to the extensive nature of the Commission’s decision-making process for a determination.⁴⁵ It is immersed in the detailed process, which leads to a determination, over a considerable period of time.

[50] Another feature of the appeal regime for input methodology decisions is the closed record requirement. Section 52ZA provides that the appeal “must be by way of rehearing and must be conducted solely on the basis of the documentary information and views that were before the Commission when it made its determination, and no party may introduce any new material during the appeal.”

[51] The legislative history supports the view that Parliament was concerned to avoid undue litigation and the potential “gaming” of the appeal process.⁴⁶

[52] Accordingly, looking only at what the Commission had before it, the question is whether there is an input methodology which is materially better.

⁴³ At [143].

⁴⁴ *Major Gas Users*, above n 2, at [40].

⁴⁵ At [41].

⁴⁶ (20 March 2008) 646 NZPD 15158; Commerce Amendment Bill 2008 (201-1) (explanatory note); and Commerce Amendment Bill 2008 (201-2) (select committee report) at 4–5. See also *Wellington International Airport*, above n 4, at [119] and [132(a)].

[53] If the Court is satisfied that the amended or substituted input methodology that is proposed is materially better in meeting the purpose of Part 4, the purpose in s 52R, or both, then it may allow the appeal by:⁴⁷

- (a) amending the input methodology; or
- (b) revoking the input methodology and substituting a new one; or
- (c) referring the input methodology determination back to the Commission with directions as to the particular matters that require amendment.

[54] For the Court to amend or revoke an input methodology, it would need in this case to conclude that the alternative input methodology, with the WACC set at the 65th or 67th percentile for GPBs, is materially better than the Commission's determination, which sets the WACC at the mid-point. Alternatively, if it was to allow the appeal and refer the input methodology determination back to the Commission, with directions on particular matters for amendment, then the Court needs to be able to provide specific directions to the Commission on the exercise it must undertake to achieve the materially better input methodology.

[55] As the Court in *Wellington International Airport* said, the "reference back" power is drafted narrowly and is considerably more constrained than the broad reference-back provision in s 94 of the Act, which relates to appeals from determinations other than input methodology determinations.⁴⁸ The Court needs to have a sufficiently clear understanding of what the practical end result of the reference-back exercise will be in order to be satisfied that the materially better outcome, on which it has determined the case, will be produced.⁴⁹

⁴⁷ Commerce Act, s 52Z(3)(b).

⁴⁸ *Wellington International Airport*, above n 4, at [182].

⁴⁹ At [191].

The Commission's decisions on the WACC percentile

[56] In this section of the decision, we undertake a relatively detailed analysis of the history of the Commission's decisions on the WACC percentile for GPBs. We do so because of its relevance to the Determination in 2023.

2004 Gas Control Inquiry

[57] In April 2003, the then Minister of Energy requested that the Commission undertake a natural gas control inquiry and that it report on whether goods and services related to gas transmission and gas distribution services should be controlled. In its final report, the Commission recognised the risks associated with imposing control are asymmetric: that is, the costs of imposing control when it is not justified, in terms of disincentivised investment, are likely to be higher than the costs of not imposing control when it is justified.⁵⁰ The Commission noted that, under a control regime, the Commission could recognise asymmetry by adopting a WACC above the mid-point.⁵¹ In modelling the costs and benefits of imposing control, the Commission similarly took account of this asymmetry by including a WACC uplift.⁵² It made the point that this modelling, including the WACC uplift parameter, should be consistent with the likely approach if control were declared, to avoid the possibility of control being recommended when it would not be binding.⁵³ It was of the view that a margin equivalent to the 75th percentile of the WACC range should be sufficient to protect against the asymmetric risk of imposing regulation when it is not justified and to avoid recommending control when it would be non-binding.⁵⁴

Gas Authorisation 2008

[58] In 2008, the Commission issued an authorisation under s 70 of the Act⁵⁵ for the supply of controlled gas services on terms specified in the authorisation. In its Decisions Paper, the Commission said that it recognised that the consequences of under-investment in infrastructure by regulated businesses can have a more significant

⁵⁰ Commerce Commission *Gas Control Inquiry Final Report* (29 November 2004) at [6.138].

⁵¹ At [6.138].

⁵² At [6.140].

⁵³ At [6.139].

⁵⁴ At [6.147].

⁵⁵ Section 70 has since been repealed.

impact on the interests of acquirers in the long term than the consequences of excessive prices to acquirers in the short term. Accordingly, it saw that the consequences of under-estimating the WACC may be more serious than over-estimation.⁵⁶ It concluded that the WACC value at the 75th percentile provided an appropriate balance between achieving normal rates of return – which can be considered commercially realistic for comparable businesses – and the interests of acquirers of controlled services.⁵⁷

[59] As part of the gas authorisation process, Vector Ltd commissioned Professor Tony van Zijl, through consulting firm LECG, to comment on the Commission’s estimate of the WACC in its draft authorisation.⁵⁸ Professor van Zijl concluded that, to ensure that the WACC estimate provides appropriate reward and incentive for Vector to invest in infrastructure, the estimate should make appropriate allowance for estimation error and model error. He recommended the modelling of a “loss function” to measure the expected losses from miscalculating the regulated rate of return.⁵⁹

[60] While that approach found support in a report commissioned by the Commission from Dr Martin Lally,⁶⁰ the Commission concluded that no empirical evidence existed to allow reliable estimation of the appropriate form or parameters of such a loss function and so it settled on using the 75th percentile.⁶¹

2010 Input Methodologies Determination

[61] In the course of developing the 2010 input methodologies, the Commission obtained advice from Professor Julian Franks, Dr Lally and Professor Stewart Myers.⁶² The advice supported an approach of choosing a WACC value equal to or above the

⁵⁶ Commerce Commission *Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd – Decisions Paper* (30 October 2008) [2008 Authorisation Decisions Paper] at [759].

⁵⁷ At [760].

⁵⁸ Tony Van Zijl *Response on behalf of Vector Ltd to the Commerce Commission’s Estimate of WACC in the Draft Authorisation for the Control of Supply of Natural Gas Distribution Services by Powerco Ltd and Vector Ltd* (LECG, 26 November 2007).

⁵⁹ At 7–10 and 17.

⁶⁰ Martin Lally *The Weighted Average Cost of Capital for Gas Pipeline Businesses* (28 November 2008) at 101.

⁶¹ 2008 Authorisation Decisions Paper, above n 56, at [761].

⁶² Julian Franks, Martin Lally and Stewart Myers *Recommendations to the New Zealand Commerce Commission on an Appropriate Cost of Capital Methodology* (18 December 2008) [2008 Franks, Lally and Myers Report].

mid-point in the estimated range in recognition of likely estimation errors and the social costs of setting allowed returns too low.⁶³

[62] Those views were reflected in a set of draft guidelines published by the Commission alongside its discussion paper on input methodologies in 2009.⁶⁴ In the paper, the Commission referred to a plausible band within which the true WACC is likely to lie, recognising the many uncertainties (quantifiable or otherwise) surrounding the WACC's individual component parts.⁶⁵

[63] In the Commission's reasons paper for the 2010 input methodologies determination, it maintained its position that the 75th percentile should be used because it considered that it "is prudent to ensure, by allowing for possible errors in the estimation of the WACC, that regulated suppliers have incentives to invest, because efficient investment is to the long-term benefit of consumers".⁶⁶

[64] It saw that, weighing the arguments, and having regard to the Part 4 purpose and, in particular, to ensure that there are incentives for both electricity lines businesses and GPBs to invest and innovate, the 75th percentile estimate was appropriate.⁶⁷

[65] The Commission issued the Commerce Act (Gas Distribution Services Input Methodologies) Determination 2010, Decision 711 and the Commerce Act (Gas Transmission Services Input Methodologies) Determination 2010, Decision 712 (Cost of Capital Input Methodologies) on that basis.

⁶³ At [10], [155]-[157].

⁶⁴ Commerce Commission *Revised Draft Guidelines – the Commerce Commission's Approach to Estimating the Cost of Capital* (19 June 2009) at [239].

⁶⁵ At [236].

⁶⁶ Commerce Commission *Input Methodologies (Electricity Distribution and Gas Pipelines Services) Reasons Paper* (December 2010) [2010 Reasons Paper], at [X35].

⁶⁷ At [6.7.12].

[66] The 2010 Determination⁶⁸ was appealed to this Court by multiple parties and on multiple fronts. Included among the appeals was an appeal by the Major Electricity Users Group and by Transpower on the choice of the 75th percentile for the WACC component of price-quality regulation for electricity lines businesses and GPBs. The Court said that using the 75th percentile would involve the likelihood that suppliers would earn excess returns and that those returns would become permanent, given the Commission's reasoning based on "unavoidable uncertainties and asymmetric costs being permanent features of the regulatory framework."⁶⁹ It queried whether that likelihood, which was at odds with the s 52A(1)(d) purpose, was justified by a fear of failure to achieve the s 52A(1)(a) outcome of providing regulated suppliers with incentives to invest and innovate. It saw the question as being whether that would best promote the long-term benefit of consumers; the overriding purpose of Part 4.⁷⁰

[67] The Court did not see the Commission as having supplied any supporting analysis for its conclusion, which seemed to be considered almost axiomatic, and was concerned also about the lack of reference to any research literature in material provided by suppliers.⁷¹ The Court noted also that, while the Commission's approach of adopting an uplift to the WACC was endorsed by their expert advisers, those views were expressed in conclusionary terms without any detailed explanation.⁷²

[68] In the absence of empirical evidence, the Court ventured some tentative counter arguments against an uplift.⁷³ It was said that a normal return (the mid-point) ought to be an attractive proposition for a regulated supplier, since the return is almost guaranteed, and higher returns risked over investment by regulated suppliers.⁷⁴ The Court queried whether above normal returns would stimulate greater efficiency of any kind.⁷⁵ Rather, they might allow inefficiency to creep in and it was said that "necessity,

⁶⁸ As redetermined in 2012 – *Gas Transmission Services Input Methodologies Determination 2012* [2012] NZCC 28; *Gas Distribution Services Input Methodologies Determination 2012* [2012] NZCC 27.

⁶⁹ *Wellington International Airport*, above n 4, at [1460]

⁷⁰ At [1461].

⁷¹ At [1462] and [1463].

⁷² At [1436], with reference to the 2008 Franks, Lally and Myers Report, above n 62.

⁷³ At [1471].

⁷⁴ At [1472]

⁷⁵ At [1473]

not plenty, is the mother of invention”.⁷⁶ Furthermore, the Court pointed to the potential downstream consequences of such inefficiencies, which need to be considered.⁷⁷ Finally, the Court expressed a view that applying the 75th percentile to past investments was unlikely to promote incentives to invest and innovate.⁷⁸

[69] While expressing those concerns, the Court noted that these objections suffered from the same lack of empirical support as the case for an uplift.⁷⁹ Consequently, it concluded that it had not been persuaded by the appellants that applying a mid-point WACC estimate would lead to a materially better input methodology. Nonetheless, it said that it would expect that its scepticism about using a WACC substantially higher than the mid-point would be considered by the Commission and that it would expect that consideration to include more detailed analysis.⁸⁰

2014 Review

[70] In response to the Court’s criticisms of the evidential basis for the Commission’s decision to set the WACC at the 75th percentile, the Commission conducted a detailed review almost straight away. It said in its final decision that, in response to the Court’s judgment, it had “gathered a substantial body of expert evidence regarding whether a WACC above the mid-point estimate should be used”.⁸¹

[71] The Commission referred to the body of evidence as including relevant academic literature, independent expert reports and modelling prepared by its advisers, further analysis of data and market transactions by the Commission, and expert reports submitted on behalf of interested parties in response to its draft decision and other consultation papers it had released. The Commission’s independent expert advisers included Oxera, Professor Ingo Vogelsang, Professor Julian Franks, Dr Martin Lally, Economic Insights and Professor Ian Dobbs (who commented on the relevance and use of his 2011 model of welfare loss asymmetries arising from uncertainty in the

⁷⁶ At [1474]

⁷⁷ At [1475]–[1476]

⁷⁸ At [1479]–[1480]

⁷⁹ At [1482]

⁸⁰ [1483] and [1486].

⁸¹ 2014 Reasons Paper, above n 30, at [5.8].

regulatory WACC in the context of the regulation of electricity lines services in New Zealand).

[72] In its draft decision (on which consultation proceeded) the Commission said that, after gathering that further evidence and conducting additional analysis, its view remained that it was appropriate to use a WACC above the mid-point estimate for both electricity lines businesses and GPBs. It said that the quantitative analysis conducted by Oxera and Dr Lally (discussed below) demonstrates that using a WACC above the mid-point estimate helps mitigate significant risks to consumers that would result from under-investment.⁸² However, it proposed in its draft decision to reduce the WACC uplift from the 75th to the 67th percentile estimate.

