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Dear Keston Ruxton

Input methodologies review – Problem definition

1. Introduction

Wellington Electricity Lines Limited (**WELL**) welcomes the opportunity to respond to the Commerce Commission's (**Commission**) *'Input methodologies review – Invitation to contribute to problem definition'* published 16 June 2015.

WELL's submission focusses on key areas where there are opportunities to refine the Input Methodologies (**IMs**) to better promote the purposes of Part 4 of the Commerce Act 1986, including:

- specifying a revenue cap as the form of control under Default Price-quality Path (**DPP**) and Customised Price-quality Path (**CPP**) regulation;
- introducing either a mini-CPP or DPP-reopener option to enable suppliers to seek reconsideration of specific aspects of the DPP where the decision is not appropriate given supplier specific circumstances and a CPP remedy is too slow and costly to resolve a single issue;
- aligning the WACC between the DPP and CPP, and developing a process for reviewing the Weighted Average Cost of Capital (**WACC**) methodology;
- reviewing the CPP application requirements with a view to finding a better balance between prescriptive ex ante requirements and allowing flexibility for suppliers to provide the information necessary to support the proposal in a form that best reflects business operations.

2. Form of control

The IMs for electricity distribution businesses (**EDB**) currently specify a weighted average price cap (**WAPC**) as the form of control.

Amending the IM to specify a revenue cap for both DPP and CPP regulation would better promote the long-term benefits of consumers in accordance with Part 4 section 52A of the Commerce Act 1983, because:

- revenue recovery would better reflect the Commission's building block expenditure allowances and avoid unintended windfall gains and losses to EDBs and consumers, leading to more efficient outcomes for consumers;
- EDBs would have better incentives to support demand-side management, energy efficiency and emerging technologies that defer or minimise traditional network investment; and
- EDBs would be better placed to restructure tariffs to move toward more cost reflective tariffs and therefore promote clearer price signals to consumers regarding optimal energy use and sources.

Each of these is discussed in more detail below.

2.1. Revenue better reflects building costs expenditure allowances.

Under the WAPC the Commission must forecast volume growth¹ for each EDB for the forthcoming six years. If the Commission's forecast is:

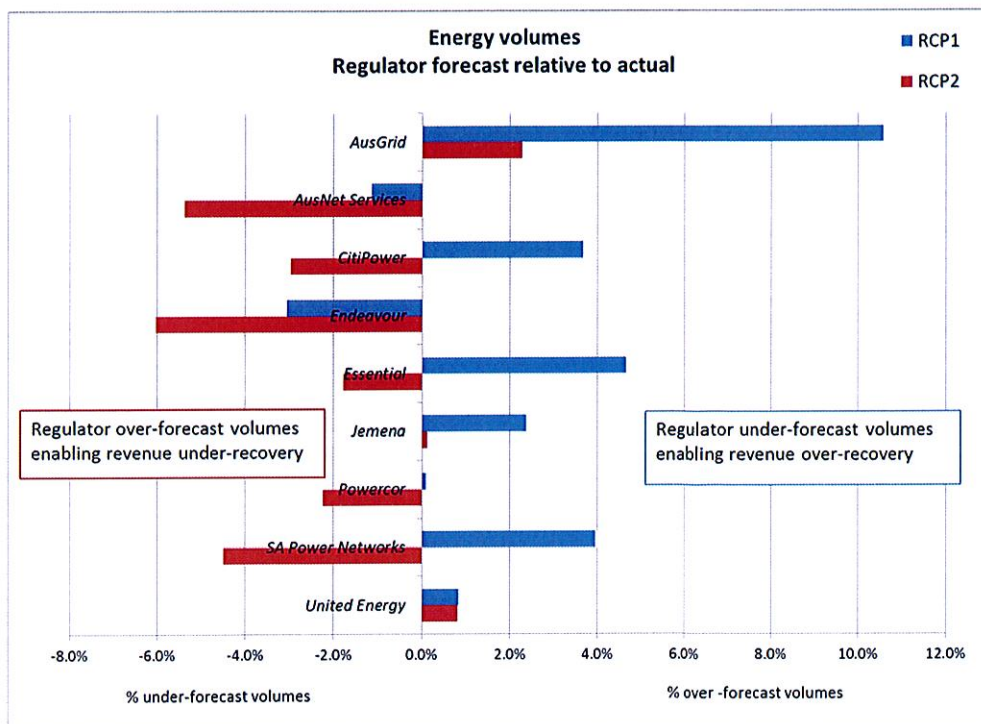
- more than actual volume growth over the period, EDBs recover revenue less than the building block allowances and consumer pay too little; or
- less than actual volume growth over the period, EDBs recover more revenue than the building blocks allowances and consumers pay too much.

