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Input Methodologies Review – Options to maintain investment incentives in the context of declining demand

Nova Energy (Nova) appreciates the opportunity to provide feedback on the Commerce Commission's (Commission) discussion paper on ways in which it can maintain investment incentives for regulated industries in the context of declining demand. Just as the Commission discusses the application of the principles under discussion to the gas industry and gas pipeline businesses (GBPs), Nova refers to the GPBs as illustrative of its points.

Gas transmission and distribution costs are a significant component of the delivered cost of gas. The Commission's decisions on the application of investment incentives in the Input Methodologies Review will therefore affect future aggregate gas demand and number of connected customers. It is important therefore that the Commission does not over-compensate gas pipeline businesses for risk by allowing accelerated depreciation on sunk assets.

Nova agrees with the Commission that GPBs should be appropriately compensated to maintain their assets and continue to provide gas distribution services. That is consistent with the long-term benefit of consumers.

Nova disagrees with accelerating the rate of return on GPB's past investments. Investment decisions are made when expected returns are commensurate with potential risks. Risks are reflected in the GPB's WACC, and therefore historical investments do not warrant compensation through accelerated depreciation rates when their expected economic life is reduced.

Depreciation rates for new investments should however be set to reflect the expected economic life of those assets.

1 Financial Capital Maintenance

Nova agrees with the principles behind the Financial Capital Maintenance (FCM) as outlined in the Commissions Paper "Input Methodologies (Electricity Distribution and Gas Pipeline Services Reasons Paper" Commerce Commission (December 2010)" [1].

Paragraph 2.6.28 of the paper references paragraph 52A(1)(d) of the Commerce Act 1986 and discusses the role of FCM:

> Because allowing a firm the expectation of being able to earn normal returns over the lifetime of an investment provides it with the chance to preserve its 'financial capital' in real (not nominal) terms, such an outcome is often referred to as 'financial capital maintenance' or 'FCM'. In a regulatory context, FCM is achieved, on an ex-ante basis[2]. This is comparable to

[1] Commerce Commission of New Zealand (comcom.govt.nz) .

[2] For example: "In defining the costs of depreciation and allowed return, regulators should adopt rules that meet the accounting principle of 'Financial Capital Maintenance' (FCM), i.e. rules which allow investors to maintain the real value of their capital. This principle is a necessary condition for total cost recovery – meaning

> expectations in competitive markets that are conducive to promoting investment[3]. It is not, however, possible to guarantee that regulated suppliers earn a normal return over the life of assets, because any analysis used to monitor profitability, or to set regulated prices, will typically be conducted part way through the lifetimes of the assets utilised in supplying regulated services. Some information about past performance may not be known. Further, the allocation of risks between suppliers and consumers will usually mean that, although suppliers might have expected to earn a normal return ex-ante, such a return is not earned ex-post.

The critical point here is that "FCM is achieved, on an ex-ante basis" and "although suppliers might have expected to earn a normal return ex-ante, such a return is not earned ex-post".

The Commission appears to recognise the importance of this in its statement in para 3.37 of the consultation paper:

> "There may be merit in considering options for applying the BBM consistent with ex-ante FCM that treat asset lives differently for sunk versus incremental investments. For example, we could decide at a DPP to not adjust asset lives for existing assets, but allow asset lives for new assets to reflect expected economic assets lives at the time of commissioning."

Nova supports that view; but this is followed by a statement that totally contradicts the logic of ex-ante FCM:

> "To implement such a decision in a DPP, we would need to offer ex-ante compensation for existing assets to support ex-ante FCM and promote the Part 4 purpose."

Any provision to allow accelerated depreciation on sunk assets has the effect of ensuring the GPBs can achieve their ex-ante expected returns ex-post. This is inconsistent with both the principles of FCM previously adopted by the Commission and promoting the long-term benefit of consumers.

If the point being made is that the Building Block Methodology and Information Disclosure regime do not support the separation of assets, then it is those regimes that must be amended, and not the introduction of an allowance for early financial recompense on sunk investments.

2 Applying the Weighted Average Cost of Capital (WACC)

The Commission employs the concept of WACC for the GPB's to determine an expected return on investments commensurate with market returns and systemic risk on equity. The key point here is that GBPs are rewarded for assuming risk on an ex-ante basis. There is no basis for guaranteeing GPBs can earn their WACC on an ex-post basis.

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for efficient investment and for the prevention of monopoly profits. … FCM therefore provides the standard by which investors effectively measure whether the regulatory regime is allowing them to recover their costs including a rate of return comparable with that offered by other companies and sectors" (Shuttleworth, G., supra n 95, pp. ii and 13). The concept of FCM underpins the decisions of regulators in many OECD countries (e.g. refer: Diewert E., Lawrence D. and Fallon J., Asset Valuation and Productivity–Based Regulation Taking Account of Sunk Costs and Financial Capital Maintenance, Report to the Commerce Commission, Economic Insights, Canberra, 11 June 2009, pp. 39-47).

[3] For example: "No commercial competitors would come into an industry if they did not expect to be able to recover the decline in real values of their assets, as well as earn a normal profit (the opportunity cost of capital). They would measure their return on investment after recovery of funds sufficient to maintain the real value of the financial capital they had invested" (HM Treasury Advisory Group, Accounting for Economic Costs and Changing Prices: A report to HM Treasury by an Advisory Group, Vol. 1, HMSO, London, 1986, paragraph 19 (emphasis in original)).

If the GPB's were to be assured of achieving their ex-ante returns ex-post, i.e. the risk of reduced returns is eliminated, then their WACC should also exclude any allowance for risk, i.e. their WACC under such conditions should be no more than the returns available on investment grade bonds.

