Memorandum

To:	Electricity Pricing Review Expert Advisory Panel and MBIE	14.20/16497
From:	Commerce Commission	
Date:	08 June 2018	
Subject:	Response to May 2018 questions from Expert Advisory Panel	

Purpose

1. This paper provides the Expert Advisory Panel with our response to the outstanding questions from the Panel, namely:

   1.1 What parts of the regulatory system work well, what changes (including legislation) would improve it (deliver more benefit to consumers), and why?

   1.2 What are your views on the changes to the regulatory system proposed by the Electricity Authority?

2. A number of submitters to the Panel have raised concerns with our estimate of the weighted average cost of capital (WACC), which we apply to price path setting for electricity lines businesses. So, this paper also provides further information on how we set WACC and why we think it is appropriate.

3. We have not yet answered the Panel's question "what new mechanisms or approaches would better promote collaboration between EDBs". We would like to take further time to consider the complexities of the issue and whether there are any other specific incentives to promote collaboration that would be useful. Can you let us know when it would be most useful to provide this further thinking to you by?

4. We would be happy to meet again with the Panel, the MBIE secretariat or advisers (Concept) to further discuss the views set out in this paper, and the thinking behind them. While we have tried to provide useful responses to the questions posed to us, we appreciate that there may be other points or questions that we could helpfully provide further input into.

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Scene setting: economic regulation of utilities

5. The Commerce Commission enforces competition law, consumer law and economic regulation. We recognise that in most situations the best solution for good market outcomes is effective competition.

6. We regulate markets where competition is neither present nor sufficiently likely to act as a constraint against monopoly power. However, we recognise economic regulation does come with associated costs.[1] In particular it is well-recognised that dealing with the monopoly problem of excessive profitability through price regulation can cause the following issues:

   6.1 **Investment hold up**—essentially suppliers have to commit to irreversible investments which are then subject to the threat a regulator will decrease prices after the investment is made. This risk can prevent the investment occurring in the first place or increase the expected returns that are required to induce the investment.[2]

   6.2 **Quality degradation**—most forms of utility regulation in New Zealand, Australia and Europe involve setting a price path which suppliers can outperform and thereby earn additional profits. This is an important way to incentivise efficiencies which are later passed back to consumers. However one way to cut costs is to cut quality of service for example by reducing maintenance costs which may lead to more frequent power outages. Hence we set price-quality paths which include quality standards.

   6.3 **Regulatory gaming**—asymmetry of information is a key issue facing all economic regulators. Firms understand what their efficient costs are better than the regulator. Both the economic literature and regulatory practice recognises that this provides regulated firms with additional profits also called informational rents. Most notably firms may over-forecast their future expenditure requirements which, if accepted, comprise a cost to consumers from which the consumers gain no benefit.

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1 This is explicitly recognised in Part 4 of the Act where under our powers to recommend to the Minister goods or services are regulated, we need to undertake a cost benefit analysis which explicitly lists a number of costs which should be taken into account. In telecommunications regulation, where the prospect of competition is significant, a lot of effort has gone into creating conditions which can promote competition and relax the need for regulation.

2 This is referred to under various terms including time-inconsistent decision making, regulatory risk and regulatory opportunism.

7. Whilst the Act and our implementation of the Act explicitly address these risks, they are nonetheless risks which cannot be completely eliminated and can be important considerations in our decision making. In practice regulators, including ourselves, have focused not just on controlling excessive profits but on:

    7.1 Stable rule setting which supports investment. Hence the strong emphasis utility regulators place on predictability and mechanisms which assist this such as preserving the value of the Regulatory Asset Base (RAB). This in turn provides a benefit to consumers through a lower required cost of capital and investment which delivers a reliable service.

    7.2 Quality controls and reporting requirements to maintain checks against degradation of assets. Typically these are backed by an enforcement regime which imposes penalties on firms which breach their quality standards.

    7.3 Incentive regulation to deal with informational asymmetries by putting in place the right financial incentives which align firms with customers in being rewarded for reducing their costs and becoming more efficient (which in turn enables the regulator to see the efficiency gains available to the suppliers).

8. There are strong advantages from setting a stable framework which seeks to align the incentives of suppliers and consumers in this way. Importantly it directly addresses the information asymmetries and avoids the need for the regulator to:

    8.1 Specify what the right inputs are to provide the service—often characterised by regulators as being technologically neutral but is equally applicable to choice of inputs such as the mix of capex and opex as well as the technology mix of inputs.

    8.2 Be precise on what level of cost efficiency is achievable by suppliers—this should be revealed over time.

9. This alignment of incentives is achieved by setting a control period, typically of five years, where the regulator pre-sets the revenue the firm is allowed which provides a target the supplier can outperform by becoming more efficient.[3] These efficiencies are then passed back to consumers at the next reset in the form of reduced prices. The 'strength' of these incentives can be altered to increase or decrease the share of any cost reduction retained by the suppliers.

10. Increasing the incentive strengths for firms to be more efficient also increases their incentives to 'game' the regulations and increases the cost to consumers from deliberate over-forecasting (and the cost to consumers will also increase from non-deliberate over-forecasting). This can be thought of as a trade-off between limiting the ability to earn excessive profits in the short-medium term and providing

[3] There are increasingly complex ways of implementing such a scheme, this is the simplest. It is worth noting that the 'pure' financial incentive to become more efficient is independent of the absolute level of revenue provided. However we recognise that these two factors are not necessarily independent for example where firms are profit satisficers rather than profit maximisers.

incentives to become more efficient and thereby limit the cost to consumers in the longer term.