Importantly, these are windfall gains and losses to consumers and suppliers and do not represent efficient outcomes. Neither situation promotes the long-term interests of consumers as:

- if EDBs recover materially less revenue than required to efficiently operate and invest in the network then optimal network investment will be dis-incentivised and consumers will be worse off in the long-term;
- if EDBs recover more revenue than required to efficiently operate and invest in the network then they are not being limited in the ability to extract excessive profits.

Consequently, accurate forecasting is essential under a WAPC and even small forecasting errors can lead to material revenue impacts, for every 1% p.a. forecasting error there is a 4% error in revenue recovered over the five year regulatory control period. International experience demonstrates that accurate volume forecasting is extremely difficult. Figure 1 shows the forecasting errors experienced by the Australian Energy Regulator (AER).

Figure 1: Difference between AER forecast and actual energy volumes over five year regulatory control period

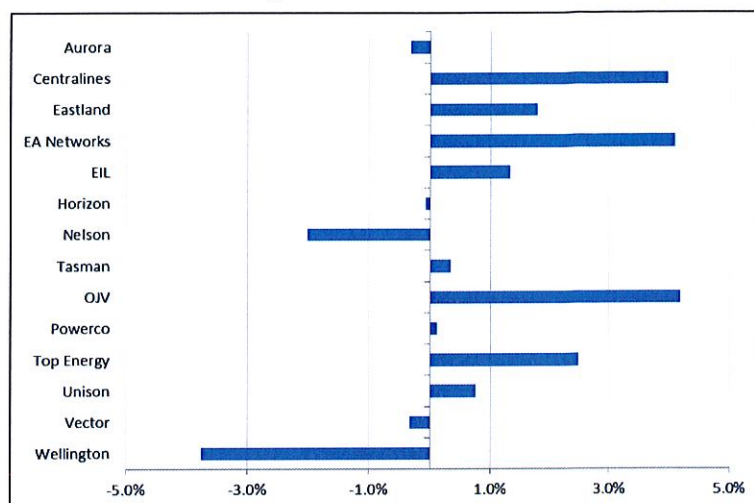


Source: AER RIN data

¹ Technically the Commission forecasts constant price revenue growth rather than aggregate volume growth. For simplicity, we describe this as volume growth in this submission.

In the New Zealand context, volume forecasting under the DPP is even more difficult than for the AER as supplier-specific circumstances are not taken into account. Under the DPP the Commission's approach has been to use a single model for all EDBs, however the drivers of volume growth vary by region and network area making forecasting accuracy more difficult. Analysis undertaken by PwC on behalf of the ENA in 2014 indicates that there have likely been considerable forecasting errors, refer figure 2. Additionally, forecasting is likely to become more difficult over time as there will be a considerable increase in uncertainty regarding the uptake of emerging technologies and how these will impact on energy volumes. The uptake and impact of emerging technologies could potentially differ markedly across different networks.

Figure 2 - Difference between annual average constant price distribution revenue growth and 2012 DPP forecast (2010-14)²



Source: PwC on behalf of ENA

Importantly, there are limited mechanisms available for EDBs to mitigate the regional difference in consumer behaviour or the risk of forecasting error under a WAPC. In practice, options to restructure tariffs are limited by:

- the *Electricity (Low Fixed Charge Tariff Option for Domestic Consumers) Regulations* which specify a maximum \$0.15 per day fixed charge for consumers of 8000Mwh or less per annum. The proportion of customers eligible for this tariff is high in networks with a high proportion of residential customers, where households use gas combined with electricity and where emerging technologies are providing an alternative energy source;
- lack of information regarding different customers demand responsiveness (elasticity of demand) coupled with non-direct pass through of distributor tariff structures to consumers;
- uncertainty regarding the treatment of unintentional breaches of the price path as new tariff options would have no associated qt-2 data necessary for the compliance test;
- concerns regarding consumer or public backlash to tariff changes.