[73] In content that was not repeated in the final decision⁸³ reference was made to Dr Lally's consideration of whether different percentiles should be applied to different sectors – electricity and gas. The Commission recorded Dr Lally's conclusion that the difficulties in estimating the differential rates preclude that course of action.⁸⁴ On the other hand, the Commission noted Professor Vogelsang's view that there may be a case for a tailored approach for different industries but that a uniform WACC level can be appropriate because it saves difficult and time-consuming analysis and generates more predictable results.⁸⁵ The draft decision was to apply the same uplift for GPBs as for electricity lines businesses, noting that, while there may be differences between them, the Commission considered them to be "similar enough".⁸⁶

[74] In working towards its final decision in 2014, the Commission considered a range of evidence and analysis, discussed in the paragraphs that follow.

Dr Martin Lally

[75] Dr Lally was commissioned by the Commission to review the empirical literature relevant to specifying a particular WACC margin for uncertainty. Having

⁸² Commerce Commission *Proposed Amendment to the WACC Percentile for Electricity Lines Services and Gas Pipeline Services* (22 July 2014) [2014 Draft Decision], at [5.41].

⁸³ Not, we perceive, because it was no longer considered relevant but, rather, because it was included in the draft as a basis for discussion and ongoing consultation.

⁸⁴ At [6.49].

⁸⁵ At [6.49]–[6.51].

⁸⁶ At [1.26] and [6.48].

rejected the use of a (short run) consumer welfare standard in favour of a total welfare standard, he considered that Dobbs' model provided the best available analysis of the issue, but he also noted a number of limitations with the model, particularly in terms of its usefulness for sectors regulated under Part 4.⁸⁷

[76] While he considered that the appropriate WACC margin would likely differ across industries, he considered that adopting this course was precluded by the difficulties involved and concluded that:⁸⁸

All of this suggests that it would be difficult to be definite about the appropriate WACC margin in general, and even more so for specific industries and new versus existing assets, but my sense is that these points collectively suggest that the uniform WACC percentile currently used by the Commission (the 75th percentile) is likely to be too low.

Professor Ian Dobbs

[77] In a 2011 paper, Professor Dobbs concluded that economic welfare gains increased rapidly as allowed rates of return in regulated markets are increased above the WACC mean value.⁸⁹

[78] In his paper, Professor Dobbs developed a model (based on the telecommunications sector) for quantifying the impact of various WACC percentiles in a regulatory period on several categories of investment. His model focused on investment in new rather than existing services, with the latter guaranteed by a universal service obligation, and was based on a number of assumptions that were not necessarily relevant in the context of Part 4 regulation of energy networks.⁹⁰ He concluded that the allowed rate of return on new investments should generally be set at a significantly higher percentile value of the WACC distribution than for existing investments. He suggested percentile values in the high eighties or nineties. Where

⁸⁷ Martin Lally *The Appropriate Percentile for the WACC Estimate* (19 June 2014) at 23.

⁸⁸ At 23.

⁸⁹ Ian M Dobbs "Modelling Welfare Loss Asymmetries Arising from Uncertainty in the Regulatory Cost of Finance" (2011) 39 J Regul Econ 1 at 17.

⁹⁰ These were discussed at length in Attachment B to the Commission's final reasons in 2014: 2014 Reasons Paper, above n 30.

businesses involve a mix of both old and new assets, the net result should, he said, see an uplift in the allowable rate of return compared to the WACC mean.⁹¹

[79] It should be noted that Dobbs' results depend critically on the adoption of a total welfare approach and an assumption that investment effects occur when the WACC is below the true cost of capital by any amount. Furthermore, as Dr Lally emphasised, the range of demand elasticities adopted were all higher than those which characterise services regulated under Part 4.

Professor Julian Franks

[80] Professor Julian Franks provided advice to the Commission on the review clarifying the advice that had been given jointly by him together with Dr Lally and Professor Myers in their 2008 report which supported the Commission's policy of setting the WACC above the mid-point.⁹² He said:⁹³

My view was that the under-investment problem was more costly to consumers than the over-investment problem. I felt this to be the case because regulated industries such as electricity, gas and telephony were so important that we could not afford to have 'the lights go out' or the equivalent. In that event we might wish to set a cost of capital above the mean WACC so as to reduce the possibility of under-investment.

[81] However, he also considered that the size and cost of the under-investment problem would be affected by a number of factors, which might vary across industries. He noted that the electricity and gas sectors have very long lived assets, compared to the relatively short period of price control, and might therefore be less affected by the under-investment problem compared to industries such as telecommunications characterised by innovation and relatively short asset lives.⁹⁴

Oxera

[82] In addition, the Commission instructed economic consultancy Oxera to undertake a loss function analysis for electricity lines businesses of the type proposed by Professor van Zijl (as described in [59] above) and encouraged by the High Court

⁹¹ At 26.

⁹² Memorandum from Professor Julian Franks to the Commerce Commission (20 June 2014).

⁹³ At 1.

⁹⁴ At 2.

in *Wellington International Airport*. Drawing on evidence from New Zealand and international comparisons, Oxera proposed a framework for assessing the costs of setting the WACC too high or too low. It produced a model to address how to estimate the probability and magnitude of economic losses associated with under-investment and, therefore, the WACC percentile at which the benefits of avoiding those losses exceeded the cost to consumers of an increase in prices.⁹⁵

[83] In considering the financial consequences of setting the WACC too high or too low, it concluded that setting the WACC at a level above the mid-point has a direct price effect which may become material but that the dead weight loss (or quantity effect) and secondary effects (of excessive investment – gold plating - and on the broader economy) appear to be small or mitigated through the broader regulatory framework, relative to the direct price effect.⁹⁶

[84] In then considering the “wider social and economic effects” of setting the WACC too high or too low, it made the point that the reliability of an energy network is the key output for the users of the network. Specifically, the concern was that if the WACC is set too low, there is a risk of under investment which may accumulate over time and undermine network reliability. Continued uninterrupted delivery of power is the primary focus for users. As reliability decreases, the probability of network failure increases. The concept of network failure is an extreme effect but one that will have increasing probability as network reliability decreases.⁹⁷

[85] Oxera went on to estimate the value of reliability, considering the costs of network failure for residential and commercial consumers alongside the types of outage that were possible, based on a range of international estimates. It concluded that the cost of network outages that could occur as a result of under-investment could be in the order of \$1 to \$3 billion per annum.⁹⁸ It found it not to be feasible to identify a specific point that would definitely trigger under-investment but found it to be likely to be linked to a material differential (or trigger point) between the estimated and

⁹⁵ Oxera *Input Methodologies Review of the ‘75th Percentile’ Approach* (23 June 2014).

⁹⁶ At 39.

⁹⁷ At 40.

⁹⁸ At 44.

actual WACC. It assessed a range of 0.5 to 1 percentage points as a plausible starting point for the differential.

[86] Oxera's model combined the assumed probability distribution of the WACC with a range of trigger points at which investment effects might occur and the empirical evidence on the cost of outages. Essentially, if the WACC was at or below a trigger point, investment effects were assumed to result in network failure. However, Oxera focused on the lower end of the range of empirical estimates of the cost of network failure, recognising that this was more likely to reflect the costs of under investment accumulated over time. The probability of this loss then depended on the probability that a given WACC percentile would be at or below the trigger point.⁹⁹ Oxera emphasised the "fundamental uncertainties" involved in this modelling, which meant it was not practicable to establish a single point value for the optimal percentile. Much would remain for the Commission's exercise of judgement.

[87] Ultimately, Oxera concluded that:¹⁰⁰

- (a) The 50th percentile was likely to be too low – incentives to invest will be low as new investment adds no value to a business, while the potential costs of under-investment would be material with outages having the potential to result in a cost with an annualised economic value equivalent to over \$1 billion.
- (b) The 90th percentile is likely to be too high – even at the 80th percentile the cost of protection was seen as being relatively high compared with the level of benefits.
- (c) A shortfall of 0.5 to 1 per cent (or more) in the value of the estimated WACC is likely to increase the risk of deferring investment.

⁹⁹ Figure 6.2 in Oxera's report (at 53) shows the relationship between different triggers, the WACC percentile and the probability of loss.

¹⁰⁰ At 73.

- (d) Any premium should be applied to all regulatory asset base (RAB) assets and applied consistently, as the expected whole-life return on assets should be the relevant test for investors.

[88] Given the specific circumstances of electricity transmission and distribution, Oxera considered that a point estimate around the 60th or 70th percentile appeared to provide a suitable balance between the costs and benefits of setting a higher percentile in mitigating the risks associated with the underinvestment problem.

Professor Ingo Vogelsang

[89] Professor Vogelsang, of Boston University, was then engaged by the Commission to conduct a peer review of Oxera's report. He provided three papers. In the first, on 12 June, he noted that Oxera's analysis had shown how there are some empirical relationships, between the level of the WACC and investment and between investment and network reliability, which can be crucial but about which little was known (the "fundamental uncertainties").¹⁰¹ He also conjectured that investment issues may differ substantially for different industries.¹⁰² However, if individual empirical analyses were deemed infeasible, a common WACC percentile, reflecting some average, should be chosen.¹⁰³ He also commented on the need to take account of other policy instruments that support investment and that the case for allowing a WACC uplift may be much weaker than conventional arguments state.¹⁰⁴

[90] In his second report, on 10 July 2014, Professor Vogelsang referred to Oxera's analysis suggesting an outcome of a WACC between the 60th and 70th percentile and concluded that the Oxera report fulfilled the requirements stipulated by the High Court and provided the empirical analysis, for the particular case of electricity lines businesses, that was needed following the High Court decision.¹⁰⁵ He commented that, while the cost to consumers from higher prices associated with a WACC uplift turn out to be conceptually straightforward and measurable, the costs to consumers

¹⁰¹ Ingo Vogelsang *On the Economic Effects of Allowing a WACC above the midpoint* (12 June 2014) at 1 and 9.

¹⁰² At 2 and 10.

¹⁰³ At 11.

¹⁰⁴ At 11.

¹⁰⁵ Ingo Vogelsang *Review of Oxera's Report, Input Methodologies – Review of the '75th Percentile' Approach* (10 July 2014) at 12.

from a WACC below the true cost of capital are complex and fraught with fundamental uncertainty.¹⁰⁶ Furthermore, he considered that the costs of a WACC uplift should incorporate the cost of excessive investment, which might suggest a lower percentile to be appropriate. Accordingly, while Oxera's analysis is informative about the nature of the problem, it is only weakly suggestive of the outcome.

[91] Importantly, he considered whether a more tailored approach for different industries might be required. The Oxera report was based upon the electricity industry. Was the case for gas or airports different enough to justify different percentiles of the WACC distribution? He found that one can only know this for sure if an analysis similar to the one done for the electricity networks is done for at least one of the other industries. However, he said that "even if such an analysis discovers major differences and suggests a different outcome for different industries, the NZCC may decide against the case-by-case approach."¹⁰⁷ A uniform approach was seen to generate more predictable results.

[92] In his third report, on 31 July 2014, Professor Vogelsang commented on the Commission's 2014 Draft Decision.¹⁰⁸

[93] Professor Vogelsang said:¹⁰⁹

I am impressed by the even-handedness of this Draft Decision and am fully supportive of the overall result. The reduction in the WACC uplift from the 75th to the 67th percentile is unlikely to materially affect investment but will relieve customers. In my view, the above report in a balanced way addresses almost all of the High Court's comments. The new empirical and theoretical evidence presented reduces the scope of necessary judgment and makes the residual judgment more informed.

[94] He concluded by saying that "In order to provide a stable outlook for long-term investments, the current NZCC decision should hold up for a long time."¹¹⁰

¹⁰⁶ At 1.

¹⁰⁷ At 5.

¹⁰⁸ Ingo Vogelsang *Review of New Zealand Commerce Commission "Proposed Amendment to the WACC Percentile for Electricity Lines Services and Gas Pipeline Businesses" Paper Published on July 22, 2014* (31 July 2014).

¹⁰⁹ At 1.

¹¹⁰ At 9.

Submissions on the Commission's draft decision

[95] Significant further analysis of the issue was provided in expert reports commissioned by submitters in response to the Commission's draft decision in the 2014 review.¹¹¹

[96] For Vector, Sapere Research Group concluded that consumers would be substantially worse off should the WACC percentile be reduced from the 75th to the 67th percentile and concluded that consumers would be better off by \$29 million per annum, from an increase in the WACC percentile to the 80th percentile.¹¹²

[97] For Transpower, Frontier Economics implemented Professor Dobbs' 2011 model (referred to in [77] above) in a New Zealand setting and concluded that the Commission's then current approach for adopting the 75th percentile was likely to be conservatively low.¹¹³ They said that their base case scenario from adapting Dobbs model to the New Zealand electricity sector, but retaining his total welfare approach, produced an optimal WACC at the 99th percentile. Frontier then adapted the model to a consumer welfare standard, which recommended the 87th percentile, and said that "[q]uite extreme (and unrealistic) parameter assumptions were required to generate results at the 50th and 70th percentiles."¹¹⁴

[98] In a report for the Major Electricity Users' Group, NZIER did not support a WACC percentile above the mid-point.¹¹⁵ They expressed concern about the number of assumptions and unknowns underpinning Oxera's analysis. They said that:¹¹⁶

We now understand better what we don't know and can clearly see that the Commission is exercising considerable judgement across a wide range of factors when proposing regulatory WACC at the 67th percentile.