11. This short introduction does not cover all the issues which can arise in regulating utilities and in particular does not cover issues of access regulation but gives a broad overview of the main features of economic regulation of utilities.

12. The reality is that the practical impact of regulation can differ significantly to the theoretical impact. As such regulatory regimes in different countries can have significant variation in the implementation detail and how the implementation has been fine-tuned over time.

What is working well and where are we currently focused?

13. Key elements of the regime have bedded down and work well in:

13.1 **Providing a stable environment for investment**. The input methodologies have been set, successfully weathered full merits review and have been through one seven-yearly review. The creation of a stable regulatory environment has been recently confirmed through an independent assessment by Standard & Poor's Global.[4] Improved credit ratings should feed through to consumers through our assessment of the debt premium from corporate bonds and lead to lower prices. We have estimated that approximately $6 billion has been invested by electricity lines businesses since 2008 and that investment is still an important driver of consumer benefits in this sector.

13.2 **Limiting excessive profits, a key rationale for price regulation.** Our assessment of the profitability of suppliers after the first full control period showed a quite tight clustering around our expected level of profits—a range from 6.3% to 8.2%, around our expectation of 7.3%, based on the 75th percentile WACC estimate (the midpoint WACC estimate expectation was 6.6%). The small consumer-owned distribution businesses that were exempt from price-quality control had a broadly similar level of profitability on average, but a wider range (2.6% to 8.7%), which still did not highlight any substantial concerns.[5]

13.3 **Providing an incentive framework for increased efficiency**. We have set a simple incentive regime around a five year control period alongside an Incremental Rolling Incentive Scheme (IRIS) which is designed to make firms indifferent to when, within a control period, they make cost savings.[6] We intend to evaluate this at the end of the current control period to see whether further incentives are required when setting the next default price-quality paths (DPPs). We have also recently strengthened the incentives on Transpower to become more efficient through the review of the Transpower capex input methodology.[7]

13.4 **Deals well with the NZ environment of a large number of small suppliers**. The system of DPPs for all the suppliers with an option of a customised price-quality path (CPP) for suppliers appears to broadly be working well. There are now three suppliers that have appropriately applied for and been set a CPP.

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4 S&P Global, RatingsDirect, 22 April 2018.

5 Commerce Commission, "Profitability of electricity distributors following first adjustments to revenue limits", June 2016.

6 One draw-back of using only a five year control period to provide efficiency incentives is that the financial incentive declines over the control period. At the end of the control period prices are reset and consequentially there is very low incentives at the end if the control period and the highest incentives at the start of the control period.

7 Commerce Commission, "Transpower capex input methodology review: Decisions and reasons", March 2018.

13.5 **Providing an appropriate range of appeal mechanisms**. There are a range of proportionate review options available to regulated parties. Most importantly:

13.5.1 The DPP can be effectively appealed by applying for a CPP;

13.5.2 The CPP can be appealed to the High Court (merits appeals);

13.5.3 The input methodologies, which set some of the key upfront rules like cost of capital, can be appealed to the High Court (merits appeal). These appeals have been designed to ensure that parties must put their best arguments, including alternative methodologies, to us first.

14. What is heading in the right direction:

14.1 **Quality controls and enforcement.** We are placing significant additional effort into our compliance and enforcement activities, and this has been heightened by a number of recent breaches of the quality paths. Quality standards are only one of our tools, but they provide an important incentive to suppliers, and are one indicator of network decline. Our current work in relation to Aurora is an example of how quality breach investigations can then inform other processes, namely:

14.1.1 The independent 'state of the network' report that Aurora has agreed to commission, which will provide all stakeholders with a more accurate picture of the immediate reliability and safety of the Aurora network; and

14.1.2 The scope of the CPP that Aurora will eventually seek to fund its network upgrade, and our level of confidence in Aurora's ability to deliver that upgrade.

14.2 We are also reconsidering, ahead of the next DPP reset, whether the current quality measures could be improved to better reflect what consumers most value in electricity transmission and distribution services.

14.3 **Better use of summary and analysis to drive the right outcomes.** We have emerged from a period of focusing on setting rules, frameworks and setting price-quality paths. We see a lot of important benefit coming out of better using and understanding the information we receive on supplier performance and this is a key focus for us at the moment. This includes some comparative analysis of EDBs,[8] increasing scrutiny of asset management practices (which drive quality in the long-run), and making information on electricity lines businesses' performance more accessible to interested stakeholders. We believe these softer powers can be important in driving the right behaviour.

[8] Commerce Commission, "Open letter on our priorities for the electricity sector for 2017/18 and beyond", 9 November 2017.

15. What else is in our headlights for increased scrutiny:

15.1 **Further work on emerging technologies**. We see this as an important topic covering the breadth of our competition, consumer and regulatory work. We are currently working with the Authority including sending an observer to IPAG. We also recently sent an open letter to industry following up the work from the Input Methodology Review[9] to check compliance and gather information. Our Regulatory Branch also works alongside our Competition and Consumer Branch on specific competition issues. The regulatory impact of emerging technologies was a key focus of the Input Methodology Review.

15.2 **Impact of our incentives given ownership structure**. A key issue for us is how the incentives work given the differing ownership structures in the electricity industry. Not all electricity lines businesses will respond to financial incentives in the same way as the stereotypical profit-maximising monopolist. We have seen elements of good performance and poor performance across the full range of size and ownership structures of electricity lines businesses, so we do not see a clear reason to favour a particular model.