The Commission is focusing on the expectation that the economic life of the GPB's assets will be reduced to less than their previously predicted operable life. In the case of gas, this is due to an expectation that natural gas usage will decline to minimal levels before the pipeline assets are fully depreciated.

Asset stranding in the context of declining demand is not an uncommon risk in regulated or competitive markets. Every market innovation will have some impact on products or services already being delivered, some positive, some negative. Changes to technology, geography, or fashion, etc. regularly disrupt markets and reduce the value of existing investments.

Rather than applying accelerated depreciation rates to existing assets, under GAAP the GPBs should write down the value of their assets to reflect the new assessment of their economic life (which is not a certainty in any case). The Commission should however continue to apply its own building block model (BBM) based on the original asset costs and subsequent depreciated value. The depreciation allowance for those existing assets, set at the time they were acquired, should remain unchanged excepting an inflationary allowance, for pricing and revenue purposes.

3 Demand uncertainty

It would also be wrong to assume that the risk of a reduction in the expected economic lifespan of gas pipelines was not inherent in the WACC applied at the time that investments were made.

This is supported by the fact that the New Zealand gas market has operated for over 20 years with not much more than around 10 years or so of proven gas reserves[4]. As an extractive industry, there has always been an understanding that the economic life of New Zealand's petroleum reserves would be limited. The reserves have been extended over time with improved drilling technologies and field extensions, but the uncertainty remained.

At the time the GPBs made their investment in pipeline assets they knew that there was no certainty the assets would continue to be economic over their full physical life.

The logical next step for maintaining the residential gas market would be switching to biogas, importing LNG, or employment of as yet undeveloped carbon capture and storage technologies, which could significantly extend the life of the gas market, and in particular gas distribution assets. As such, there has been no real change in risk profile (uncertainty) for GPBs compared to prior to the Climate Change Response (Zero Carbon) Amendment Act 2019.

[4] Refer to the redetermination of Maui gas reserves, 8 Feb 2003 Redetermination of Maui gas reserves | Beehive.govt.nz

4 Leveraging WACC

The fallacy of enabling regulated entities to earn their WACC on an ex-post basis is apparent when looking at the valuations of takeovers of regulated companies.

Notionally, the take-over cost of an acquired regulated company should be somewhere close to the total value of shareholders' funds (book value), which by design should be reflective of their WACC. However, if the true equity risk is less than that determined through application of the Capital Asset Pricing Model (CAPM) , then the regulated company will be worth more than its book value, i.e. if the assessed risk is lower than that applied in calculating its WACC, then a lower discount rate will apply to the valuation of the entity by a purchaser. That then implies that if a regulated entity trades for a higher price than its book value, then the WACC applied by the regulator is either too high or the risk settings are too low.

Enabling accelerated revenues to ensure the recovery of capital from past investments is an example of creating a situation where the risk to the regulated entities' return on investment is less than that factored into its calculation of WACC.

The reported value of past market transactions, plus the apparent ability of regulated entities to leverage on their balance sheets to engage in competitive markets outside their regulated activities, suggests that WACC settings in the New Zealand market are already more favourable to owners than to consumers.

5 Future investment

Clearly it is appropriate to encourage GPB's to maintain their gas distribution networks. As such the depreciation rates for new investments should reflect their expected economic life, i.e. to preserve ex-ante FCM. Based on current expectations it is reasonable to allow the depreciation rates on new pipeline investments to be greater than that applied to sunk investments.

Nova expects the GPBs will have adequate systems in place to be able to apply the correct depreciation rates on their various assets and report on these under the information disclosure rules.

6 Impact on consumers of allowing accelerated depreciation on existing assets

An increase in the depreciation allowance for sunk assts will have an inequitable impact on future consumers.

To illustrate this point, consider the following scenario:

- an asset held for 20 years projected to have a 40 year life has now been determined to have 10 years of economic life remaining, i.e. 30 years total.
- Its book value now sits at 50% of cost assuming straight line depreciation (and no inflation adjustments).
- The depreciation rate for the remaining economic life increases from 2.5% of the cost p.a. to 5% p.a.
- The effect is to <u>double the cost to future consumers</u>. That is in direct conflict with the Commission's role to protect the long term interests of consumers.

This additional cost to consumers can be expected to accelerate reductions in demand as:

- the economics of switching away become more compelling for those consumers with a choice, and
- Consumers forgo the utility of using the product or service.

The extent of demand reduction depends on the elasticity of demand in different markets. Accelerated depreciation rates, and hence higher short term prices, will likely reduce demand and therefore increase the risk of early obsolescence. A self-reinforcing spiral of demand reduction becomes possible, or even likely.

With perfect information it may be possible to optimise the depreciation allowances and revenue requirements with the objective maximising the aggregate utility to consumers, but in the absence of such information, a cautious approach should be taken to settings.

7 Conclusion

Excepting adjustments for inflation and maintenance expenditure, depreciation rates on all assets should be determined at the time of acquisition and not adjusted in circumstances where the expected economic life of the asset is reduced. The balance of risks between the GPB and consumer is achieved by allowing the GPB to continue to recover its costs through its revenues over the expected life of assets at the time the investments were made, even if the life of some assets is ultimately shorter than was estimated at the time of investment.

Depreciation rates on all new investments should similarly reflect the expected economic life of each asset ex-ante. On a first principles basis these might be reasonably determined by each regulated party using GAAP. Under that regime the Commission would likely need a suitable monitoring and penalty regime to ensure the rates being applied are consistent with the Commission's views.

The BBM and Information Disclosure regimes should be designed to support those arrangements.

Yours sincerely

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