¹¹¹ 2014 Draft Decision, above n 82.

¹¹² Kieran Murray and Tony van Zijl *Proposed Amendment to the WACC Percentile – Commerce Commission's Draft Decision* (Sapere Research Group, 29 August 2014) at 6 and 42.

¹¹³ Frontier Economics *Application of a Loss Function Simulation Model to New Zealand* (September 2014) at 24.

¹¹⁴ At 6.

¹¹⁵ NZIER *Changing the WACC Percentile – Advice to MEUG Regarding Commerce Commission Proposal to Amend the Regulatory WACC For Electricity Line & Gas Pipeline Services* (29 August 2014).

¹¹⁶ At 9.

[99] They found that a WACC uplift is not necessarily the right instrument for dealing with concerns about the welfare costs of reduced investment. They saw that the current approach, involving an estimation of the WACC and the addition of an adjuster (which it saw as being motivated largely by intuition) as being too ad hoc to promote certainty.¹¹⁷

Further expert analysis sought by the Commission

[100] Before releasing its final decision in 2014, the Commission sought further input from Professor Dobbs, Professor Vogelsang and Oxera.

[101] At the Commission's request, Professor Dobbs reviewed Frontier's analysis and concluded that it was soundly constructed with reasonable adjustments. However, he considered that the adoption of a choke point to deal with inelastic but isoelastic demand was likely to exaggerate the required uplift.¹¹⁸ Professor Dobbs also queried the extent to which his model could be applied precisely to existing services in the energy sector, given limitations with the model,¹¹⁹ which was developed for new telecommunications services.¹²⁰ More generally, he queried how much quantitative significance could be placed on the model's results, as distinct from providing support for the general direction of an uplift.

[102] Professor Vogelsang continued to find in favour of the Commission's approach, at the 67th percentile, and reiterated his view that "in order to provide a stable outlook for long-term investments the current NZCC decision should hold up for a long time".¹²¹ He welcomed, in particular, the Commission's clarification of its approach to consumer and producer welfare. He considered that, even with the best theoretical and empirical analysis, a lot has to be left to the judgement of the Commission,¹²² and

¹¹⁷ At 33.

¹¹⁸ Ian M Dobbs *Comments on the Application of the Dobbs [2011] Model* (17 September 2014) at [17].

¹¹⁹ At [4].

¹²⁰ At [27]-[28].

¹²¹ Ingo Vogelsang *Review of New Zealand Commerce Commission "Amendment to the WACC Percentile for Price-quality Regulation for Electricity Lines Services and Gas Pipeline Services" Reasons Paper published on October 30, 2014* (24 October 2014) at 14.

¹²² At [14].

saw the high burden of proof for deviating from the 50th percentile called for by NZIER as being something that “could hardly ever be overcome”.¹²³

[103] Oxera was asked to comment on submissions made by various parties in relation to their earlier report.¹²⁴ Oxera did not consider that the submissions provided additional evidence in favour of the alternative approaches proposed that would reduce the judgement that needed to be exercised by the Commission in coming to its view.¹²⁵ It continued to conclude that, at the proposed percentile levels (around the 60th to the 70th), the impacts of over-investment and innovation will be secondary to the primary effects (higher prices and the impact on consumers of outages) considered in its report. It saw that examples provided did not appear to support a change to the choice of percentile.

2014 Final decision

[104] Over 194 pages, the Commission in its final decision considered all of the evidence and information discussed and found that the appropriate percentile was between the 60th and the 75th percentile. This was based primarily on Oxera’s quantitative analysis, which the Commission considered “provides the best analytical model available”¹²⁶, as well as experience with an uplift of the WACC to the 75th percentile.

[105] The Commission said that the main reason to set the WACC percentile above the mid-point was to mitigate the risk of under-investment in service quality and network reliability.¹²⁷ It said that more targeted investment incentives might be more effective for other types of investment.¹²⁸

[106] The Commission settled on the middle of the 60th and the 75th percentile range, providing an uplift of the WACC to the 67th percentile, exercising judgement

¹²³ At [30].

¹²⁴ Oxera *Review of Expert Submissions of the Input Methodologies* (27 October 2014).

¹²⁵ See generally at 8–10.

¹²⁶ 2014 Reasons Paper, above n 30, at [6.4]–[6.8].

¹²⁷ At [X18].

¹²⁸ At [X19].

with reference to both Oxera's analysis and the analysis of RAB multiples and other factors.¹²⁹ The Cost of Capital Input Methodologies were amended on that basis.

[107] The amendment was seen as reflecting a conservative approach, recognising the fundamental uncertainties underpinning the analysis.¹³⁰ It found that the WACC uplift would be consistent with the s 52A purpose to the extent that the additional costs to consumers from the uplift are exceeded by the additional benefits the higher prices produce, compared to prices without the uplift, over the long term.¹³¹ Erring on the high side, the Commission said, is likely to be in consumers' interests.¹³²

[108] The Commission found that Oxera's quantitative analysis demonstrated that applying a WACC uplift to mitigate significant risks to consumers that could result from under-investment in network quality is "reasonable and proportionate" and, importantly, that "overall, the other available evidence provides substantial support for using a WACC above the mid-point estimate for electricity lines and gas pipeline businesses".¹³³ While accepting that there were differences between electricity lines and gas pipelines, there had been no submissions in response to the draft report suggesting that a different WACC percentile should be applied to GPBs.¹³⁴

[109] Further, the Commission, said:¹³⁵

We are confident in the position we have reached on the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services. The conclusion of this review ties up the most significant remaining loose end following three years of IM appeals, and puts the WACC percentile on the same footing as other parameters of the input methodologies. We consider the reasons for this review of the WACC percentile to be exceptional, and we do not anticipate having to undertake a similar process again.

[110] However, the Commission did go on to say that a full review of the cost of capital input methodologies is required to be completed by December 2017 which would cover all aspects of the cost of capital input methodologies, including the

¹²⁹ At [6.43]

¹³⁰ At [6.45].

¹³¹ At [2.34].

¹³² At [2.39].

¹³³ At [5.78].

¹³⁴ At [6.51]

¹³⁵ At [1.34].

estimation of the standard error of the WACC and the choice of percentile used in setting price-quality paths.¹³⁶ It said that during that review it would consider any significant new information relevant to the WACC percentile to see whether change is warranted but noted that “the stability and predictability of the WACC supports the incentives to invest in the supply of regulated services” given in particular the long lives of the assets involved and that large and/or frequent changes to the uplift could affect incentives.¹³⁷

2016 Review

[111] In 2016, the Commission reviewed its input methodologies and produced the 2016 Amendment Determinations.¹³⁸ The Commission concluded that there was no evidence before it that convinced it that it should change the WACC percentile as part of the review. It referred to its 2014 work and said that “to revisit this work so soon would undermine one of the key benefits of the WACC percentile – it would devalue investor confidence”.¹³⁹

2023 Review

[112] In its 2023 Amendment Determinations, the Commission changed its approach. It decided:

- (a) no longer to apply a WACC percentile above the mid-point for GPBs; and
- (b) to set different WACC percentiles for electricity lines businesses and GPBs – maintaining above mid-point WACC estimates for electricity distribution businesses and Transpower, but adopting the 65th rather than the 67th percentile.

¹³⁶ At [4.42].

¹³⁷ At [4.43].

¹³⁸ Commerce Commission, above n 32.

¹³⁹ At [666] and [667].

Process and issues paper

[113] On 20 May 2022, the Commission got the 2023 review process under way by publishing a process and issues paper.¹⁴⁰

[114] The Commission said that it saw an issue relating to the predicted decline in gas over the longer term and a corresponding increased dependence on electricity. It saw this having a potential impact on the error costs associated with under- or over-investment in the gas and electricity sectors.¹⁴¹

Framework paper

[115] In October 2022, the Commission published a framework paper for the 2023 input methodologies review.¹⁴² Its purpose was to explain the review framework it intended to apply.

[116] The Commission emphasised that the Part 4 purpose governs all of their decision making under Part 4, including the review of input methodologies. It acknowledged the potential for tension to arise between making IM changes that better promote the Part 4 purpose and the promotion of certainty. The Commission referred to the importance of predictability – which plays a role in providing suppliers with incentives to invest in accordance with s 52A(1)(a) and the role of input methodologies in promoting certainty.¹⁴³ However, the Commission emphasised the overriding importance of the Part 4 purpose and that changes to IMs to promote certainty must only be made if they do not detract from the overriding obligation to promote the Part 4 purpose.¹⁴⁴

[117] The Commission said that it did not consider the key economic principles (ex ante financial capital maintenance, allocation of risk and asymmetric consequences of over/under investment) amount to a ‘regulatory compact’ between it and regulated suppliers but it made the point that key economic principles, which assist in giving

¹⁴⁰ Commerce Commission *Part 4 Input Methodologies Review 2023 – Process and Issues Paper* (20 May 2022).

¹⁴¹ At [6.97].

¹⁴² 2023 Framework Paper, above n 26.

¹⁴³ At [2.24].

¹⁴⁴ At [2.25].

effect to the Part 4 purpose and outcomes, are something that “we would not depart from lightly” as the regime was intended to provide greater certainty over time”.¹⁴⁵

Cambridge Economic Policy Associates’ report

[118] In conducting the 2023 review, the Commission engaged Cambridge Economic Policy Associates (CEPA) to provide analysis of various cost of capital parameters, including the WACC percentile. In its report, CEPA explained that it had been asked by the Commission to provide advice on whether the Commission should continue to set an allowed return above the mid-point estimate and more specifically at what percentile. CEPA said that it had been instructed to adopt the methodology previously developed by Oxera. It said it was not advising on the overall appropriateness of that method and that, therefore, it had only set out to update the relevant evidence.¹⁴⁶ However, CEPA pointed out that:¹⁴⁷

The Oxera method requires a certain logical chain to hold. A loss in network reliability is assumed to only occur if underinvestment occurs, and underinvestment is assumed to occur if and only if the allowed cost of capital is sufficiently below the actual WACC. Oxera assumed a linear, perfectly correlated relationship between the probability of an allowed WACC below the true WACC, and the probability of network failure.

[119] CEPA concluded that, since the costs were last estimated in 2014, two main changes had occurred.¹⁴⁸ First, regulators in the UK and Australia had become less likely to set their WACC above the mid-point, relying instead upon quality standards and performance incentives to protect consumers against the risk of under-investment. That is, there had been a shift away from using the regulatory WACC as a tool to protect consumers against under-investment. Secondly, the annualised cost of a loss of electricity network reliability had increased significantly due to an increase in the size of New Zealand’s economy and the changing patterns of electricity use.¹⁴⁹

[120] Whereas in 2014 Oxera had assessed the cost of an electricity network failure at \$1 billion, the cost of a network failure in 2022 prices, and taking account of the

¹⁴⁵ At [4.27].

¹⁴⁶ CEPA *Review of Cost of Capital 2022/2023 – New Zealand Commerce Commission* (29 November 2022), at 23.

¹⁴⁷ At 39

¹⁴⁸ At 46.

¹⁴⁹ At 46.

increased electrification of the economy, was estimated by CEPA at \$1.9 billion.¹⁵⁰ However, CEPA noted concerns that Oxera's approach, on which this estimate is based, likely overestimates the true cost of underinvestment by using the cost of one-off events to estimate the annualised cost of these events. They also considered that there would be some probability of a loss of network reliability even in a world of efficient investment, while Oxera assumed this probability to be zero.¹⁵¹

[121] CEPA found that a key assumption in Oxera's approach is the choice of an appropriate trigger point for the difference between the allowed WACC and the true cost of capital at which under investment will occur, which drives the value to consumers of any particular uplift.¹⁵² CEPA referred to Oxera having focused mainly on the 0.5 per cent and 1 per cent thresholds. Adopting that approach, CEPA found that setting the WACC at the 60th percentile may generate benefits in the range of \$100 million to \$160 million per year while costing the consumer approximately \$50 million. At the 70th percentile, the benefits increased to a range of \$180 million to \$300 million while the cost was approximately \$100 million.¹⁵³

[122] Against this was the trend of a number of UK and Australian regulators towards adopting the mid-point WACC, relying instead on a range of other regulatory tools to insure against underinvestment. CEPA noted that:¹⁵⁴

An important observation made by the AER is that, given their methodology for estimating WACC parameters is unbiased, in the long run the expectation of the difference between the allowed WACC and the true WACC is zero. That is, in the long run, the allowed WACC should not lie below the true WACC and cause sustained underinvestment, reducing the cost to consumers of underinvestment.

Oxera February 2023 report

[123] Vector, First Gas and Powerco asked Oxera to review the analysis in CEPA's report. Oxera did so in a February 2023 paper.¹⁵⁵

¹⁵⁰ At 41.

¹⁵¹ At 39.

¹⁵² At 43.

¹⁵³ At 46.

¹⁵⁴ At 32. See also 47.