15.3 This year we are increasingly focused on working with the consumer trusts that own some electricity lines businesses to better understand their drivers, and better equip them to hold those electricity lines businesses to account for delivering better consumer outcomes. We also recognise that good Board level governance of these businesses is important to their performance, so may warrant further consideration.

[9] Commerce Commission, "Open letter – Our intention to gather information relating to emerging technologies", 9 May 2018.

Recommendations by the Electricity Authority—our response

16. This paper sets out our response to the concerns about the electricity industry raised with the Panel by the Electricity Authority, and its recommendations for change.

17. We are aligned with the Authority at a high level. Particularly, we both appreciate the importance of access to electricity networks by a range of parties—such as potential suppliers of network support service like demand response—as new technologies and business models are increasingly adopted in the sector.[10] We also agree that there are generally significant benefits of competition in markets where competition is feasible. However, based on our economic regulation expertise, we disagree with some of the Authority's emphasis and its proposed solutions to perceived problems. For some of these issues, we consider that it may be too early to promote particular solutions.

18. In this paper we discuss the Authority's recommendations to amend legislation to:

    18.1 more strongly encourage electricity lines businesses to competitively procure inputs;

    18.2 avoid overly encouraging electricity lines businesses to own contestable assets;

    18.3 align the purpose statements of the Electricity Industry Act and Part 4 of the Commerce Act; and

    18.4 broaden the range of contestable activities that are subject to separation.

Context

19. Open access is the ability for any party to access an electricity network, on equal terms, to purchase (or on-sell) electricity, sell electricity, or to sell other services such as network support services. Open access is an increasing area of focus in the electricity sector because technology developments have created increased opportunities for third parties to use networks in these ways. We agree with the Authority that these increased opportunities should ultimately drive greater innovation and efficiency (through competition), which will benefit consumers in the long-run.

20. To explain further, one risk is that electricity lines businesses could use their monopoly power to create barriers to other parties accessing the network, to gain or maintain a competitive advantage. There may also be other barriers to entry in the sector that are impeding market entry. We generally agree with the Authority that barriers to accessing the network impede competition and innovation.

[10] While the Authority's paper, and this response, are both largely focussed on access to networks, we note that we are also supportive of the Authority's work in other areas, eg, distribution pricing reform; improving access to customer data.

21. These new ways of using electricity networks can be an input into electricity lines services. For example a battery can shave the peak demand and thus reduce the need for additional network investment. The new uses of the network can also be part of the development of adjacent markets, such as public electric vehicle charging.

The timing for any change requires a trade-off

22. We agree with the Authority that a range of new technologies and business models are available now and their importance for delivering better consumer outcomes could grow quickly. We also think that, all other things being equal, the most benefit could be gained for consumers by addressing any issues sooner rather than later, and that some solutions may be easier to implement now rather than trying to unwind situations that have already developed.

23. However, it is difficult for us to properly judge the adequacy of the current regulatory environment in regards to changes to the market before they occur. Electricity lines businesses are still largely experimenting with new technologies, cf. plans for a larger scale roll-out. For example, the use of grid-scale batteries in New Zealand has only been at a trial stage for the last 2-3 years. While we are gathering further information about how suppliers are using these assets, we suggest that caution and thorough investigation should be applied in considering solutions for these potential issues, especially where that potential solution could essentially reduce the pool of innovators in the market, ie, remove electricity lines businesses from that pool and forgo potential economies of scope.

24. We understand that there are differing opinions on the best weighting of the trade-off between acting sooner before the situation is difficult to unwind and acting later when we have better information. A key consideration in this trade-off is the speed at which change will occur, the impact it will have, (both of which are difficult to accurately predict), and the options available under the current system. Our more 'cautious' approach (compared to the Authority) reflects our view that some good incentive mechanisms are already in place, and both regulators are able to do more under the current framework if necessary.

More strongly encourage electricity lines businesses to competitively procure inputs

25. The market for the conveyance of electricity is still largely a natural monopoly market.[11] However, many of the inputs that electricity lines businesses use to deliver lines services can be provided competitively. For example, options to solve a capacity constraint could include a:

    25.1 traditional network solution (eg, a new transformer) which can be provided by a number of different (internal or external) suppliers;

    25.2 demand side response programme; or

    25.3 grid-scale battery (owned by the electricity lines business or a third party).

[11] Self-generation and storage offer a limited substitute, but do not at this point provide a large scale substitute to an existing electricity distribution network.

26. The Authority considers that the regulatory framework could be improved by:

> "Amending the Commerce Act to ensure regulation of electricity lines services more strongly encourages providers of those services:
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> - to competitively procure emerging contestable assets and contestable support services used to provide their regulated services".

27. This is about inputs. The starting point is that both the Authority and us share the same end goal—to promote efficiency in electricity lines businesses' expenditure on inputs necessary to deliver the regulated service. We consider that productive efficiency is the most relevant dimension of efficiency in relation to expenditure on inputs.[12]

28. It is useful to unpack this issue:

    28.1 *Procurement of what*—the inputs can broadly be differentiated by whether they are capital or operational (ie, assets or services).

    28.2 *Procurement approach*—regardless of the nature of the input, it can either be produced by the electricity lines business, or purchased from a related or independent third party. If purchased from a related or independent third party, it can be procured through a competitive process, from a preferred supplier, or through another procurement method.