Conversely under a revenue cap, revenue outcomes will better reflect the building blocks expenditure allowances approved by the Commission. This is because, under a revenue cap, the Commission determines the Maximum Allowable Revenue (**MAR**). The supplier is then responsible for forecasting energy volumes in order to set tariffs to achieve the MAR. Any differences between the MAR and actual revenue received in a particular year is corrected for through adjustments to the MAR in subsequent years. Notably, the supplier still has an incentive to forecast as accurately as possible to mitigate revenue volatility and to manage stakeholder relations. Therefore under a revenue cap the

² Analysis based on growth in distribution revenue by customer group deflated for CPI and other identified price changes including the 2013 Starting Price Adjustments.

Commission would not need to forecast volumes and the risks to EDBs and consumers of windfall gains or losses arising under the WAPC are removed.

The AER has recently moved all EDBs under its jurisdiction to revenue cap. One of the reasons for the change was to ensure revenue outcomes reflect efficient costs. Specifically the AER stated:

*"We consider that a revenue cap provides a high likelihood of efficient cost recovery. We consider that because costs for distributors are largely fixed and unrelated to energy sales, revenue recovery should also be largely fixed and unrelated to energy sales....We consider that a WAPC does not provide a high or even reasonable likelihood of efficient cost recovery."*³

2.2. Incentives to support demand-side management, energy efficiency and emerging technologies

Under a WAPC, EDBs face a direct negative revenue impact from the implementation of any demand-side management, energy efficiency activities, or emerging technologies which lead to a reduction in energy volumes on the network. This creates a direct disincentive for EDBs to support, promote or initiate these activities. The 2015-20 DPP includes an energy efficiency and demand-side management incentive allowance with the aim of offsetting revenue losses. However, the scheme only partially offsets the disincentives due to uncertainty regarding full recovery of lost revenue ex post, the administration costs associated with the application process and the exclusion of tariff related initiatives.

Conversely, under a revenue cap EDBs are revenue neutral and therefore indifferent to reductions in aggregate energy volumes arising from these activities. Under a revenue cap EDBs would have a strong incentive to support investments that reduce network peak demand and congestion and thereby efficiently reduce or defer expenditure on the network. EDBs and consumers would share the benefits of any deferrals or reductions of expenditure in accordance with the incentive schemes for capex and opex. A revenue cap therefore better promotes section 54Q of the Act by removing existing disincentives and providing positive incentives for EDBs to support and invest in energy efficiency and demand-side management activities

Importantly, EDBs are well placed to contribute to and coordinate the efficient implementation of demand-side management and emerging technologies as they have in-depth knowledge of location and timing of network constraints.

Notably, regulators across many other jurisdictions, including Australia and the United Kingdom, have cited the promotion of energy efficiency and demand-side management as reasons for moving from a WAPC to a revenue cap.

2.3. Opportunities to promote tariff restructuring

While the Commission is not directly responsible for the tariff structures of suppliers, the form of control has an impact on suppliers incentives with regards to optimal tariff structures. Therefore it is still important for the Commission to determine a form of control which promotes efficient tariff structures.

In theory, under a WAPC suppliers have incentives to extract maximum revenue by setting tariffs to reflect relative customer demands (willingness to pay) based on the customers relative price sensitivity (elasticity of demand), i.e. suppliers would ideally apply Ramsay pricing. For demand-reflective pricing to be efficient it relies on no external constraints on distributor tariffs, distributors having access to consumer price sensitivity information, full retailer pass through of distributor tariff structures and informed and responsive consumers. In practice these conditions do not hold for EDBs in New Zealand.

³ AER, *Final Framework and Approach for the Victorian Electricity Distributors, Regulatory control period commencing 1 January 2016*, 24 October 2014, p. 82.

Under a WAPC EDBs may also be reluctant to move toward more cost reflective tariffs, subject to other regulatory constraints, due to concerns regarding revenue impacts and well as compliance concerns.