¹⁵⁵ Oxera Consulting LLP *Asset Beta and WACC Percentile for New Zealand Gas Distribution Businesses* (1 February 2023).

[124] Oxera observed that the conceptual framework used by the Commission to assess the percentile of the WACC distribution that should be targeted was based on a 2014 report by Oxera. As it said, that framework considers the extent to which “aiming up” on the WACC generates network reliability benefits to the energy sector as a whole, rather than focusing on electricity and gas separately.¹⁵⁶ It said that the need to maintain security of supply in New Zealand is important context for assessing the WACC percentile.¹⁵⁷ Oxera concluded, in short, that the updates made by CEPA are reasonable and in their judgement supported an uplift to the 80th percentile.¹⁵⁸ However, they also considered that CEPA may have under-estimated the benefits of avoiding network failure, rather than over-estimated them as CEPA had suggested.¹⁵⁹ The authors of the Oxera report said that, while they were not aware of studies into the impact of under-investment in gas networks on reliability, they noted a study which showed that industries that consume 93 per cent of natural gas account for 57 per cent of the value added to the economy. As the authors said, that does provide evidence that in New Zealand gas-intensive industries generate significant economic value.¹⁶⁰

[125] While Oxera agreed with CEPA that there is less regulatory precedent for aiming up than had been the case in the past, there are still a number of regulators that do aim up and academic research continues to suggest that a WACC uplift is appropriate. The authors of the Oxera report made reference to a paper by Romeijnders and Mulder from 2022 which used a theoretical model that assumed that electricity grid operators invest in infrastructure replacement only if the WACC allowance is set above the true WACC and which linked under-investment to network failures and damage to consumers, quantified using estimates of the value of lost load.¹⁶¹ The authors of that article concluded from their modelling that in most cases the optimal WACC allowance is above the historical mid-point of the WACC range.

¹⁵⁶ At [4.2].

¹⁵⁷ At [4.15].

¹⁵⁸ At [4.10].

¹⁵⁹ At [4.55].

¹⁶⁰ At [4.56].

¹⁶¹ W Romeijnders and M Mulder “Optimal WACC In Tariff Regulation Under Uncertainty” (2022) 61 J Regul Econ 89.

Further CEPA report

[126] In May 2023, CEPA commented (as requested by the Commission) on submissions and expert reports on its November paper.¹⁶² It concluded that its update of Oxera's quantitative 2014 analysis indicated that a higher WACC percentile could be used – but a careful assessment of the evidence indicated that there was a risk that the case for this is overstated. It thought that the balance of regulatory evidence was now against a WACC percentile above the 50th.¹⁶³ It made the point, in the context of the prospect of a different approach for gas to that taken for electricity, that the best solution would be to undertake a similar loss assessment for the gas sector but that a lack of available evidence meant that the appropriate WACC percentile for GPBs was estimated using analysis based upon the electricity sector.¹⁶⁴ While an analysis of the gas sector was outside the scope of CEPA's work for the Commission, they considered that an application of the Oxera methodology to the gas sector would be likely to result in a lower WACC percentile.¹⁶⁵

2023 Draft decision

[127] The Commission released a draft decision for consultation in June 2023 (the Draft Decision).¹⁶⁶

[128] The Commission emphasised that the WACC is their best unbiased estimate of the cost of capital and if the estimate is correct it will balance limbs (a) and (d) of the s.52A purpose. However, the Commission recognised that there may be asymmetric consequences from setting the WACC too high vs too low. While there may be over investment and consumers will pay more in the short term if the WACC is set too high, they may pay more in the long run if it is set too low and there is under investment, leading to network degradation and outages.¹⁶⁷ While a WACC uplift is expensive for consumers and may also be poorly targeted, since there is no necessary direct link to

¹⁶² CEPA *Review of Cost of Capital 2022/2023: Response to Submissions* (15 May 2023).

¹⁶³ At 6.

¹⁶⁴ At 25.

¹⁶⁵ At 6.

¹⁶⁶ Commerce Commission *Cost of Capital Topic Paper – Part 4 Input Methodologies Review 2023 – Draft Decision* (14 June 2023) [2023 Draft Decision].

¹⁶⁷ At [6.6]–[6.10].

improved network reliability, the Commission considered that an uplift is one of the tools available to incentivise businesses to invest in network maintenance.¹⁶⁸

[129] It said that, given the evidence gathered during the 2014 review, it was not starting afresh but “building on the existing evidence base”.¹⁶⁹ Consistent with the 2014 review, the Commission again considered that investment in network maintenance and service quality was the main reason to consider a WACC uplift, and that other types of investment would be better incentivised through more targeted ex post investment incentives.¹⁷⁰

[130] With reference to the Romeijnders and Mulder article cited by Oxera, the Commission considered that it expressed the idea of the loss-analysis model but with added complexity. The Commission agreed with CEPA that different behavioural assumptions to those adopted in their model, particularly regarding the trigger point for investment effects, would lead to different outcomes. However, if at a reset a WACC is set so that it is materially below the level needed to compensate investors, the Commission considered that it would be reasonable to suppose that businesses may seek to delay investment and that under-investment can accumulate over time.¹⁷¹

[131] The Commission said that its Draft Decision was to use the 65th percentile for price-quality regulation of electricity distribution businesses and Transpower based on a wide range of evidence and using updated results from the loss analysis model adopted in 2014.¹⁷²

[132] The 2014 model, it was said, was developed solely with reference to electricity outages and the same uplift was applied to GPBs on the basis that the issues relevant for gas were sufficiently similar to electricity, an assumption that was revisited in the 2023 review.¹⁷³

¹⁶⁸ At [6.12]–[6.13].

¹⁶⁹ At [6.30].

¹⁷⁰ At [6.41]–[6.43].

¹⁷¹ At [6.57]–[6.61].

¹⁷² At [6.87]–[6.96].

¹⁷³ At [6.97].

[133] The Commission did not consider that points made by Oxera, which were largely unrelated to network reliability, provided a sufficient basis for an uplift for GPBs.¹⁷⁴ It said that, in its view, there were two respects in which gas is likely to differ from electricity:¹⁷⁵

- (a) the cost of electricity outages relative to the cost of gas outages; and
- (b) the likelihood that under-investment would go undetected and lead to outages is less likely for gas.

[134] It referred to gas as a secondary source of fuel such that, in its view, the cost of outages would likely be lower than for electricity. And it said that gas outages do not result in electricity outages while electricity outages can result in gas outages as many applications for gas rely on electricity to run.¹⁷⁶

[135] The Commission said that the evidence is that gas pipelines are more reliable than electricity networks, with reference to the System Average Interruption Frequency Index (SAIFI) and the System Average Interruption Duration Index (SAIDI).¹⁷⁷ SAIFI is the average number of times a consumer experiences an outage (total outages divided by total consumers). SAIDI is the minutes of outages each consumer would experience if the total time for all outages were divided between consumers.

[136] The Commission said that the SAIFI for electricity distributions is 1.47 while for gas distributors it is 0.01. It said that the SAIDI for electricity distributors is 210.2 while, for gas distributors, it is 1.51.¹⁷⁸

[137] With those figures in mind, it referred to lower expected cost of outages for gas (in proportion to GDP) and the lower probability of under-investment leading to outages – seeing the mid-point for the WACC as being appropriate.¹⁷⁹

¹⁷⁴ At [6.103].

¹⁷⁵ At [6.105].

¹⁷⁶ At [6.106].

¹⁷⁷ At [6.108].

¹⁷⁸ At [6.110] and [6.111].

¹⁷⁹ At [6.113].

Submissions on the Draft Decision

[138] A range of submissions and expert reports were received in response to the Draft Decision. They included, by way of summary, the following:

- (a) First Gas, in a July 2023 submission, said that the Commission had not obtained new evidence to support a change in its view on the appropriate percentile for GPBs but, rather, had simply changed its mind on the basis of the same evidence that it accepted in 2014 in support of an uplift. That, it said, would adversely affect incentives to invest at a critical juncture in the life cycle of the regulated service.¹⁸⁰ It was said that SAIDI and SAIFI measures have limited application to gas pipelines and they emphasised the potential impact of “low probability high impact” events on gas pipelines. It was further argued that the Commission had understated the consequences of gas outages for gas consumers, most of whom are commercial and industrial users, and referred to the MBIE study of the costs arising from the 2011 Maui gas transmission outage, estimated at \$200m in 2012.
- (b) Oxera, for First Gas, Powerco and Vector, said that, if regulations are changing frequently or are applied inconsistently across different industries, then the risk and uncertainty faced by investors can increase which, in turn, can drive up the cost of capital.¹⁸¹ It said that the order of magnitude of the difference in SAIDI and SAIFI numbers between gas and electricity networks had remained similar over time such that the retention of a 67th percentile in the gas sector was reasonable.¹⁸² Further, it said that, although outage costs in the gas sector are likely to be less costly than in the electricity sector, that is offset potentially by a lower RAB for GPBs.¹⁸³ Using the Commission’s loss analysis model, which Oxera had developed for electricity lines businesses in

¹⁸⁰ First Gas *Part 4 Input Methodologies Review 2023* (19 July 2023).

¹⁸¹ Oxera *Response to the New Zealand Commerce Commission’s Draft Decision for Part 4 Input Methodologies Review 2023 on the Cost of Capital Relating to the Gas Sector* (19 July 2023) at [3.9].

¹⁸² At [3.14].

¹⁸³ At [3.38].

2014, combined with the costs of the Maui gas pipeline outage as estimated by MBIE, Oxera concluded that the \$266 million in outage costs (in 2022 prices) that resulted would justify an uplift to the 79–90th percentile for GPBs. Oxera then estimated, again using the Commission’s model, that outage costs of \$110 million would justify an uplift to the 67th percentile.

- (c) MGUG responded to submissions made by First Gas and others in response to the Commission’s draft decision.¹⁸⁴ They supported the Commission’s draft decision to bring the WACC for GPBs back to the mid-point. In their view, the likelihood of the real cost of capital being persistently higher than the midpoint is low enough that as major gas consumers who would bear the costs of outages directly, they prefer to carry the risk and pay lower prices. It was further argued that consumers and the Commission have sufficient visibility and involvement in supplier AMPs to test them against prudent operator standards and work with suppliers on network priorities.

The 2023 Final Decision

[139] The Commission’s 2023 Final Decision Paper confirmed its approach to considering an uplift for the WACC.¹⁸⁵ While the WACC is the best unbiased estimate of the cost of capital, the Commission considered that there are potential asymmetric consequences for consumers of under investment vs over investment and higher prices if the true cost of capital is below or above the WACC. Providing a WACC uplift was seen as being most relevant as one potential tool for incentivising quality related investments to prevent outages.

[140] Much of the Commission’s focus in its reasons on the WACC percentile was on electricity lines businesses. It referred to the analysis and conclusion in the CEPA report and then pointed to the following additional considerations:¹⁸⁶

¹⁸⁴ Major Gas Users’ Group, *Cross submission on Commission draft decisions for Part 4 Methodologies Review* (9 August 2023).

¹⁸⁵ 2023 Final Decision Paper, above n 6.

¹⁸⁶ At [6.94] and [6.205].

- (a) A quality incentive scheme the Commission had introduced in 2014 for EDBs, which provided an alternative source of incentives for investing in network reliability;
- (b) The enforcement action it had taken against regulated suppliers for breaching quality standards since setting the WACC percentile in 2014;
- (c) Improvements made in its analysis of information disclosed by regulated suppliers; and
- (d) Reasonableness checks suggesting that there had been no under-investment at the 67th percentile and that the 65th percentile for electricity lines businesses produced a commercially reasonable WACC.¹⁸⁷

[141] Using the Oxera 2014 loss analysis model, the Commission concluded that updated results supported the use of a percentile between the 55th and the 75th for electricity distribution businesses, with the 65th percentile being preferred at the mid-point of the range.¹⁸⁸ The Commission emphasised that its decision was a conservative one – the mid-point is the best unbiased estimate of the true cost of capital and other developments mean that less reliance should be placed on the WACC uplift to ensure investment in network reliability. Nevertheless, the Commission recognised the significant degree of uncertainty and the need for regulatory stability.¹⁸⁹

[142] The Commission then went on to consider whether or not it should apply the uplift to GPBs. It observed that, in 2014, it had analysed the empirical case for the 67th percentile with reference solely to electricity distribution and transmission.¹⁹⁰ As it said, it then applied that decision equally to electricity distribution, Transpower and gas distribution and transmission because it believed that the issues relevant to the decisions for these services to be similar enough for the same percentile to apply.¹⁹¹

¹⁸⁷ At [6.76].

¹⁸⁸ At [6.75].

¹⁸⁹ At [6.95]–[6.97].

¹⁹⁰ At [6.98].

¹⁹¹ At [6.98].