Electricity lines businesses are generally well placed to make procurement choices

29. The choice of what input to use and who to source it from should be made by electricity lines businesses, except for particular circumstances where we judge that further intervention is in the long-term interest of consumers. The main role of the regime is to align the interests of electricity lines businesses with those of consumers.

30. Importantly, if that alignment occurs, then the regime should remain neutral on *what* input is lowest cost—on whether the input is a pole, a wire, a transformer, a battery or a demand response contract.

31. Similarly, the regime of economic regulation should remain neutral on *who* is the best provider. We recognise that in some situations it may be best for the substation, for example, to be built by the electricity lines businesses' own engineers rather outsourced to a specialised contractor. However, we also recognise the importance and benefits of competitive procurement.

32. Electricity lines businesses should consider alternative solutions too, such as demand response, which could be procured in various ways.

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[12] Productive efficiency occurs when electricity lines businesses use inputs in such a manner as to minimise costs, subject to technological constraints. Like other types of efficiency gains, the regulatory regime ensures sharing of the benefits of productive efficiency gains with consumers.

33. As regulators, we have to be careful before deciding to tell firms how to run their business because they very likely know that better than us. Where possible, we should avoid picking winners. This extends to technologies (inputs), input suppliers, and business models.

We place incentives on electricity lines businesses to make the efficient choices

34. Our goal is to provide effective incentives that promote efficiency in electricity lines businesses' expenditure on inputs necessary to deliver the regulated service. Effective incentives are those that align the interests of electricity lines businesses with those of consumers; those that drive electricity lines businesses to choose the appropriate input for the job given the technological constraints, from the supplier (including self-supply) that provides the best value.

35. Incentive regulation like our regime puts the incentives in place for the electricity lines businesses to reduce their costs, similar to the incentives that are in place in competitive markets (but does so through price-quality paths). However, just like in competitive markets, it is difficult to accurately measure how close firms are to meeting a theoretical maximum level of efficiency. Whilst we can see efficiency gains being made, it is difficult to quantify exactly how well the incentives are working.[13]

Context influences what the efficient choices are

36. The Authority's point regarding competitive procurement of inputs relates to the *how*. Having identified the business need, an effectively incentivised electricity lines business should select the procurement method that minimises its costs. This method might well be a competitive tender; it might also be a preferred supplier, or other methods. However, we also recognise the long-term benefit that competition may have in these markets for consumers and the relevance of competitive procurement processes in ensuring this outcome. Our understanding is that this dynamic efficiency is what the Authority most wants to promote.

37. The choice of method will be influenced by a range of factors. Some of these factors include transaction costs (eg, how hard is it to write a contract), coordination costs (eg, how hard is it to coordinate the demand response), economies of scope, internalising externalities (ie, avoiding 'double marginalisation'),[14] firms' inherent competitive advantage, the specificity or irreversibility of the input supplier's investment, which might have been the reason for any long-term contract, among potentially other factors.

38. Within a workably competitive market, different firms choose to structure and operate their business in different ways, including what inputs they procure, from who and how.

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[13] We would be happy to discuss further with you our current thinking about options to assess the efficiency of electricity lines businesses.

[14] Double marginalisation is a situation where firms in different vertical segments of an industry (eg, input supplier (upstream) and electricity lines business (downstream)) exercise their market power by applying their own price mark-ups.

We have the tools; the Act is not the place

39. Competitive tendering is a useful tool in driving efficiencies. We would expect electricity lines businesses to use this method where the benefits outweigh the costs.

40. Regulators should only intervene where there is a problem (eg, a market failure). In our view the problem is not yet proven. It is not yet clear to us that competitive tendering has, or would have, produced consistently better outcomes in all scenarios.

41. Electricity lines businesses have used a range of models for sourcing inputs over time. If it was concluded that more strongly encouraging electricity lines businesses to competitively procure inputs was the best solution, then we consider that we have the tools to do it under the current drafting of the Act; it is enabling enough.

42. We have intervened to correct natural monopolists' lack of incentives to improve efficiency. It is likely that the resulting incentives we have placed on electricity lines businesses are not perfect; that the job of aligning electricity lines businesses' and consumer interests could be improved. "More strongly encouraging" electricity lines businesses to competitively procure inputs, for example, may well be a solution and is one that we could undertake. But any problem with the existing interventions needs to be first identified and validated, taking into account all the relevant factors, including the ones mentioned above.

43. Primary legislation is of a rigid nature, appropriately so. We consider that as the pace of change accelerates, and uncertainty as to the future of the industry grows, flexibility to evolve the regulatory framework becomes even more valuable. The Authority recognises this.[15] Therefore, we consider that we should refrain from adding more detail into the Act unless it is proven to be necessary.

Avoid overly encouraging electricity lines businesses to own contestable assets

44. Electricity lines businesses may have incentives to act in ways which harm competition in adjacent markets. Conduct by electricity lines businesses may be purposively anticompetitive or may have the effect of substantially lessening competition (even if they consider they are promoting a public benefit). For example, some electricity lines businesses may install free public electric vehicle chargers to support the nascent electric vehicle market (which will increase electricity demand for distributors in the future) without doing so with the purpose of discouraging competitive provision of the service.

45. We agree in principle with the Authority that increased competition in these adjacent markets would be a good thing, likely leading to more innovation and lower prices.

