Auckland Energy
Consumer Trust

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Dr Mark Berry

Chairman

Commerce Commission

13 August 2010

Dear Dr Berry,

AECT Submission on cost of capital

I attach the Auckland Energy Consumer Trust (AECT) submission. It deals with one specific aspect of cost of capital – the need to use all available information when estimating key parameters for the regulatory process.

While we have engaged with the Part 4 regulatory process on a range of other issues previously – and of course reserve the right to do so subsequently in the course of cross submissions – we are concentrating here on this single issue. In part this is because we are confident that other submitters will address points that are of concern to us, and in part because it is one that we think is important.

As noted in the submission the Trust is not a typical owner and has a responsibility that allows it to appreciate the delicacy of the task the Commission faces.

Yours sincerely,

W Kyd

Chairman AECT

Confidential

Cost of capital

Report to AECT

13 August 2010

About NZIER

NZIER is a specialist consulting firm that uses applied economic research and analysis to provide a wide range of strategic advice to clients in the public and private sectors, throughout New Zealand and Australia, and further afield.

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1. Introduction

As part of the regulatory development process under Part 4 of the Commerce Act, the Commerce Commission released two input methodology documents in June 2010. Submissions on various aspects of these releases close during August.

In this brief note we address the Commission's treatment of cost of capital for Electricity Distribution Businesses (EDBs) and Gas Pipeline Businesses (GPBs)[1]. In particular we are concerned about the way the Commission has chosen to deal with the difficult question of developing an appropriate estimate of the cost of capital.

2. AECT

The Auckland Energy Consumer Trust (AECT), the owner of 75% of Vector Limited, is an elected body that operates on behalf of its income beneficiaries, who are consumers of Vector's services. As owner, the Trust reflects consumers' concerns over the long term outlook – more than 60 years - inherent in the lifetime of the trust. The need to keep its consumers happy requires trustees to take an interest in the delivery of better service at appropriate prices; while sustaining and growing the business demands an emphasis on investment and efficiency.

Overall, therefore, to fulfill its aims AECT faces trade offs similar to those included in Section 52A of the Commerce Act:

> 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.

The Trust is thus sympathetic with the aims of Part 4 and is seeking to assist the Commission in its implementation role.

[1] While there are similar issues associated with the gas business, such as the potential for the use of gas ducts to enable cable distribution, for ease of drafting we have discussed the question of concern in terms of electricity distribution only.

There are points in the June documents dealing with cost of capital that have been the subject of past AECT submission and comment. Aspects of these remain of concern, but we are confident others will be discussing those issues in detail, and so are restricting comments in this submission to the overall result that has been proposed in the June documents[2], and in particular, the way the final estimates are brought together.

3. The regulatory issue

The cost of capital is one of the fundamental building blocks that underlies the regulatory mechanism implemented under Part 4 of the Commerce Act. It is a fundamental part of the mechanism for information disclosure and for the price quality paths (D/CPP) that feature in that policy.

The discussion in the input methodology (IM) documents starts with the conundrum that the crucial data points (cost of debt and equity funding) for the relevant industry are not actually accessible; they must be constructed out of other information – in other words, estimated. All estimates are potentially inaccurate. Yet, in practice, the Commission has to produce figures to support the rest of the regulatory structure.

That structure has to align with the aims in s52(1) of the Act (see the 4 objectives cited above). To do so there has to be a reasonable rate of return for the capital used by industry. To be acceptable under the Part 4 aims the rate has to be:

- high enough to ensure that investments are made to keep the industry moving and service standards up, and
- restrained enough to avoid the likelihood of excessive profits.

Thus the level of the rate must be sufficient to service debt and offer equity investors an appropriate return, while not being excessive. How to establish what an appropriate rate might be?

There are different approaches to managing this problem. Practical difficulties arise as these figures are 'counterfactual,' with no exact analogies available. The method the Commission has adopted for the estimation is to break down the figures sought into a series of subcomponents, in part employing a specific model. These subcomponents are then approximated by data coming from a variety of empirical sources, here and abroad.

In carrying out this process the estimation of each subcomponent is effectively tackled individually; despite the importance of the single estimate, which can be seen as coming from a "system". As is well attested in the IM documents there are significant practical choices to be made as part of the estimation process. These are what might be expected, and stem from issues such as the sparseness of local data

[2] Commerce Commission (2010) *Input methodologies electricity distribution services: Draft reasons paper*, and Commerce Commission (2010) *Input methodologies gas pipeline services: Draft reasons paper.*

and the difficulties of interpreting the material based on observations from other countries. Nevertheless a series of parameters emerge from the process.

3.1 Estimation analysis

Success in terms of the aims of Part 4, as have been shown above, hinge around determining an appropriate benchmark rate of return – one that satisfies the two requirements of not being too high nor too low. For these aims therefore, what matters is the system output – the overall system estimate.

Sound practice in system estimation such as this process is to seek to relate the system outputs to the outcome sought. This type of "calibration" is not readily available in this case. An alternative approach, which reflects a recommendation of the Atkinson Review of difficult to measure quantities, such as government productivity[3], is to seek to use independent corroborative evidence. In other words, faced with uncertainty, use all the available information.

One test for systems of estimation (such as models) is to check the way their components match reality.

The estimation system employed by the Commission is not straightforward. For instance, it has selected the simplified Brennan-Lally version of the CAPM as the framework within which the empirical material will be organised. Looking at its requirements, we understand that the model assumes that tax imputations are fully used by the owners of the EDBs. In the case of the AECT as part owner of Vector, this is an unrealistic assumption. Other difficulties are recognised in the IM paper. In particular it has problems with the way leverage works, which force the selection of an arbitrary figure. So the model – as one component in the estimate system - does not fit closely with reality. The model as used is argued by other submitters to result in likely biases in the estimates – driving down the results.

In addition, there are problems with locating sufficient data and with putting together appropriate parameter estimates. Overall it seems likely to underestimate the return on equity, when the results are assembled into a final overall figure.

Some allowance is made for the uncertainties, by using a band for the cost of capital, with the top of that band (75th percentile) employed in the D/CPPs. But the size of the band chosen seems to reflect only a subset of the system estimation problems and to be arbitrary at that.

The problem here stems, at least in part from the consideration of the different elements of the model in isolation – even in the calculation of the percentiles, where they are assumed to be normally distributed and uncorrelated.

[3] Principle H in A Atkinson (2005) *Atkinson review final report: Measurement of government output and productivity for the national accounts*, Palgrave MacMillan,

4. Proposal

Given that the aims of Part 4 drive toward a limited set of rates of return the way the system of estimation works to produce a final result is vital. This discussion supports a need to review the overall system estimate results against as many reasonable comparitors as is possible. This would include testing against other models such as classical CAPM and Officer together with considering approaches used in other regulatory settings overseas.

While this may entail making further judgements and assessments this would be based on further analytical material and thus bring fresh insights to the final outcome. It might take some time to carry through the work, but there is room in the timetable without any slippage and its significance to the process and the EDBs is great.

The final result would be figures with a more acceptable degree of reasoning behind them.