[143] It went on to say that the loss analysis model it used in deciding upon the 67th percentile was developed solely with reference to electricity outages because there is established literature on the cost of those outages but that the Commission was not aware of any studies on the economic costs of outages to consumers of gas.¹⁹²

[144] The Commission said that, having considered the available evidence, it did not consider that the points made by Oxera (writing for Vector, First Gas and Powerco), which were largely unrelated to outages or systematic risk, provided a sufficient basis for an uplift.¹⁹³

[145] The Commission said that, having reconsidered the available evidence, it reiterated its belief that there were two important respects in which gas was likely to differ from electricity:¹⁹⁴

- (a) The cost of electricity outages relative to the cost of gas outages; and
- (b) The likelihood that under-investment will go undetected and that the undetected under-investment would lead to outages is likely to be lower for gas.

[146] It put it on this basis:¹⁹⁵

While we have no empirical basis for estimating a magnitude, we expect that the cost of outages will be lower for gas users than for electricity users. For many users, gas is a secondary energy source, and so the cost of outages is likely to be lower than for electricity. Gas outages do not result in electricity outages, but electricity outages result in gas outages as many applications for gas – continuous flow water heating and cooking equipment in domestic application – rely on electricity to run. In addition, electricity outages can have an impact on telecommunications, which gas outages do not.

[147] It went on to conclude that the evidence on reliability is that gas networks are more reliable than electricity networks, referring to the SAIFI and SAIDI data referred to in its Draft Decision and set out at [136] above.¹⁹⁶

¹⁹² At [6.101] and [6.102].

¹⁹³ At [6.103] and [6.104].

¹⁹⁴ At [6.105].

¹⁹⁵ At [6.106].

¹⁹⁶ At [6.108] to [6.112].

[148] It said that these differences in reliability point to engineering differences that were not accounted for in the Commission’s previous decision to apply the uplift to GPBs.¹⁹⁷

[149] It did not see a basis for departing from its draft decision to use the 50th percentile for GPBs, saying that it did not see it as being appropriate to use a WACC that is less than its best, unbiased, estimate of the true cost of capital, as would be suggested by any estimate of the optimal percentile based on a lower cost of outages and the lower likelihood of undetected under investment leading to outages.¹⁹⁸

[150] The Commission, in referring to stakeholder views on its draft decision, was of the view that a coherent counter had not been presented. It was of the view that suppliers and experts writing for suppliers had overlooked the Commission’s improved scrutiny of asset quality, improved information disclosure and the fact that it had, in “then” recent times, taken enforcement action in the sector; factors that, it said, “together are an important reason to rely less on the uplift”.¹⁹⁹ It was also noted that the Major Gas Users Group (MGUG) said that they preferred to carry the risk of outages than pay higher prices.²⁰⁰

[151] The Commission referred to Oxera’s 2023 report reminding it that its 2014 decision to use the same percentile for GPBs as for electricity lines businesses was supported by experts writing for the Commission.²⁰¹ It will be recalled from our discussion of reports leading up to the 2014 decision that Dr Lally had investigated whether various percentiles should be applied to different industries but considered that determining the differential rates would be too complex, while Professor Vogelsang considered that, while there may be a case for a tailored approach for different industries, a uniform WACC level may be appropriate because it saves difficult and time-consuming analysis and generates more predictable results.

¹⁹⁷ At [6.112].

¹⁹⁸ At [6.113].

¹⁹⁹ At [6.142].

²⁰⁰ At [6.129].

²⁰¹ *Response to the New Zealand Commerce Commission’s Draft Decisions for Part 4 Input Methodologies Review 2023 on the Cost of Capital Relating to the Gas Sector*, above n 181.

[152] In discussing the point, the Commission did not see that comments of that sort were definitive from the perspective of Dr Lally or Professor Vogelsang. It saw Dr Lally as having considered that differences between industries might be appropriate and went on to say that Dr Lally's analysis was based on a model by Professor Dobbs which, in turn, gave rise to the model that Oxera created for the Commission which was calibrated specifically to electricity lines businesses.²⁰² The Commission said that neither Dr Lally nor Professor Vogelsang considered directly whether the Commission should use the same percentile for the gas and electricity sectors.²⁰³

[153] Essentially, the Commission is saying here that in-principle arguments on the point do not provide assistance and that, having since the 2014 determination considered evidence on gas reliability, it had reached the view that the 50th percentile is appropriate for GPBs.²⁰⁴

[154] The Commission went on to examine Oxera's estimates for an optimal percentile for GPBs using the Commission's loss analysis model. The Commission did not consider that results of that sort could be relied upon because the use of \$266 million as an estimate of the cost of outages was based on a single event and it considered that the calculation ignored the reliability differences that the Commission saw as being central to its decision.²⁰⁵

[155] The Commission went on to confront arguments for First Gas that the impact of gas outages on consumers had been underestimated on the basis that:²⁰⁶

- (a) the existence of more studies for electricity reflects greater public interest in electricity.
- (b) SAIDI and SAIFI have limited application to gas, and other regulators use additional measures of customer satisfaction to evaluate the performance of gas networks relative to electricity networks.

²⁰² At [6.216].

²⁰³ At [6.217].

²⁰⁴ At [6.218].

²⁰⁵ At [6.219]–[6.220].

²⁰⁶ At [6.225].

- (c) the use of SAIDI and SAIFI data does not reflect the consequences of low frequency, high impact events.
- (d) SAIDI and SAIFI data is unpersuasive because gas transmission businesses do not report SAIDI and SAIFI data.

[156] The Commission accepted that SAIDI and SAIFI measures were developed for electricity networks rather than for gas pipelines and that gas transmission is not included in the reported data but, nonetheless, it expressed the view that “the differences in reliability are very large”.²⁰⁷ The Commission acknowledged issues relating to the cost of gas leakages and the time taken to relight gas networks as being relevant considerations, but there was no basis for evaluating the associated costs. The Commission agreed with First Gas that SAIDI and SAIFI are poor measures of low frequency high impact events, but went on to say that, in any event, it did not believe that it relied on SAIDI and SAIFI alone in concluding that there was no basis for estimating the expected cost of outages for gas as an input into estimating an appropriate percentile.²⁰⁸ It said:²⁰⁹

Our view [is] formed by an overall view of gas as a secondary fuel where electricity is a primary fuel, large differences in reliability as evidenced by SAIDI and SAIFI data, and the absence of comprehensive data on the costs of gas outages.

[157] The Commission concluded in the following terms:²¹⁰

Overall, we consider that there is clear evidence that gas is more reliable than electricity and that there is no sound basis for estimating the cost of outages in a way that is comparable to the way that we estimate the cost of outages for electricity.

[158] For these reasons, the Commission considered that the s 52A purpose is best met by using the 50th percentile for GPBs.²¹¹ The Cost of Capital Input Methodologies were amended on that basis.

²⁰⁷ At [6.226].

²⁰⁸ At [6.230]–[6.231].

²⁰⁹ At [6.231].

²¹⁰ At [6.232].

²¹¹ At [6.238].

Summaries of the positions of First Gas and the Commission

[159] We discuss the positions of First Gas and the Commission in an integrated way when considering the substantive issues in the proceeding. However, for introductory purposes at this point in the decision, we provide broad summaries of the parties' respective positions.

[160] First Gas says that, as the Commission itself recorded at the time, its 2014 exercise was intended to be enduring – it did not expect to reevaluate and reset the WACC percentile absent a significant change in circumstances. Consistently, the Commission reaffirmed its adoption of a WACC percentile above the mid-point across the energy sector (electricity lines services and GPBs) in the 2016 input methodology review.

[161] First Gas says that, not only was the 2023 determination the first occasion on which the Commission adopted different WACC percentiles for electricity lines businesses and GPBs, it was the first occasion on which it declined to set a WACC percentile above the mid-point to mitigate asymmetric risks to consumers of regulated energy services.

[162] Mr Smith emphasised the fact that the decisions on the very point over the previous decade, supported by expert analysis, adopted a percentile above the mid-point for both GPBs and electricity lines businesses. Those decisions did so, it is said, on the basis of expert evidence put forward by the GPBs demonstrating the existence of the magnitude of asymmetric error costs associated with underestimating the WACC for GPBs. And, conversely, Mr Smith emphasised the absence of any expert evidence to support a proposition that there were no asymmetric error costs associated with WACC estimation for GPBs – or that it was appropriate to assume (contrary to previous decisions) that costs of that sort were different from electricity lines businesses.

[163] The changed position for GPBs is described as being made without any independent assistance to support the Commission's conclusions and without any moderately robust empirical inquiry. First Gas says that the decision is contrary to the Court's judgment in *Wellington International Airport*, to the Commission's own

reasoning in prior determinations and to the evidence available on the 2023 determination.

[164] First Gas argues that the results of Oxera's 2014 loss analysis should be understood as directional, based on plausible assumptions, rather than as a precise quantification of the appropriate percentile for electricity lines businesses or energy networks generally.

[165] While the Commission appeared to focus on the potential costs to residential consumers, First Gas notes that most gas demand is from industrial users and gas intensive industries generate significant economic value and the cost of outages for those consumers can be substantial, as demonstrated in relation to the Maui outage. Oxera had provided an updated loss analysis with reference to the cost of that outage.

[166] Underpinning First Gas' analysis is the legal and economic framework that supported earlier decisions of the Commission and of the Court. A framework, it is said, that is absent in the 2023 decision and which, for gas, is replaced with broad assumptions that have no sufficient foundation.

[167] First Gas refers to the Court's decision in *Major Gas Users Group* to argue that, while there is no "regulatory compact" between suppliers and the Commission, consistent application of economic principles over time promotes confidence in the regulatory system and, all else equal, promotes efficient investment. It is said that GPBs have invested in long lived assets in reliance on the WACC percentile.

[168] It is said that a materially better input methodology would have continued to set the WACC for GPBs at the 67th percentile adopted in the 2014 determination or, alternatively, at the 65th percentile adopted for electricity lines businesses in 2024. The use of either of those percentiles would, it is said, promote consistency in regulatory decision-making, give effect to long-standing legal and economic principles on the appropriate WACC, developed by the Commission and endorsed by the Court, reflect the Commission's own position in analysing evidence on asymmetric costs of WACC estimation and reflect the best-available evidence on the topic.

[169] First Gas says that the consequences of the Commission's choices are significant when considering the long-term interests of consumers. While it must be accepted that the future of GPBs is uncertain, First Gas emphasises the significant investment that is required in the short to medium term to continue to provide gas pipeline services. It refers to the approximately \$190 million the Commission has allowed for capital expenditure on First Gas' pipeline businesses for the four years from 2022 so as to continue to incentivise those investments.

[170] The Commission comes at it from what is essentially the opposite angle. It says that, while it considered carefully First Gas' position during the 2023 input methodology process, it rightly rejected the position as unsupported by evidence or information on the record. It was, the Commission says, for First Gas to produce evidence or information that justified an uplift for GPBs.

[171] The Commission emphasises that the mid-point WACC estimate for GPBs is its "best, unbiased estimate of the true cost of capital".²¹² Absent good justification for an uplift, the midpoint WACC estimate should be applied. Any short term variations between the mid-point WACC and the true cost of capital will tend to even out over time.

[172] It says that the economic model that justified an uplift for electricity networks did not support an uplift for GPBs, essentially because outages are less frequent and less costly for gas than electricity. There was a lack of equivalent evidence relating to the cost of gas outages, which reflects the lower frequency of such outages compared to electricity. Absent strong justification for applying an uplift, the Commission would risk making arbitrary adjustments.

[173] The Commission emphasises, also, other factors that it says incentivise GPBs to invest in their networks – improvements in asset quality monitoring and the establishment of enforceable quality standards - to protect consumers against the risk of under-investment. The Commission has taken action to enforce quality requirements on EDBs, and says that there is no reason why the Commission would not do the same for GPBs where breaches occur.

²¹² 2023 Final Decision Paper, above n 6, at [6.113].

[174] Essentially, the Commission says that there is an evidence-based justification to support the uplift for electricity lines businesses, but not for GPBs. It says that there is insufficient evidence of the causal inferences needed to justify an uplift and that, in the absence of them, the mid-point of the WACC is sufficiently high to incentivise investments because it allows a normal rate of return.

[175] The Commission says that decisions to uplift the WACC in the past cannot be seen as akin to a regulatory compact to apply uplifts in the future. That, Mr Every-Palmer KC says, would be inconsistent with Parliament’s directive that input methodologies must be reviewed every seven years, which contemplates that the methodology for determining parameters like the WACC may change. An uplift cannot, it is said, reasonably be expected to continue if it would not promote the long-term benefit of consumers.

[176] The Commission disputes the submission by First Gas that it had said following the 2014 review that it did not expect to re-evaluate and reset the WACC percentile absent a significant change in circumstances. Rather, it is said that the reference to the reasons for the 2014 review being “exceptional” was a reference to conducting an “out of cycle” review. The Commission says that, at the time of the 2016 review, it made it clear that it intended to review the evidence as to whether the uplift had delivered benefits to consumers.

Is a WACC at the 65th or 67th percentile for GPBs materially better at meeting the Part 4 purpose?