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[15] See for example their view to amend the Act to make it "easier to adjust the Commission's regulation of electricity lines services as the providers of those services face greater contestability from alternative providers".

46. The Authority expresses the following more specific views:

> "In our view ss52A(1)(a), 52T(3) and 54Q in Part 4 of the Commerce Act need to be reviewed to check the incentives they're providing for regulated businesses to rationalise their businesses by substituting competitive procurement of emerging contestable assets and services, such as storage, generation and demand response assets and services…
>
> Alternatively, open and neutral competitive tendering requirements could be introduced, especially if changing ss52A(1)(a), 52T(3) and 54Q are outside the scope of the Electricity Price Review or changes to IRIS are unacceptable or inadequate…
>
> In our view this provision [s52A(1)(a)] has driven the Commission to set very favourable returns on capital for electricity lines businesses, which encourages them to favour capex (owning assets) over opex (procuring services)."

47. Section 52A(1)(a) is about suppliers having incentives to innovate and invest, including in replacement, upgraded, and new assets. There are three points we consider worth making in relation to potentially changing this section.

48. Firstly, firms that have incentives to innovate and invest is a sign of a well-functioning market. This is generally to the long-term benefit of consumers.

49. Secondly, the four limbs of s 52A create a healthy balance and can involve trade-offs. Removing or changing one limb of the purpose statement could unbalance the regime and not reflect outcomes consistent with outcomes produced in workably competitive markets.

50. Lastly, the impact of removing or changing s 52A(1)(a) is potentially very substantial in terms of our regulation of these sectors. For example, an amendment to s 52A is likely to require us to revisit many decisions made to date under Part 4, including conducting another review of its input methodologies (which were first set in 2010, subject to extensive litigation during 2011-13, and we then reviewed during 2015 and 2016). Crucially, a change could significantly weaken incentives to invest to the extent that it signals to investors that promoting investment is less important to the regime.[16] The impact of this risk materialising could be very significant, given the asymmetric nature of the costs of under-investment in energy networks compared to over-investment.

51. Any significant change could affect the investment climate more widely and increase the actual cost of capital businesses face (if investment in New Zealand or the electricity industry is perceived by investors as more risky).

52. We set out our views regarding returns on capital later in this paper.

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[16] We would still need to provide incentives to invest in order to improve the industry's dynamic efficiency, as required by s 52A(1)(b). It is unlikely that dynamic efficiency would improve without investment. We considered the links between competition, dynamic efficiency and investment in the 2015 Final Pricing Principle work in the Telecommunications industry (paragraphs 148-155 here http://www.comcom.govt.nz/dmsdocument/13933).

53. We agree that it is worth looking to ensure that specific incentives are not causing a problem, but in our view s 52A(1)(a) is not the problem.

54. We consider that the risks of making changes to s 52T(3) and s 54Q are significantly lower, though we are not convinced that removing s 54Q in particular would necessarily be beneficial. We understand the Authority's perspective that s 54Q could encourage self-supply, and therefore we have sought to design regulatory solutions that are neutral about technology or solution type.

55. We are happy to provide the Panel more detailed views in relation to these sections of the Commerce Act if that would be useful.

Align the purpose statements of the Electricity Industry Act and Part 4 of the Commerce Act

56. We have the ability to take action against and therefore deter anticompetitive conduct. In particular, Part 2 of the Commerce Act contains provisions that prohibit anticompetitive conduct or practices in all sectors in the economy, including the electricity sector. However, when using our regulatory powers under Part 4 of the Commerce Act we must consider the purpose of Part 4, which does not include the competitiveness of adjacent markets.

57. As proposed by the Authority, we can see that there could be an advantage to better aligning the purpose of Part 4 to include, when regulating monopoly markets, consideration of any impact on competition in adjacent markets. This may be able to be achieved by specifically referring to competition in adjacent markets, or by broadening the definition of consumer to include consumption of electricity itself rather than just consumption of electricity lines services.

58. Again though, we urge caution when considering changing the purpose of Part 4 because of the large unknown implications of doing so. We also note that, looking back at our past decisions, such as our recent review of the cost allocation rules, we do not think that our decisions would have been substantially different had 'competition in adjacent markets' been included in the purpose. We also expect that these markets should be able to develop as workably competitive markets adjacent to the Part 4 regime and participants would be aware of the risks of taking advantage of any market power they have in regulated markets in these markets.

59. Similarly, we note that in appropriate circumstances we have put extra requirements in place which positively impact on adjacent market competition, eg, the requirement on Transpower to consider non-network alternatives for large investments.

60. When considering the purpose of Part 4 of the Commerce Act, it may be helpful for the Panel to refer to the Telecommunications (New Regulatory Framework) amendment Bill 2018, which looks to introduce a new regulatory framework for fixed fibre access services—the services that enable ultra-fast broadband. While the purpose that would be set out in the amended Act largely mimics s 52A of the Commerce Act, the following additional section is also proposed:

166 Matters to be considered by Commission and Minister

1) This section applies if the Commission or the Minister is required under this Part to make a recommendation, determination, or decision.

2) The Commission or Minister must make the recommendation, determination, or decision that the Commission or Minister considers best gives, or is likely to best give, effect—

(a) to the purpose in section 162; and

(b) to the extent that the Commission or Minister considers it relevant, to the promotion of workable competition in telecommunications markets for the long-term benefit of end-users of telecommunications services.

61. We have not considered in detail how well this type of additional section could translate to Part 4 of the Commerce Act, but it seems reasonable to consider further.