Under a revenue cap, suppliers are revenue neutral with respect to tariff structures, therefore, there is more scope for EDBs to move toward cost reflective tariffs. Cost reflective tariffs would provide more efficient price signals to customers regarding the relative costs of using the network compared with alternative energy sources and technologies and the relative costs of using the network at different times of the day. Providing efficient cost reflective price signals to customers is becoming increasingly important as emerging technologies are providing customers with increased choice regarding their energy source. Inefficient or confused price signals could lead to customers making inefficient decisions with regards to energy use and investments in alternative energy sources.

2.4. Interaction between form of control and WACC

The Commission's problem definition paper raises the question of whether there is any interaction between the form of control and the asset beta used in the WACC calculation.

The equity beta is intended to estimate the systematic risks (market-wide risks) faced by regulated suppliers. WELL is not aware of any evidence that the form of control materially influences the systematic risks of regulated suppliers. Further, empirical analysis undertaken by CEG in 2013 found no statistically significant difference in the asset beta for US companies operating under different regulatory regimes.⁴

The Commission determined the equity beta currently applying under the IMs using a sample of relevant comparator firms including international suppliers. The sample of firms includes those subject to varying forms of control and regulatory regimes. Additionally, under the IMs the same equity beta is currently applied to suppliers with varying forms of control, for example Transpower is subject to a revenue cap while EDBs are subject to a WAPC.

Notably, international regulators including the AER and Ofgem did not adjust WACC as a result of moving from a WAPC to a revenue cap.

WELL therefore considers that there is no basis for adjusting the equity beta applied under the IMs if the form of control changes from a WAPC to a revenue cap.

3. Mini CPP or DPP reopener

The regulation of EDBs under Part 4 is based on a two pronged approach where suppliers are subject to the DPP unless they apply for a CPP. Under the DPP the Commission applies standard methods for forecasting price path inputs across all EDBs. Under the CPP the Commission's forecasts are based on an assessment of an EDB's proposal which takes into account supplier-specific circumstances and covers all aspects of the price path.

In concept this approach works well by providing a low cost solution for dealing with multiple small networks while also providing an alternative option where the DPP is not appropriate for specific EDB circumstances. In practice, however the time, resourcing and information requirements for a CPP application make it a significant leap from the DPP and is seen as a barrier to considering CPP applications. In circumstances where the DPP is generally appropriate, a CPP is a high cost and time consuming solution to dealing with one specific matter which is not appropriate given supplier-specific circumstances. A CPP application may cost an EDB at least \$3M in out of pocket preparation costs plus at least a two to three year time delay before the change takes effect. Consequently, there is a high likelihood that some EDBs will not apply for a CPP, even though the change required would have better promoted the long term benefit of consumers.

⁴ CEG, *Information on equity beta from US companies*, June 2013.

An intermediate option is required that would enable EDBs to seek the Commission's reconsideration of specific matters within the DPP that are not appropriate given supplier-specific circumstances. This option would be best achieved by enabling EDBs to make either a mini-CPP or apply for a DPP reopener. The intermediate option would enable the Commission and EDBs to focus resources on the specific matter of concern and not waste time and money on matters which are not in contention.

The intermediate option could be only available in circumstances where an EDB can demonstrate that the DPP forecasting approach is not appropriate given its specific circumstances, does not promote the long term benefits of consumers and where the revenue impact is material.

An intermediate option would better promote the long term benefits of consumers by providing a lower cost and faster approach for addressing specific aspects of the DPP where the forecasting approach does not support the purposes of Part 4 given supplier-specific circumstances.

4. WACC

4.1. Alignment of CPP and DPP WACC

WELL understands that the decision of whether to align the DPP and CPP WACC is being considered as a separate fast-track process. As previously submitted⁵, WELL supports removal of the WACC differential between DPP and CPP which may act to deter CPP applications that would otherwise be in the long term benefit of consumers. We consider that the alignment of the WACC between DPP and CPP can be considered as a separate matter to the question of the WACC methodology. The principle that the WACC be the same across the two forms of regulation remains irrespective of the method used to determine the level of the WACC. The Commission should also consider using the same WACC for three year and four year CPP periods as that used for the five year CPP period.

Alignment of the WACC across the DPP and CPP better promotes the purpose of default/customised regulation, as set out in in section 53K of the Act, by:

- enabling suppliers to assess whether a CPP proposal is appropriate given the underlying investment and operation needs of the business to operate efficiently and ensuring this decision is not distorted by a differential in the WACC between the DPP and CPP; and thereby
- promoting the long-term benefit of consumers by ensuring suppliers have incentives to efficiently invest in the network in accordance with section 52A of the Act; and
- fast tracking the WACC alignment ensures that CPP applications are not inefficiently deferred due to the WACC differential and therefore efficient investment decisions facilitated by the CPP determination are not inefficiently deferred.