[177] As explained earlier, in determining this appeal the Court must consider whether the alternative input methodology proposed by First Gas would be materially better at meeting the Part 4 purpose in s 52A or would be materially better at meeting the purpose of Input Methodologies in s 52R, or both. As the Court made clear in *Wellington International Airport*, the Part 4 purpose is paramount.²¹³

Therefore, taking for example appeals against the cost of capital IM, the amended or substituted cost of capital IM must be materially better in meeting the purpose of Part 4, the purpose in s 52R, or both. Both the s 52A purpose, of the long-term benefit of consumers and the s 52R purpose, of promoting certainty for suppliers and consumers, are relevant. However, we consider that

²¹³ *Wellington International Airport*, above n 4, at [165].

in this context the s 52R purpose of certainty is conceptually subordinate to the s 52A purpose of the long-term benefit of consumers. We say that because promoting the long-term benefits of consumers in accordance with s 52A is the central purpose of Part 4 as a whole. IMs must be designed with that in mind. Subject to that, a materially more certain IM is to be preferred to a less certain IM.

[178] If the alternative input methodology was materially better or at least no worse at meeting the s 52A purpose and was better at meeting the s 52R purpose, the appeal would succeed. If an input methodology was materially better at meeting the s 52R purpose, but was worse at meeting the s 52A purpose, the appeal must fail. Accordingly we first consider whether the proposed amendment would be materially better at meeting the s 52A purpose.

The relevant welfare standard reflected in s 52A

[179] When the issue of an uplift to the WACC was considered during the 2014 review, there was considerable discussion about the appropriate welfare standard to apply when considering the long term benefit of consumers in s 52A. The significance of this debate is emphasised by the inclusion of an attachment devoted to the topic in the Commission’s final reasons paper.²¹⁴ It is important because any judgement about the appropriate size of a WACC uplift is likely to be significantly different according to whether a total welfare or consumer welfare standard is adopted.²¹⁵

[180] A total welfare standard looks at the size of total surplus (that is, the total value to consumers over the costs of supply) and any transfer of surplus between consumers and producers – such as is associated with an uplift to the WACC and therefore prices – is not relevant. By contrast, such a transfer counts as a detriment under a consumer welfare standard, which considers the net value to consumers. The “dead weight loss” associated with the reduction in consumption arising from higher prices counts as a detriment under both approaches, but this is likely to be small where demand is inelastic.

[181] Of course, as the Court of Appeal has said in the context of considering the authorisation of a merger, the Commission and this Court are required to apply the

²¹⁴ 2014 Reasons Paper, above n 30, at Attachment A: Consumer Welfare vs Total Welfare.

²¹⁵ At [2.29]; Vogelsang, above n 121, at [4] and [16]–[19].

statutory test, not a welfare standard as such.²¹⁶ However, a welfare standard that is consistent with the statutory framework facilitates assessing and weighing the relevant costs and benefits – whether of a merger or of a percentile uplift to the WACC. That, in turn, is consistent with applying the relevant statutory test.

[182] When reviewing the WACC uplift in 2014, the Commission considered that an uplift would be consistent with the s 52A purpose to the extent that the additional costs to consumers from the uplift were exceeded by the additional benefits the higher prices produce for consumers, compared to prices without the uplift, over the long term. It considered that the use of a consumer welfare approach in any loss analysis was “more consistent with” that purpose than a total welfare approach.²¹⁷

[183] The Commission went on to say that producer surplus may be relevant as a proxy for longer term consumer benefits, such as dynamic efficiency benefits from innovation or improvements to service quality.²¹⁸ This statement reflects a short term static approach to consumer welfare, which would be maximised with a zero WACC on existing assets, but which would fail to capture the benefit to consumers over time from investment and innovation. Similarly, the Oxera analysis was framed in terms of a trade-off between the financial costs to consumers from higher prices and the “wider social and economic benefits (and therefore the risk of loss of these benefits)” associated with investment in network maintenance and service quality.²¹⁹

[184] In our view, a more straightforward approach is to simply refer to a long run consumer welfare standard, which takes account of the interests of consumers in lower prices, but also in investment and innovation associated with the maintenance and improvement of service quality and efficiency over time. The Commission, in its 2014 reasons paper, described an extract from a 2014 report from Covec in the following way:²²⁰

²¹⁶ *NZME Ltd v Commerce Commission* [2018] NZCA 389, [2018] 3 NZLR 715 at [75].

²¹⁷ 2014 Reasons Paper, above n 30, at [2.34]–[2.35].

²¹⁸ 2014 Reasons Paper, above n 30, at [2.36].

²¹⁹ Oxera, above n 95.

²²⁰ Covec, *WACC Percentile Issues, prepared for BARNZ* (28 August 2014) at 4, quoted in 2014 Reasons Paper, above n 30, at [A31].

... one should take care to define the consumer surplus standard in a way that is consistent with the ‘long term’, otherwise “we are not giving the consumer surplus standard a fair chance”.

[185] This, in effect, is what the Commission and Oxera did. Such an approach is consistent with the purpose of Part 4 regulation set out in s 52A to promote the *long term* benefit of consumers and which balances the specific outcomes in (a)-(d) of that section.

[186] A decade later, we do not think such an approach is contentious. Nevertheless, it is worth emphasising because some of the theoretical models and many of the historical papers and submissions to which we were referred adopted a total welfare framework.²²¹ In a sector characterised by low elasticity of demand, such an approach would tend to suggest an uplift towards the 100th percentile would be appropriate. This is so because the costs of an uplift under a total welfare framework are largely confined to the “dead weight loss” associated with allocative inefficiency, which will be minimal when demand is inelastic and output not much affected by the higher prices associated with an uplift. By contrast, a long run consumer welfare approach will consider both the transfer of surplus from consumers to producers associated with an uplift as well as the dead weight loss associated with that uplift as costs to consumers.²²²

²²¹ For example, Dobbs, above n 89, and Lally, above n 87. Many supplier submissions argued for a total welfare standard, as discussed in Attachment A of the Commission’s 2014 Reasons Paper, above n 30. Frontier Economics, above n 113, determined an optimal uplift of 99 per cent using an adaptation of the Dobbs model for electricity networks, but retaining the total welfare standard. Frontier also attempted to adapt Dobbs model to a consumer welfare standard in the context of Part 4 regulation, which they said still suggested an optimal WACC at the 87th percentile. However, because demand for energy was assumed to be inelastic, unlike the assumptions in Dobbs model, but they retained the iso-elastic demand assumption in Dobbs, the model had to be made tractable by assuming a “choke point”. In Dobbs’ review of Frontier’s work, he noted the significance of this choke point and considered that the way it was used in the modelling undertaken by Frontier was likely to lead to a significant over estimation of the extent of welfare loss arising from non-investment, leading to an over-statement of the optimal percentile for the allowed rate of return (Dobbs, above n 118, at [48]). More generally, this points to the need to critically assess the appropriateness of a range of modelling assumptions. The Dobbs model was developed to assess investment incentives for new telecommunications services and assumed that existing services were guaranteed by service obligations. Dynamic efficiency considerations were assumed away and, while a range of demand elasticities were considered, they were all much higher than are characteristic of energy networks.

²²² Both frameworks would also consider any inefficiencies associated with capex bias or “gold plating” that might be incentivised by the uplift.

Can a WACC uplift provide a long-term benefit to consumers of gas pipeline services?

[187] As discussed in the introductory sections of this decision, the true cost of capital is unknown and so must be estimated. Like any estimate it is subject to potential estimation error. The Commission estimates a probability distribution and associated standard error for the WACC as compared to the true cost of capital, based on the standard errors for a number of inputs to the WACC. This distribution determines the actual size of the uplift associated with a particular percentile. The Court in *WIAL* was critical of the statistical precision implied by the use of standard errors and probability distributions, which were based on judgements and assumptions, to determine percentiles, while acknowledging that the Commission had not intended them to be understood in this way.²²³ In its 2014 Reasons Paper, the Commission agreed that the distribution from which the percentile is chosen is not a true statistical distribution, and should not imply a level of statistical precision beyond what is reasonably justified, but considered that it represented a reasonable estimate of the likely estimation errors.²²⁴

[188] In our view, the concepts are a useful way to conceptualise estimation errors for the WACC, and the assumed distributions are what determines the actual size of any uplift associated with a particular percentile. Some sort of assumption about the distribution is necessary to determine where any particular percentile actually sits compared to the mid-point. However, it is important to keep in mind that the actual probability distribution is one of the many uncertainties requiring judgement calls in determining any WACC uplift.

[189] The mid-point WACC is the best unbiased estimate of the true cost of capital. This is not in dispute. However, there is a 50 percent probability that the actual cost of capital will turn out to be higher than this. At the 65th percentile there is estimated to be only a 35 per cent chance that the true WACC will turn out to be higher.

[190] The case for any uplift hinges not just on the assumed probability distribution but, more importantly, on the *consequences for consumers* of the mid-point WACC

²²³ *Wellington International Airport*, above n 4, at [1450]–[1452].

²²⁴ 2014 Reasons Paper, above n 30, at fn 12 and [4.21].

estimate being too low or too high and by how much. Specifically, it is argued that, if the estimated WACC is above the true cost of capital, prices and profits will be too high, and there could be excessive investment but, if the estimated WACC falls too far below the true cost of capital, there will be under investment and adverse consequences for consumer welfare, particularly in terms of network reliability and service quality, over the long term.

[191] Critically, it is argued that these consequences are likely to be asymmetric; that the adverse consequences to consumers of under estimating the WACC increase more rapidly than the adverse consequences of over estimating the WACC as the “estimation gap” widens.²²⁵ This *potential* asymmetry is reflected in one of the Commission’s key economic principles.²²⁶ Absent this assumption of asymmetry of consumer effects from mis-estimating the WACC, the mid-point WACC would maximise long-run consumer welfare, consistent with the purpose of Part 4.

[192] Assuming the potential for asymmetric consequences, it is argued that an uplift can provide benefits to consumers in the form of avoided costs from under investment, such as outages, which exceed the cost to consumers associated with the higher prices. Oxera’s “loss analysis model” attempts to apply this theoretical framework empirically to determine a range for any potential uplift.

Critical assumptions and fundamental uncertainty

[193] The theoretical argument in favour of an uplift hinges on a particular set of assumptions and relationships, which may or may not reflect commercial reality. While Oxera and CEPA have quantified some elements of the trade off, many critical relationships remain unknown. Oxera emphasised repeatedly the “fundamental uncertainty” underpinning their analysis in 2014, which made it impossible to specify a particular WACC uplift and would require the Commission to exercise judgement.²²⁷ In light of these unknown relationships highlighted by Oxera, Professor Vogelsang

²²⁵ Oxera above n 95, at 3. These potential *asymmetric consequences for consumers* that may arise from misestimating WACC are to be distinguished from the *asymmetric risks for suppliers* associated with asset stranding under Part 4, which were the subject of the Court’s consideration in *Major Gas Users*, above n 2.

²²⁶ 2023 Framework Paper, above n 26, at [X24.3] and [4.20]–[4.23]. This asymmetry assumption is visually represented by Figure 2.1 in Oxera, above n 95, at 11.

²²⁷ At 1, 6, 16, 44, 57, 70, 73.

commented that the case for a WACC uplift may be much weaker than traditionally thought.²²⁸ The Commission acknowledged these fundamental uncertainties in its final Reasons.²²⁹

[194] In particular, the case for an uplift rests on assumptions that, if the estimated WACC is below some “trigger point”, there will be a negative effect on investment and secondly that this effect on investment will result in a cost for consumers, a cost that is asymmetric and larger than the cost to consumers of an uplift.²³⁰ However, we do not know at what point investment will be adversely affected, if at all, and we do not know what effect any loss of investment will have on the long term benefit of consumers – including, importantly, whether the effect is asymmetric as compared to the cost of the uplift. Furthermore, the absolute size of any percentile uplift depends on the assumed standard error of the WACC distribution. The assumed standard error for gas pipelines (0.0112), and hence the cost to consumers of that uplift, is somewhat larger than that for electricity networks (0.0108).²³¹

[195] In order to make some empirical estimates of a possible range for an uplift in 2014, Oxera considered a range of “trigger points”, focusing on the trigger points for the WACC that were 0.5 and one percentage point below the true cost of capital. They considered these trigger points to be consistent with the workings of financial markets and the Commission agreed.²³² Oxera pointed to case studies linking under investment to electricity network reliability and outages.²³³ In order to estimate the potential cost to consumers from under investment, they focused on the cost of (electricity) network outages, for which there were a number of empirical estimates available, adjusted for the size of the New Zealand economy. If the WACC fell below the trigger point, network failure is assumed to occur. The “probability of loss” was then determined by the probability that the WACC would fall below the trigger point.

[196] The model did not take account of the possibility that network failure might not occur even if there was under investment or that some lesser service degradation

²²⁸ Vogelsang, above n 101, at 11.

²²⁹ 2014 Reasons Paper, above n 30, at [X15].

²³⁰ This is sometimes referred to as an insurance premium paid to reduce the risk of an outage.

²³¹ 2023 Final Decision Paper, above n 6, at [5.42] and Table 5.5.

²³² Oxera, above n 95, at 6; 2023 Final Decision Paper, above n 6, at [6.66].