62. If the Panel wants us to further consider the potential implications of changing the Part 4 purpose statement we would be happy to do so by a date that fits with your timetable.

Broaden the range of contestable activities that are subject to separation

63. The Authority considers that the EIA should be amended with a view to

"broadening the range of contestable activities that are subject to separation and disclosure requirements in Part 3 of the Electricity Industry Act"

64. We agree that the Act should enable regulators to take action where the interests of consumers are not being promoted. We read the above view in this light, namely enabling, rather than necessarily intervening in imposing any kind of separation before the problem is appropriately defined and validated.

65. The Authority says:

"If distributors own contestable assets used for multiple purposes then only a portion of the purchase costs are allocated to the regulatory asset base for determining the regulated business's allowable capex. In principle this is no different to the need for cost allocation rules for dealing with other common costs, such as head offices. However, the practical difficulties of avoiding excessive incentives for regulated monopoly businesses to own emerging contestable assets means there is likely to be value in having a range of 'checks and balances' on their impact on competitive markets."

66. As discussed above, electricity lines businesses owning emerging contestable assets that provide inputs to the regulated service is not necessarily a problem. Indeed, it may be what best promotes efficiency and consumers' benefit. The fact that this market provides an input to the electricity lines business suggests that the electricity lines business should have incentives to ensure that the input is competitively priced. If the relevant input market is competitive, a competitively priced input may be procured from the market (ie, a third party). However, if this market is not effectively competitive, then self-supply may be the most efficient approach.

67. We recognise that in practice, other factors could come into play and that it is important to retain tools to deal with problems that may emerge. That is why we support a change to the Act that *enables* regulators to take action where needed, including potentially requiring greater separation.

Other comments

Strengthening IRIS

68. The Authority makes the following point:

> This could be done [changing any potential incentives driving EDBs to inefficiently favour owning emerging contestable assets rather than competitively procuring services from other businesses] by removing those provisions or strengthening the Commission's incremental rolling incentive scheme (IRIS), which rewards regulated businesses for making efficiency savings over time. However, in reality it will be very difficult to get the right strength of incentives by adjusting IRIS, and doing so would reduce the speed at which the efficiency savings are reflected in lower prices for consumers.

69. We agree that it is difficult to get the "right" strength of incentive. However, we consider that the IRIS is the best (albeit imperfect) tool to set the desired financial incentives. Refining the incentive strength in the IRIS is less administratively costly for us and industry, and is something that can be done as we learn more about how electricity lines businesses respond to this incentive.

70. It is precisely the prospect of retaining a larger share of the savings that should drive electricity lines businesses to find more and greater efficiencies. In the short term, the net effect in terms of prices for consumers is a-priori unclear (ie, whether prices drop by a little or by a lot). In the longer term, consumers would more likely benefit from a more efficient industry.

71. However, IRIS comes with related difficulties. There is a trade-off with strengthening incentive rates—it also provides stronger incentives for electricity lines businesses to overstate their forecast opex and capex needs. This is because if we set a higher expenditure allowance (possibly influenced by an overstated forecast by the electricity lines business), the electricity lines business can more easily underspend the allowance (rather than finding genuine efficiencies). Where there is a stronger incentive rate, they will also get to keep a higher proportion of any underspend.

72. This is the reason why we set a lower incentive rate for capex—because the asymmetry of information between electricity lines businesses and us in relation to future capex requirements was (and is) more acute than for opex. However, at the margin, the existence of different incentives rates for capex and opex provides an incentive to favour capex over opex. This is an issue we will be reviewing during the next reset of the price-quality paths.

73. We note also that, in terms of the problem the Authority is seeking to solve, there are a suite of incentives and rules that can influence supplier behaviour. We recently changed its related party rules for this purpose, ie, to reduce any potential financial incentive for suppliers to favour outsourcing to a related company.

Adjusting the scope of regulation when alternatives emerge

74. The Authority mentions that

> "In principle, we think the scope of monopoly regulation should be adjusted as soon as one or more alternative to the electricity lines service arises. However, the increasing contestability is occurring in complicated ways, as it is increasing for some service dimensions and some geographical service areas quicker and more effectively than others. For example, the regulated electricity line service is becoming contestable in many remote areas earlier than urban areas."

75. We agree on the principle that regulation tends to be inferior to workable competition. So regulation should be adjusted as competition increases.

76. In the same way that the strength of competition can vary within a market, the Authority rightly infers that regulation is not black and white, but is a matter of degree (eg, information disclosure may be 'shallower' and price-quality regulation 'deeper', with negotiate arbitrate somewhere in between). So any adjustment to the breadth[17] and depth[18] of regulation should reflect the strength of competition in the relevant market.

77. While the Authority may not have directly meant that "the scope of regulation should be adjusted as soon as one or more alternative to the electricity lines service arises", it is important to note that we would disagree with this being taken literally. Rather, we consider that whenever credible economic substitutes to the regulated service arise, we should investigate the degree of constraint they can realistically impose on electricity lines businesses' market power, and then decide on whether and how to adjust regulation as a result.

[17] Breadth includes market definition in terms of geographical coverage and/or product/service definition.

[18] Depth includes information disclosure, negotiate arbitrate and price-quality regulation.

One other potential legislative change

Prohibition on benchmarking in setting default price-quality paths

78. We are currently prohibited from using benchmarking in setting DPPs paths under s 53P(10). We think that this prohibition is unnecessary and could be removed, but we also caution that the benefits of removing the prohibition may be limited.