The Commission's process updated paper published on 7 August 2015 sought further submissions on how to align the DPP and CPP WACC. As previously submitted⁶, WELL supports Powerco's proposal for aligning the CPP WACC with the prevailing DPP WACC. Powerco's proposal provides a simple mechanism which, at a high level, involves:⁷

- for the part of the CPP period which overlaps with the current DPP period, the CPP WACC equals the DPP WACC; and
- for the remaining part of the CPP period, a forecast of the WACC is applied initially to determine the revenue/price path in the CPP determination. Then once the new DPP WACC is published, an adjustment to the CPP price/revenue path such that the effective CPP WACC equals the new DPP WACC.

⁵ Refer to Wellington Electricity Lines Limited submissions dated 23 June 2015 and 10 July 2015.

⁶ Refer to Wellington Electricity Lines Limited submissions dated 10 July 2015.

⁷ Refer to Powerco submission dated 23 June 2015.

WELL supports Powerco's proposed approach because it:

- provides reasonable certainty to prospective CPP applicants regarding the WACC that will apply under a CPP;
- fully removes any perverse incentives to make decisions regarding whether to apply for a CPP based solely on the difference in the WACC between CPP and DPP; and
- is simple to understand conceptually and straight forward to implement using a mechanistic adjustment formula in the CPP price/revenue path compliance formula.

4.2. WACC methodology review

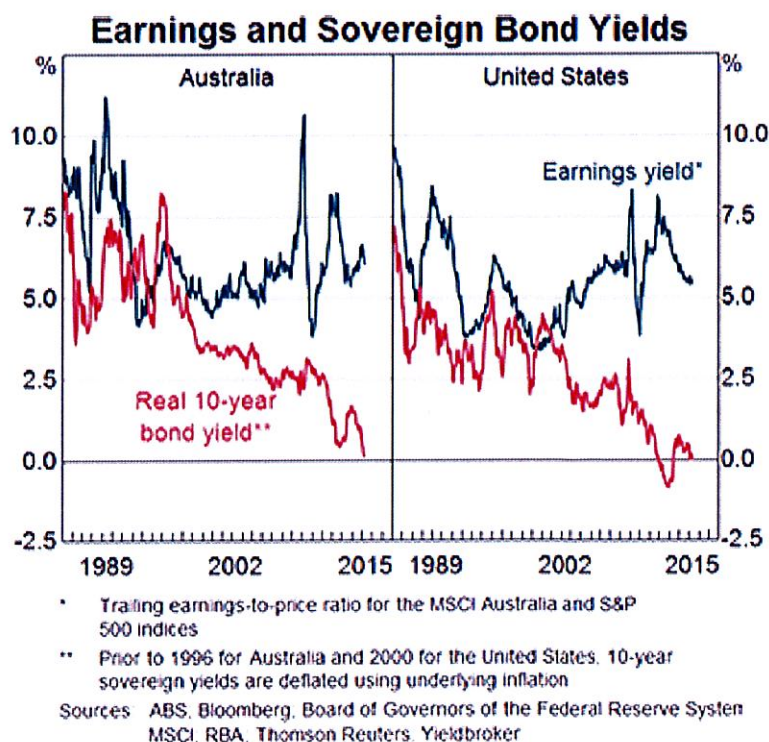
Return on equity

WELL notes that the return on equity estimates have moved significantly over the last five years, from 8.14% in September 2009 to 7.21% in September 2014. This movement is purely due to changes in the government bond yield as a result of the Global Financial Crisis (GFC).

The return on equity estimate computed using the Brennan Lally CAPM suffers from high volatility due to high volatility in the government bond yields. This relationship with government bond yields has resulted in a counter intuitive movement in return on equity estimates. This is because such a movement suggest that the peak of the GFC resulted in a fall in the cost of equity capital as a consequence of the precipitous fall in government bond yields.