²³³ At Table 5.2, and 49.

could occur. However, Oxera did focus on the lower bound of the empirical estimates of the cost of network failure as being more likely to reflect the costs of under investment accumulated over time. In their response to expert comments, Oxera agreed that even lower figures might better reflect “normal course outages”.²³⁴

[197] As CEPA emphasised – in the extract quoted at [118] above from its November 2022 report – the Oxera model depends on a particular set of simplifying assumptions. Essentially, if and only if the allowed WACC falls below a particular threshold or “trigger point”, under-investment is assumed to occur that is sufficient to result in network failure. The probability of network failure occurring then hinges on the assumed standard error of the WACC distribution and the chosen “trigger point”.

[198] Furthermore, CEPA concluded:²³⁵

We find that benefits to consumers are driven by the choice of an appropriate threshold for the difference between the allowed WACC and the true cost of capital required for underinvestment to occur. In the most extreme case this threshold is 0% meaning that underinvestment occurs as soon as the allowed WACC is below the true WACC. In this case, each increase in WACC percentile leads to NZ\$19m in benefits for the consumer. On the other hand, if the threshold is 2% a one percentile increase in the WACC above the midpoint only generates around NZ\$2m in benefit for consumers.

[199] It is worth noting at this point that some of the theoretical models do in fact assume that the investment effect occurs as soon as the estimated WACC is any amount below the true cost of capital. This was the assumption underpinning Dobb’s 2011 model and its adaption by Frontier in 2014, as well as the more recent approach of Romeijnders and Mulder, considered during the 2023 review.²³⁶ This assumption appears to be an extreme one that is unlikely to correspond to commercial reality. As Dobbbs himself commented during the 2014 review:²³⁷

A final observation regarding the applicability of the model concerns whether firms respond to incentives. The Dobbbs model (and hence the Frontier submission) assumes that they do (and do so in a ‘Neo-classical economics’ rational way). If they do not, then any uplift in *AROR* is simply a windfall benefit to them and a loss to consumers. A regulator may reasonably be concerned over whether this is the case or not. There is plenty of evidence that

²³⁴ Oxera, above n 124, at 22-24.

²³⁵ CEPA, above n 146, at 43.

²³⁶ Romeijnders and Mulder, above n 161.

²³⁷ Dobbbs, above n 118, at [36].

individuals do not behave as ‘homo economicus’ – and there is plenty of evidence that ‘competitive pressure’ is less than severe, such that managers have considerable scope to pursue their own objectives – that is, managers of firms are not necessarily incentivised to make decisions in the interests of shareholders or customers, or indeed, anyone but themselves...

[200] As CEPA and the Commission point out, if the mid-point WACC is the best unbiased estimate of the WACC, in the long run the difference between the average estimated WACC and the true cost of capital should be zero.²³⁸ It seems at least possible that investors in long lived assets such as energy networks might expect any under or over estimation of the WACC in particular periods to even out over the life of those assets and that there may be no or minimal effect on investment. An under estimate of the WACC may, for example, simply delay some non-critical investments with little to no effect on consumers.

[201] However, this argument may be less relevant in the case of gas pipelines, given the phasing out of gas in New Zealand. If the WACC is significantly below the true cost of capital, compensation in a later period may not be forthcoming. As discussed in *Major Gas Users*, ongoing investment in gas pipelines is directed substantially at maintaining rather than expanding those pipelines, as demand is expected to decline.²³⁹ While gas pipelines may have a use in future to transport “clean gas”, this future is uncertain. Nevertheless, substantial capex of almost \$284 million is still provided for in the current four year pricing period, which provides an indication of the investment that could potentially be at risk if the WACC is set too low.²⁴⁰

[202] In addition, we do not know what effect any shortfall in investment will have on consumer welfare. To make their model tractable, Oxera assumed that, once the trigger point was met, under or delayed investment would lead to network failure. However, there may be little if any effect on network reliability, or there may be a lesser degree of service degradation than total network failure, depending for example

²³⁸ CEPA, above n 146, at 32; CEPA, above n 162, at 9; 2023 Final Decision Paper, above n 6, at [6.60]–[6.61].

²³⁹ *Major Gas Users*, above n 2, at [204]. However, we note that the current DPP for gas pipelines also allows for growth and new customer connections: Commerce Commission, *Default price-quality paths for gas pipeline businesses from 1 October 2022: Final Reasons Paper* (31 May 2022) at [5.10].

²⁴⁰ Table 5.1 at 71.

on the existing condition of the network, particularly if the effect of under estimating the WACC is just to defer non-critical investment.

[203] On the other side of the ledger, Oxera focused entirely on the costs to consumers arising from the transfer of surplus from consumers to producers associated with a WACC uplift and higher prices. They considered that dead weight loss effects and additional downstream detriments were likely to be minimal and that the risk of over investment would likely be minimised due to other features of the Part 4 regime.²⁴¹ CEPA largely agreed with these conclusions in its 2022 update.²⁴²

[204] Professor Vogelsang was particularly concerned that excess investment costs had been excluded from Oxera's analysis.²⁴³ Oxera conceded that there may be a greater risk of this in the case of EDBs as compared to Transpower, which is subject to an individual price-quality path requiring more detailed capex approvals, but noted also that this may be offset by the greater uncertainty of the default price-quality path regime.²⁴⁴ GPBs are more like EDBs than Transpower in this respect. There may also be reasons to think the dead weight loss and downstream effects from an uplift would be higher for GPBs, as discussed later in these reasons.

[205] Even if we knew more about the relationship between a WACC uplift and investment and between investment and consumer welfare, an uplift will always be a blunt instrument for incentivising new investment. The uplift applies to the entire RAB, both new investment and sunk investments from previous periods, yet clearly investments that are already sunk cannot be incentivised by an uplift. Some consideration has previously been given to a split cost of capital, with the uplift only applying to new investment.²⁴⁵ However, all new investments become sunk in subsequent periods and the reduced uplift would be anticipated by investors.²⁴⁶

²⁴¹ Oxera, above n 95, at 39.

²⁴² CEPA, above n 146, at 37.

²⁴³ Vogelsang, above n 105; Vogelsang, above n 121, at 8.

²⁴⁴ Oxera, above n 124, at 10, 40; Oxera, above n 95, at 37.

²⁴⁵ For example, see Commerce Commission, above n 32, at [674]–[688]; and 2023 Final Decision Paper, above n 6, at [6.270]–[6.278].

²⁴⁶ Dobbs, above n 118, at [20].

Alternative investment incentives

[206] In its review of the WACC uplift in 2014, the Commission considered which types of investment might best be promoted through an uplift to the WACC. Whereas previous uplift decisions had focused on the need to incentivise innovation, since the 2014 review the Commission has focussed on incentives to maintain network reliability and service quality.²⁴⁷ In its view, other types of investment are better incentivised through more targeted incentive schemes.²⁴⁸ However, they were concerned that such schemes were not likely to be fully effective for incentivising investment in electricity (and by extension gas) network maintenance and service quality.²⁴⁹

[207] As discussed by CEPA, there has been a trend away from reliance on a WACC uplift to incentivise investment amongst international regulators.²⁵⁰ While First Gas disputes the universality of this trend, it can certainly be said that the trend is in one direction, away from providing an uplift and towards setting the WACC at the mid-point. However, it is also the case that this trend has been accompanied by another trend – increased reliance on more targeted regulatory tools to promote network investment.²⁵¹

[208] In the case of electricity networks, there has been increased enforcement of quality standards and the introduction of a quality incentive scheme under Part 4 since 2014.²⁵² This should have reduced the need to rely on an uplift to the WACC to incentivise investment (assuming it has such an effect). However, in the case of gas pipelines, quality standards under Part 4 are limited to an emergency response standard for both gas transmission and distribution and a major interruptions standard for gas transmission and there has been no enforcement action to date for non-compliance.²⁵³

²⁴⁷ 2023 Final Decision Paper, above n 6, at [6.45] and [6.150]. 2014 Reasons Paper, above n 30, at [3.44]

²⁴⁸ 2023 Final Decision Paper, above n 6, at [6.43]. It is worth recalling here, that the Dobbs (2011) model assumed there were quality controls in place to maintain existing service delivery and his model was focused on incentives for investment and delivery of *new* services.

²⁴⁹ 2014 Reasons Paper, above n 30, at [3.43]; 2023 Final Decision Paper, above n 6, at [6.45].

²⁵⁰ CEPA, above n 146, at 27.

²⁵¹ At 31.

²⁵² 2023 Final Decision Paper, above n 6, at [6.33].

²⁵³ Refer *Gas Distribution Service Default Price-Quality Path Determination 2022* [2022] NZCC 19; *Gas Transmission Services Default Price-Quality Path Determination 2022* [2022] NZCC 20.

[209] Nevertheless, there are other incentives for investment in gas pipelines, both within Part 4 and outside Part 4. Price cap regulation under Part 4 encourages cost saving investments within pricing periods, as these investments benefit the businesses' bottom line. Investments which maintain quality of service and those that add new customers, and so maintain or increase revenue streams, also benefit business profitability. The pipelines would similarly be incentivised to avoid outages and minimise gas leaks from pipelines to the extent that these things would reduce their revenue.

[210] Outside of Part 4, gas pipelines are subject to substantial regulation of safety and security under the Gas Act 1992, compliance with which incentivises investment in network maintenance, which supports service quality.²⁵⁴ This may help explain the superior performance of gas pipelines against measures of SAIDI and SAIFI and the limited experience of network failures.²⁵⁵ Indeed, the major example of a gas pipeline failure, the Maui outage, was not caused by a lack of investment but by a landslide.²⁵⁶

A matter of judgement: electricity networks and gas pipelines

[211] As the preceding discussion makes clear, there are many unknowns in relation to the probability distribution of the WACC and, more significantly, the relationship between the WACC and investment, and the effect of any investment shortfall on the long term benefit of consumers. The optimal WACC uplift (if any) could be very different depending on the nature of these relationships.

[212] This means that there remains considerable room for judgement as to whether an uplift would be for the long-term benefit of consumers, and if so by how much? The Commission has exercised that judgement by taking a conservative approach in favour of providing an uplift for electricity lines businesses in 2014 (and before) and again in 2023. Those decisions were informed by Oxera's 2014 loss analysis, updated by CEPA in 2022, using empirical data of the potential cost of electricity outages as compared to the cost of a WACC uplift for consumers. However, that analysis was

²⁵⁴ WorsleyParsons *Gas Disruption Study: Report on the Potential Impacts on the NZ Gas Market*, (January 2014); Major Gas Users' Group *Re: 2023 WACC Review* (3 February 2023) at 7.

²⁵⁵ 2023 Final Decision Paper, above n 6, at [6.109]–[6.111].

²⁵⁶ Ministry of Business, Innovation & Employment *Review of the Maui Pipeline Outage of October 2011* (October 2012).

based on data relating to the costs of electricity outages and was critically dependent on assumptions regarding the investment “trigger point” and the relationship between investment shortfalls and network outages, as well as a probability distribution for the WACC which was based on a number of underlying assumptions.

[213] The uplift for electricity lines businesses was reduced from the 67th to the 65th percentile for electricity networks in 2023, based on the updated modelling from CEPA, the increased role of more targeted investment incentives for EDBs under Part 4 as well as improved information disclosure and analysis, and noting the move away from reliance on WACC uplifts by international regulators. Nevertheless, this remains a conservative approach, given the number of unknowns, as the Commission acknowledged.²⁵⁷

[214] By contrast, the Commission decided against continuing to adopt a conservative approach to the question of providing an uplift to the WACC for GPBs. Effectively, the Commission decided that gas pipelines were no longer considered to be “similar enough” to electricity networks for the same uplift to be applied. The Commission no longer considered Oxera’s loss analysis for electricity networks provided a guide for the potential cost of gas pipeline outages and also rejected the usefulness of Oxera’s 2023 analysis using gas outage data, which relied on the costs from a single outage and which did not take account of the reliability differences between gas and electricity.²⁵⁸ In the absence of quantitative analysis that it regarded as relevant, the Commission now considers that there is no data before it to justify an uplift from the mid-point WACC for GPBs. The Commission emphasised the greater reliability of gas pipelines, compared with electricity networks, and the perception of gas as a secondary fuel – which would tend to reduce the cost to consumers of network outages – and suggested that the likelihood of under investment going undetected and leading to network outages is lower for gas pipelines than for electricity networks.²⁵⁹

[215] Oxera’s loss analysis, updated by CEPA, was always based on data for electricity networks. As noted above, in 2023 Oxera conducted a loss analysis

²⁵⁷ 2023 Final Decision Paper, above n 6, at [6.95].

²⁵⁸ At [6.220]

²⁵⁹ At [6.105]–[6.115].

specifically for gas pipelines, using data on the costs associated with the Maui outage.²⁶⁰ Those costs had been estimated at \$200m by MBIE in 2012 (which Oxera inflated to \$266m in 2022 dollars²⁶¹) much of which was associated with costs to the dairy industry, such as lost output.²⁶² While the Maui outage resulted from a landslide and not lack of investment, that does not seem to us to make the outage costs irrelevant. Certainly they may be more extensive than would be expected to result from insufficient investment, but that is also reflected in one of the critical simplifying assumptions of the Oxera model itself – once the WACC falls below the “trigger point”, investment will be reduced to such an extent that it results in network failure. This assumption may be particularly inappropriate for gas pipelines if under estimating the WACC is less likely to result in network failure, perhaps because of safety regulations.