79. Benchmarking is used widely in regulation overseas to varying degrees of success. It can be a useful tool, but is certainly limited due to the inherent differences between different networks. We also recognise that, regardless of any outcome of benchmarking, we would have to continue to balance the need for continued incentives for investment and quality against incentives that reduce the price to consumers.

80. If the prohibition against benchmarking was removed, we would take a cautious approach to using benchmarking in setting price-quality paths, recognising the limitations of such analysis.

81. We are already undertaking a limited amount of benchmarking in our assessment of the performance of electricity distribution businesses using information published under our information disclosure requirements, which we are finding useful. We have not yet published our most explicit benchmarking analysis, but intend to in the future. We do not use this analysis to inform our setting of price-quality paths.

Why we consider our estimate of the WACC is appropriate

82. We consider our estimate of the weighted average cost of capital (WACC) is appropriate for four main reasons:

    82.1 We have exposed our thinking to extensive and thorough consultation which has included input from numerous experts in this field. It has benefited and been refined through this process. Our rules for calculating WACC have also been reviewed and endorsed by the High Court through merits appeals.

    82.2 We have used an orthodox approach to calculating the WACC that is widely accepted and used in New Zealand and around the world.

    82.3 We have allowed a WACC uplift that is consistent with ensuring investment which will keep the lights on.

    82.4 We have also tested our estimates for reasonableness using market evidence.

WACC and our process explained

83. The cost of capital is the financial return investors require from an investment given its risk. Investors have choices, and will not invest in an asset unless the expected return is at least as good as that they would expect to get from a different investment of similar risk.[19] The WACC is an estimate of that rate of return. The WACC is applied to the RAB to estimate a capital cost for that business. This is then used as part of the building blocks that form the price paths for electricity lines businesses. It feeds directly into the aggregate level of prices.

84. WACC is one of the most debated elements of the regulatory regime. It matters a lot for consumer outcomes (both reliability and price) and to regulated suppliers.

85. The WACC cannot be observed directly. Its estimation is subject to significant uncertainty. This makes it controversial. As such our calculation of WACC has been subject to very strong processes, rigorous debate and substantive expert opinion.[20] For electricity lines business regulation this has included:

    85.1 Setting the original input methodologies for the Cost of Capital in 2010.[21]

    85.2 The three year High Court merits appeal which was concluded in 2013 and covered nearly every aspect of our estimate of the cost of capital.[22]

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19 This can also be viewed in the reverse, providing a WACC which we expect will be below what is required by investors to support investment, but then requiring investment through enforcement of quality paths would also expropriate asset value from the business.

20 Our original cost of capital panel consisted of Dr Martin Lally, Prof. Julian Franks and Prof. Stewart Myers. We subsequently commissioned expert opinion on various aspects of the cost of capital including from Prof. Ian Dobbs and Prof. Ingo Vogelsang. There were also numerous experts acting for parties.

21 Commerce Commission, "Input Methodologies (Electricity Distribution and Gas Pipeline Services) Reasons Paper", December 2010.

22 Wellington International Airport Ltd and others v Commerce Commission [2013] NZHC 3289 (11 December 2013).

85.3 Our reconsideration of the WACC percentile which concluded in 2014.[23]

85.4 The review of the input methodologies which concluded in 2016.[24]

86. We have substantial expertise in this area both at the staff and Commissioner level. We have reached a view on WACC which we believe best meets the long-term benefit of consumers. We do recognise there can be a range of reasonable views on this; it is not a yes no question.

87. In looking at why we believe the WACC is appropriate it is useful to distinguish between our best estimate of the cost of capital (the midpoint WACC) and our decision to use the 67th percentile of the distribution of WACC for price control purposes.

Why we are comfortable with our midpoint WACC estimate

88. The WACC is not directly observable and therefore we have to estimate it from market data. In doing so we also estimate the range within which we believe the WACC sits and our best estimate of the WACC is the midpoint of that range. Our estimate has been based on market data as far as possible and, as outlined above, has been subject to a very rigorous process and debate including from numerous experts in this field. Many of the parameters are not specific to the electricity sector and therefore also benefited from wider debate across submitters in the airport, gas and telecommunications sectors.

89. The broad methodology we use in arriving at our estimate is not novel but widely employed by regulators and market analysts. The input methodologies merits review covered nearly every aspect of our methodology for estimating the cost of capital and the court found no materially better method. We also note that the subsequent debate on cost of capital when the input methodologies were reviewed was far more contained.

90. As far as is reasonable we have pinned our estimates back to actual market and economic data. We have also taken care to look at the reasonableness of the estimate as a whole rather than just examining individual elements. These reasonableness tests included wider market evidence such as the purchase prices of regulated businesses. We have appended our reasonableness chart.

91. We consider that the combination of a rigorous process, extensive debate and use of real market evidence has produced as reliable an estimation of the WACC as possible.

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[23] Commerce Commission, "Amendment to the WACC percentile for price-quality regulation for electricity lines services and gas pipeline services: Reasons paper", October 2014.

[24] Commerce Commission, "Input methodologies review decisions. Topic paper 4: Cost of capital issues", December 2016.

Why we have deliberately chosen to set a higher WACC for price-quality paths

92. We have set a WACC above the midpoint to reflect that electricity lines infrastructure provides critical services for the vast majority of New Zealanders and New Zealand business. The recent storms in Auckland show how severe the impact from the loss of electricity supply can be. Major outages can be particularly costly and there is a limit to a regulator's ability to mitigate these costs to consumers.