In his recent speech in April 2015, the Reserve Bank of Australia Governor noted that:

"...the earnings yield on listed companies seems to have remained where it has historically been for a long time, even as the return on safe assets has collapsed to be close to zero... This seems to imply that the equity risk premium observed ex post has risen even as the risk free rate has fallen and by about an offsetting amount."⁸ [refer figure below].



⁸ Glenn Stevens, Governor RBA, *Address to the American Australian Association*. Available at: <http://www.rba.gov.au/speeches/2015/sp-gov-2015-04-21.html>

The Federal Energy Regulatory Commission stated that:

“The premise underlying the use of U.S. Treasury bonds for the post-hearing ROE adjustment is that changes in ROE over time track changes in U.S. Treasury bond yields. However, while U.S. Treasury bond yields are an important indicator of capital market conditions and therefore inform our determination of an appropriate base ROE, the capital market conditions since the 2008 market collapse and the record in this proceeding have shown that there is not a direct correlation between changes in U.S. Treasury bond yields and changes in ROE.”⁹

Therefore, the two issues for further exploration as part of the full IM review, in relation to the return on equity, are:

- whether B-L CAPM can deliver a stable return on equity over time that provides confidence to investors to invest in long life assets. If not, is there an alternate asset pricing model that could provide a better platform for estimating return on equity; and
- whether the parameters within B-L CAPM can be estimated in a manner that they result in a more stable estimate of return on equity. A predominant part of this consideration would include looking at an alternative estimation of the risk free rate and market risk premium.

Cost of Debt

In relation to the cost of debt, the IMs specify key inputs including the leverage assumption, tenor, narrow pricing window and credit rating. The full IM review should consider whether these key inputs reflect an efficient industry benchmark. Additionally, the current IMs provide no allowance for the efficient costs of hedging, including the necessary cost associated with hedging during the narrow regulatory pricing window and the subsequent commencement of the next regulatory period, eight months later. To ensure suppliers expect ex ante to recover their efficient costs, the efficient hedging costs should be included in the cost of debt estimate.

To address these and other questions regarding the WACC methodology, WELL recommends that the Commission initiate a separate process for facilitating stakeholder and expert discussions and submission regarding the WACC methodology.

5. CPP process and information requirement

The current process and information requirements for making CPP applications is likely deterring some EDBs from seriously considering making CPP applications. Unlike other jurisdictions, many EDBs in New Zealand do not have the resources available to commit to developing a compliant and comprehensive CPP proposal based on the current IMs.

Finding the optimal balance for how much information should be prescribed ex ante is difficult. Therefore, it is important to bear in mind that the burden of proof for justifying the proposal rests with the supplier. A supplier has strong incentives to provide as much information as it can in support of its proposal to improve the likelihood of the proposal being accepted. The Commission also has the ability to use its information gathering powers to seek additional information from suppliers if the information received in the proposal is considered insufficient to make a thorough assessment.

⁹ FERC, Opinion no. 531, June 2014, para 158.

WELL recommends the Commission review the information requirements in the IMs with a view to:

- removing prescriptive data requirements and substituting these for more generic information requirements which provide greater scope for the applicant to set out the information in the most logical way reflecting business operations;
- removing information requirements that have the effect of pre-empting the forecasting methodology. As an example, the opex data requirements assume a bottom up build, however much of this data would not be necessary if a supplier chose to apply a base-step-trend forecasting approach to aggregate opex;
- removing information requirements that are not considered essential and instead relying on the ability to issue subsequent information requests if the information contained in the proposal is not adequate for the Commission to make an informed assessment. This would enable the Commission to target the information request to seek the exact information it requires.

WELL recommends the Commission review the process requirements with a view to:

- providing further clarity or guidelines regarding the expectations in relation to customer engagement and how customer engagement outcomes will be used in the Commission's assessment process;
- reconsidering the role of the verifier, in particular whether the dual accountability is able to work in practice and how the role can best add value to the process;
- reviewing the timelines, particularly in relation to whether the timelines enable the purpose of the process to be achieved in practice, for example customer consultation and verification timelines.

6. Closing

WELL appreciates the opportunity to contribute to the problem definition for the Commission's IM review. Please do not hesitate to contact Megan Willcox, Regulatory Projects Manager, on MWillcox@welectricity.co.nz if you have any queries.

Yours faithfully



Greg Skelton

CHIEF EXECUTIVE OFFICER