[216] In Oxera’s report, it is said that the results of their analysis for gas pipelines would support an uplift in the range of the 79-90th percentile (for trigger points in the range of 0.5-1 percentage points) and that outage costs of \$110m would justify an uplift to the 67th percentile.²⁶³ However, the assumptions underlying these results are somewhat opaque. Unlike Oxera’s 2014 analysis for electricity, and CEPA’S update in 2022, the gas pipeline report submitted by Oxera in 2023 does not provide a cross tabulation of costs and benefits associated with a range of uplifts and trigger points. There is no reference to the standard error that has been assumed, which would affect the location of any particular percentile and the calculation of the uplift cost. There is, in addition, a lack of clarity on the assumptions that have been made relating to demand elasticity or to the dead weight loss associated with an uplift, or to the indirect effects of an uplift, all of which could potentially differ for GPBs as compared to electricity lines businesses.

[217] As noted previously, the move towards using the mid-point WACC by international regulators has been accompanied by increased use of more direct investment incentives. While there has been an increase in these incentives under Part 4 for electricity lines services, this is much less significant for GPBs. Quality controls

²⁶⁰ Oxera, above n 181.

²⁶¹ At 3 and [3.28].

²⁶² Ministry of Business, Innovation & Employment, above n 256.

²⁶³ Oxera, above n 181, at 3 and [3.37].

are limited and specific investment incentives are non-existent. The Commission says that it is now better able to detect under investment through scrutiny of asset management plans. However, no argument has been presented as to why this scrutiny is more effective for gas pipelines than for electricity networks.

[218] As mentioned, there are significant safety regulations imposed on gas pipelines outside Part 4, under the Gas Act, which may have contributed to their superior reliability and it may be that information disclosure and asset management plans work in combination with these other regulations to support network reliability. As Worsley Parsons commented in relation to the regime of information disclosure and asset management plans for gas pipelines under Part 4:²⁶⁴

It can be anticipated that the publication of the information required under the regulations will have a positive impact on the management of the pipelines in terms of adherence to requirements of the operating code (AS 2885); and delivery of planned activities (investment, maintenance, etc.) published in the asset management plans. The published information may also serve as a public reference point for other pipeline owners and assist in adherence to the code requirements.

[219] It is certainly the case that gas pipelines perform better than electricity networks on the basis of SAIDI and SAIFI measures – and the number of gas outages in New Zealand has been few and declining.²⁶⁵ As we have noted, the Maui outage was caused by a landslide rather than insufficient investment. However, SAIDI and SAIFI are only indicative of a limited set of information and may not convey the risk of a low probability high impact event of the type that may be more relevant for gas pipelines.

[220] It is not in dispute that gas pipelines in New Zealand are generally reliable and the data would suggest that they are more reliable than electricity networks. This could suggest the costs associated with under estimating the WACC for GPBs are less than for electricity lines businesses, depending on the explanation for the superior performance. If reliability hinges on regulations that lie outside Part 4, under estimating the WACC may have limited effect on network reliability. However, this reliability record has occurred in the context of a long history of GPBs being provided

²⁶⁴ WorsleyParsons, above n 254, at 27.

²⁶⁵ Commerce Commission *Trends in gas pipeline business performance* (3 February 2023).

with the same WACC uplift as electricity networks and reliability has improved over that time.²⁶⁶ Accordingly, it does not necessarily provide any indication that gas pipelines would continue to be as reliable with prices that incorporate a mid-point WACC.

[221] The Commission suggests that gas is largely used as a secondary fuel. Furthermore, it says that gas outages do not cause electrical outages, whereas the reverse is often true because many applications that run on gas require electricity to function. In addition, it says that electrical outages can affect telecommunications systems, which are unaffected by gas outages.²⁶⁷ All of this would tend to reduce the cost of a gas outage relative to an electricity outage for residential consumers – and to increase the dead weight loss associated with any uplift.

[222] However, residential consumers of gas represent a relatively small minority of total demand by volume (but the majority of gas demand by value). The overwhelming majority of gas is used by industrial and commercial customers.²⁶⁸ This includes not only the use of gas as an energy source itself but also to generate electricity²⁶⁹ and as a feedstock for industrial production that is exported.²⁷⁰ On the one hand, this could imply a higher cost of outages for these customers. On the other hand, it might suggest a potentially higher dead weight loss from an uplift, associated with exports into competitive global markets. While the Maui outage provides some potentially relevant data on the first, we have not been taken to any data on the latter. It is not irrelevant, however, that the major gas users themselves say they would prefer to have lower prices and bear any increased risk of outages themselves.²⁷¹

²⁶⁶ Commerce Commission, above n 265.

²⁶⁷ 2023 Final Decision Paper, above n 6, at [6.106].

²⁶⁸ Commerce Commission, above n 239, suggests residential gas demand is slightly over 20 per cent by volume but closer to 65 per cent by value. Oxera, above n 181, Fig 3.4 puts residential volume at just six per cent of total demand.

²⁶⁹ Oxera, above n 181, calculated that “energy transformation” represented 42% of gas consumption in 2022: Fig 3.4.

²⁷⁰ *Methanex submission on draft decisions on the IM Review 2023* (19 July 2023).

²⁷¹ Major Gas Users’ Group, above n 184, at 4; Methanex do not say they would prefer to carry the risk associated with a mid-point WACC. Rather, they argue that deviating from the mid-point is of dubious merit, especially when the loss analysis is based on electricity data, and that the primary drivers of asset integrity spend should be the quality standards and penalties for breaching these: *Methanex submission on draft decisions on the IM Review 2023*, above n 270, at 3.

[223] Apart from GDP growth, the other major reason why the potential cost of electricity outages calculated by CEPA in 2022 had increased from that calculated by Oxera in 2014 was the increased electrification of the economy. This has increased the value of lost load (VOLL) for electricity users.²⁷² By the same token, one would expect the VOLL for gas users to have decreased, but we have not been taken to any relevant data. On the other hand, as previously noted, the uncertain future of gas pipelines means that planned investments are largely focused on network maintenance, which has been the particular focus of the Commission when deciding whether to provide WACC uplifts.

[224] While the case for an uplift in the WACC for electricity networks rests on quite uncertain ground, the case for an uplift for GPBs is, if anything, even more uncertain. However, that does not necessarily imply that there is not a case for an uplift and some data points might suggest a stronger case for GPBs than for electricity lines services. But the evidence rises no higher than suggestions, which might support an uplift but might not. Accordingly, we are unable to be satisfied one way or the other whether an uplift in the WACC to the 65th or the 67th percentile for GPBs would be materially better at delivering the outcomes in (a)–(d) in s.52A for the long-term benefit of consumers than setting the WACC at the mid-point. We simply do not have sufficient information – it may be better or it may be worse for consumers.

Certainty and s 52R

[225] Since we are unable to conclude one way or another whether an uplift would be better at delivering the outcomes in s 52A for the long-term benefit of consumers, we now turn to consider the purpose of the input methodologies in s 52R – 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.

[226] As the Supreme Court emphasised in *Vector v Commerce Commission*, it is clear from the legislative history of Part 4 that an important underpinning of the regime

²⁷² CEPA, above n 146, at 41.

when it was introduced was to address the lack of regulatory certainty under the old Part 4A regime.²⁷³ As the explanatory note stated:²⁷⁴

The purpose of setting input methodologies is to give greater certainty, transparency, and predictability to businesses (including businesses not subject to regulation) and their customers. This certainty is expected to help *improve the climate for investment in infrastructure*.

...

The proposal will provide an effective regime that over time provides more timeliness, certainty, and *incentives for investment*.

[227] Part 4 regulation is largely concerned with the regulation of infrastructure that involves investment in long lived assets. Gas pipelines are certainly assets of that type. It is important that investors in such assets have confidence in the regulatory framework across multiple periods, since those investments will only be recovered over multiple periods and the cost of capital associated with them will continue for the expected economic life of the assets. Changing the percentile uplift over the lifetime of assets without good reasons can result in windfall gains and losses and undermine investor confidence.²⁷⁵ In doing so, it may in turn work against the long term benefit of consumers.

[228] Nevertheless, certainty is not absolute. As the Court of Appeal indicated in *Commerce Commission v Vector*, there is a continuum between absolute certainty and complete flexibility. Parliament did not accord the Commission absolute flexibility but nor did it require absolute certainty.²⁷⁶ Indeed, change is a feature of the Part 4 regulatory framework, which requires the Commission to review the input methodologies at least every seven years. These regular reviews provide the Commission with the ability to update the input methodologies on the basis of improved evidence and/or analysis.

[229] If a change would better give effect to the Part 4 purpose, then change is not only justified but required by the statutory framework. It is not, however, appropriate for the Commission to change the input methodologies simply because they have

²⁷³ *Vector Ltd v Commerce Commission* [2012] NZSC 99, [2013] 2 NZLR 445 at [63].

²⁷⁴ Quoted in *Vector Ltd v Commerce Commission*. at [64], emphasis added.

²⁷⁵ Oxera, above n 95, at 14; Vogelsang, above n 105, at [9]; Dobbs, above n 118, at [20].

²⁷⁶ *Commerce Commission v Vector Ltd*, [2012] NZCA 220, [2012] 2 NZLR 525 at [60].

“changed their mind”, without any compelling improvement in the evidence base or the analysis of that evidence. Such changes can undermine investor confidence in the regulatory regime as a whole, not just for investors in gas pipelines, but also for investors in other sectors subject to Part 4 regulation.²⁷⁷

[230] If we were at the point of setting the initial input methodologies in 2010, or re-considering the initial uplift question in 2014 following the Court’s critical comments in the *Wellington International Airport* decision, the mid-point WACC would be the appropriate starting point.²⁷⁸ In that situation, we would expect to see specific analysis of the potential costs and benefits associated with an uplift *for GPBs* and a further critical appraisal of the assumptions regarding fundamental uncertainties in the relationships between the WACC and investment and between investment and consumer benefits which drive the results of any loss analysis.

[231] However, this is not 2010 or 2014. By 2023, GPBs had been treated equivalently to electricity lines services for over a decade and investments had been made on that basis. In [56] to [110] above, we have set out in some detail the considerable evidence and analysis that formed a basis for the Commission’s 2014 decision on the WACC percentile. Absent compelling new evidence or analysis that GPBs should be treated differently, the Commission should not have simply “changed its mind”. As discussed in the previous section, we are not satisfied that such evidence underpinned the Commission’s decision.

[232] Therefore, we are satisfied that an uplift to the 65th percentile, treating GPBs equivalently to electricity lines services, better meets the s 52R purpose of the input methodologies to provide certainty to suppliers and consumers and promotes confidence in the Part 4 regulatory system more broadly, which in turn supports investment.

²⁷⁷ *Major Gas Users*, above n 2, at [215].

²⁷⁸ This was the approach taken by the Commission when determining the initial IMs for fibre services in 2020: Commerce Commission *Fibre Input Methodologies: Main final decision – reasons paper* (13 October 2020), at [6.643].

Conclusion and outcome

[233] For the reasons given, there is insufficient evidence before us to reach a conclusion on whether an uplift would be better or worse than the mid-point WACC in terms of the purpose of Part 4 – to promote the long-term benefit of consumers. However, we have concluded that changing the WACC uplift at this time without an improved evidence base would undermine confidence in Part 4 regulation and investment more generally and in turn adversely affect the long-term benefit of consumers. It would, in terms of the purpose of input methodologies in s 52R of the Act, not 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.

[234] For these reasons, we are satisfied that – in terms of s 52Z(4) of the Act – an uplift in the WACC to the 65th percentile is materially better in meeting the purpose in s 52R of the Act. Accordingly, in terms of s 52Z(3)(b)(i) of the Act, the appeal is allowed.

[235] The precise form of the orders that will follow is to be the subject of further input from the parties. The Court anticipates an order under s 52Z(3)(b)(i) of the Act amending the gas transmission and gas distribution cost of capital input methodologies in the manner sought in paragraph [36.1] of First Gas' 1 February 2024 notice of appeal. But the wording of the particular amendments to be made is of some importance.

[236] Accordingly, the Court directs the parties to file, by 5 pm on 5 June 2026, a joint memorandum on the precise form of the orders that would follow from the Court's decision. In the event that agreement cannot be reached, the respective positions of the parties should be explained. The Court will then either finalise the orders on the papers or make any further directions.

[237] Costs are payable by the Commission to First Gas on a 3B basis. In the event that costs cannot be agreed by the parties, then First Gas may file a memorandum by 5 pm on 12 June 2026 and the Commission may file a memorandum in reply by 5 pm

on 3 July 2026 . Any such memoranda, including schedules, should be no longer than seven pages in length.

Radich J for the Court

Solicitors: