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Ed Chan
Director
Australian Energy Market Commission

By email: ed.chan@aemc.gov.au

Dear Mr Chan,

2019 Economic regulatory framework review

The Australian Energy Market Commission (AEMC) has released an Approach Paper (the Paper) for the *2019 Electricity Networks Economic Regulatory Framework Review* (the Review) (AEMC, 2019). The paper sets out the Commission's approach and seeks stakeholder feedback on the issues the AEMC proposes to consider as part of the Review. Energy Consumers Australia appreciates the opportunity to comment on the issues raised in the Paper.

Energy Consumers Australia is the national voice for residential and small business energy consumers. Established by the Council of Australian Governments Energy Council (the Energy Council) in 2015, our objective is to promote the long-term interests of energy consumers with respect to price, quality, reliability, safety and security of supply.

We see the current transformation of the electricity sector as part of the larger, longer-term project of building a dynamic and sophisticated energy system and energy services market. This is a system and market which will continue to include some big long-lasting infrastructure and distributed energy resources, delivering intelligent individualised services which are tailored to the unique circumstances and requirements of different people and businesses. Overall the system must optimise a large, distributed and increasingly complex energy system.

In the immediate term, our objective is to improve energy affordability for households and small businesses being impacted by high energy prices. In a highly capital-intensive sector, we need to optimise the way we build out and operate physical infrastructure to deliver energy services at the lowest possible cost for consumers.

It is critical that our regulatory framework is geared to delivering on these objectives. In this context, the Paper provides an important overview of the Commission's broader work program on network-related issues arising from the current transformation of the electricity sector. In this submission we discuss ways to strengthen the review process by integrating a more explicit view on core issues around regulatory design and incentives that we see as fundamental to achieving affordability and optimisation outcomes and the starting point for a review of this kind.

Approach to the 2019 Review

The Paper in section 3 outlines the proposed approach to the 2019 review. This is identified in the Paper as including three elements:

- Continuing to implement the Finkel recommendation on network incentives by consulting on alternative approaches to Network Service Provider expenditure assessment and remuneration - as recommended by the Finkel Review. This follows on from the Commission's

finding in the 2018 Review that incentives are not aligned and, in certain circumstances, a strong capex bias exists.

- Monitoring of key trends and market developments. The Commission will continue to monitor key trends in grid usage as well as development and uptake of new technology and new business models.
- Providing advice on regulatory sandboxes, as requested by the COAG Energy •Council Senior Committee of Officials. As we have submitted separately on sandboxes we won't address this further.

As an overall observation, Energy Consumers Australia believes that any comprehensive review of the operation of economic regulation should be grounded in detailed analytic descriptions of the operation of the 'incentive regulation' framework for electricity distribution in Australia. This review jumps this critical step.

One consequence is that the review overstates the significance of conclusions reached in previous investigations. For example, the finding that the current incentive regime includes a 'capex bias' isn't so much a conclusion as a direct consequence of the historical process by which the EBSS and CESS have been developed.

The EBSS was developed to deal with the consequences of the time dependence of the incentive for making opex savings, an issue that arises specifically from the use of the 4th year in the previous period as the basis for base-step-trend opex forecasts. The EBSS operates to give the business the same incentive (economic rent) for an opex saving irrespective of the year in which it is made, being six years. The AER has then calculated that the distribution of the benefit of the efficiency gain (opex saving) is 30% to the network and 70% to consumers. To make this calculation the AER had to assume a discount rate for the NPV calculation, and they chose 6%. The CESS has then been developed to apply the same logic to capex savings, having now a goal of a 30:70 sharing ratio.

That the incentive is not the same if the allowed rate of return is greater than 6%, and that there is a greater incentive for opex savings than capex saving, is simply a consequence of the choice of 6% as the discount rate for calculation of the sharing ratio, and the replication of that ratio for the CESS. Now that the allowed rate of return is below 6% it could be argued there will be an 'opex bias.'

The cause of this bias is ultimately the choice made in the opex forecasting approach and the set of decisions to implement an EBSS and then a CESS and the design of these. Rather than simply concluding that the incentive bias would be removed by changing the way expenditure is forecast or is subsequently incorporated in the Roll Forward Model (both of which are varieties of a 'totex' approach) other more fundamental alternatives should be considered.

To provide the necessary analytic assessment Energy Consumers Australia is developing a paper *Economic Regulation of Electricity Distribution.* The paper is intended to have three main parts; the first will focus on the objectives and theory of economic regulation including the consideration of incentives, the second will provide an explicit statement of the Australian electricity distribution variant of economic regulation, and the third will use that specification to assess the effectiveness of the regulatory model against the objectives.

Some preliminary observations on incentive regulation

Notwithstanding our work in developing this analytic assessment, we feel it important to touch on the important elements that were part of our presentation to the public forum on 6 March 2019. We begin

with restating principles of efficiency in the long-term interests of consumers, and then discuss the operation of incentives.