93. Consequently when setting price-quality paths for electricity lines businesses, we choose to use the 67th percentile of our WACC range rather than the midpoint. This uplift was originally set at the 75th percentile in 2010 and adjusted in 2014 following criticism from the High Court. The High Court did not overturn the decision but did query the extent of evidence underlying the decision.

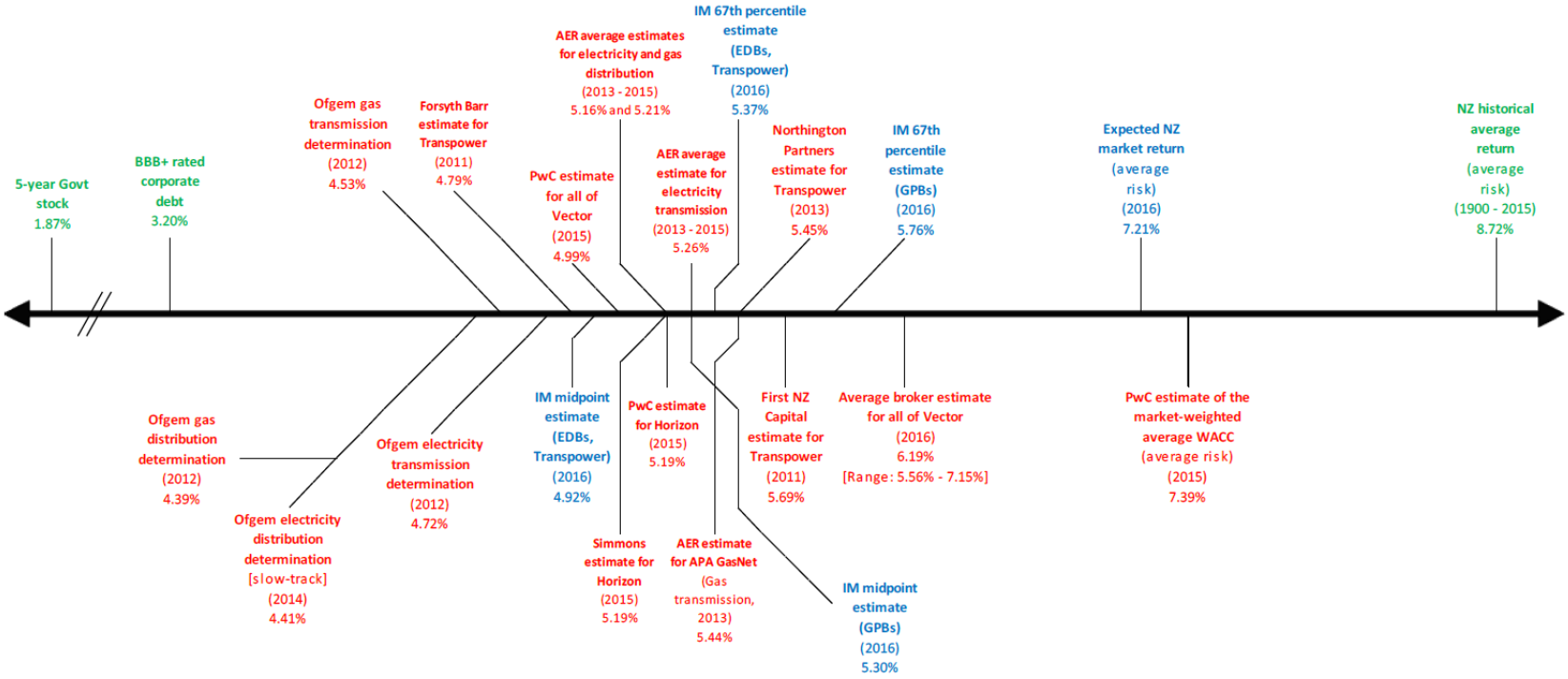
94. We have chosen to set an uplift to our best estimate of the WACC to reduce the risks and expected costs of under-investment, which would directly impact on the reliability of the electricity services. This concern about under-investment arises because the estimate of WACC is subject to uncertainty and there is a risk our WACC estimate is too high or too low. We believe the costs to consumers from under-estimating the WACC is greater than over-estimating the WACC. This is because under-estimating the WACC can heighten the risk of under-investment adversely affecting service quality and in particular can contribute to the risk of major supply outages. This is a real risk—the Panel noted their concerns about Aurora when we met.

95. Providing an uplift to the WACC, or erring on the high side is also not unusual in other jurisdictions, which was demonstrated by a study on international practice we commissioned during our reconsideration of the WACC percentile which examined international practice.[25]

[25] Economic Insights, "Regulatory Precedents for Setting the WACC within a range", June 2014.

Appendix: Extract from Input Methodology Review Topic Paper 4: Cost of capital issues

Figure 14: Summary of WACC reasonableness checks for EDBs, Transpower, and GPBs (using normalised risk-free rates)



Estimates made by the Commission are shown in blue, market information is shown in green, and estimates made by other parties (normalised to reflect our estimate of the risk-free rate) are shown in red.

As noted in paragraph 699, we consider that New Zealand sourced WACC estimates should be given more weight than overseas estimates, given that international WACC estimates can be affected by a number of country-specific factors (such as differences in tax regimes, monetary conditions, regulatory regimes, and investors' relative risk aversion).