The objective of policy is the **promotion of the long-term interests of consumers**. Regulation of natural monopolies for efficient outcomes is a precondition for achievement of the objective. There are two elements to static – at a point in time – efficiency.

- Allocative efficiency – simply that prices are equal to costs, there is no monopoly rent. This can also be called efficient prices.
- Productive efficiency – that costs are as low as they can be, also called technical efficiency. This can be called efficient costs.

The theory of incentives deals with the circumstance where there is a principal who 'contracts with' one or more agents to deliver the principal's objective. The most common example is the remuneration of business executives so that they pursue the objective of shareholders (e.g. increased returns) rather than their own interests (expanding the business). Any such contract includes incentives. There really is no such thing as a regulatory scheme without incentives, as we will see.

In the case where there is a regulator specifying the prices that a natural monopoly business can earn there are two polar contract forms. For simplicity we start with a single product business.

The first – which we will call 'pure cost of service' regulation – occurs where the prices are determined based on the business's actual costs. The second – which we will call 'fixed price' – occurs when the regulator sets a fixed price for the duration of the contract.

In these two pure forms we are separately addressing two uncertainties faced by the regulator. The first is that the regulator has no idea about what the cost opportunities for the business are. If the regulator chooses to use a fixed price approach they face an adverse selection problem – set too high the business earns rents, set too low the business doesn't participate. So the regulator has to err on the side of setting the fixed price too high.

The regulator also doesn't know how much (not costless) effort business will apply to efficiency improvement. If the regulator chooses a pure cost of service approach they face a moral hazard problem in deciding whether to accept the business's costs.

The theory has been well specified by Laffont and Tirole in their little volume *The Theory of Incentives for Regulation and Procurement.*[1] They conclude that the optimal contract involves a linear mix of these two forms and the firms with high cost efficiency possibilities will choose a contract with a higher incentive component. However, this insight is gleaned from a 'single shot' contract.

A weakness remains the assumption that costs can be known even after the fact. In practice, the actual cost of equity capital (i.e. what is the minimum amount you would need to pay) can't be observed without the effect of regulatory decisions.

There are two totemic implementations of monopoly regulation; historic US rate of return and the UK price cap (RPI-X). The former isn't really pure historic cost of service because a rate case only sets up rates going forward based on most recent historic costs. So in effect it is a fixed price that is reviewable at any time at the request of the business when their costs increase – but has no mechanism to force cost decreases to be passed on. We do know courtesy of Averch and Johnson that this form of regulation does create an incentive to inefficiently prefer capex over opex because it

[1] https://trove.nla.gov.au/work/22295508

artificially inflates profit (as an absolute not relative number)[2]. In the multi-product case rate of return regulation doesn't permit price rebalancing without a new rate case (and in declining cost environments it is rebalancing that acts as the rate case trigger).

The UK price cap using the RPI-X formula was designed as a pure form fixed price model. The price cap is fixed for each year via a pathway established through a combination of inflation and a productivity factor. It worked moderately well for the first period after control by ownership (i.e. post-privatisation), where some faith can be had on initial prices. It doesn't work so well for a reset. It was very effective for price rebalancing as occurred in fixed line telecommunications between line rental and call charges.

The regime we have is now using revenue caps rather than price. This has two implications – the first is the issue about consequences on risk exposure to volume variance from forecast, the second is the impact it has on (second best) efficient prices – but that is outside the scope of this discussion.

Our 'incentive regime' is a fixed price regime modified to deal with the five-yearly reset (that is the EBSS and CESS). 'X' is used for 'revenue smoothing' not a productivity factor on the price path. Separately the business faces an incentive to 'build the RAB' if the allowed rate of return is greater than the cost of capital.

What are the consequences of a 'capex bias'?

The discussion on whether there is a bias in the incentives has been joined to a related concept of whether a network business has incentives to choose capex or opex solutions. The issue here is that the business makes these decisions primarily in its revenue proposal where the incentives themselves have no role. The decision whether to make opex or capex savings after the proposal has been accepted is the domain of the expenditure incentives. In the language of incentive regulation, it is management's decision about how much effort to put into making these savings.

Some of that effort could result in a capex being deferred while a solution requiring increased opex is implemented, but it is far from clear that this describes anything more than a small number of efficiency projects. The absence of detailed examples of prospective capex/opex trade-offs makes any detailed analysis of how changes to the incentive regime could promote efficient trade-offs very difficult.

Energy Consumers Australia is not confident that the implementation of any variety of 'totex' approach will significantly enhance the operation of the incentive regime nor provide any benefits in accelerating the transition of networks to supporting and utilizing significantly higher levels of Distributed Energy Resources. We note the Commission's acknowledgement that any reform 'would require extensive stakeholder consultation and collaboration between the industry and market bodies such as the Commission and the AER, and that significant lead time may be required.'

The consideration of totex should go beyond theory to review the real-world applications of the mechanism in the UK and elsewhere. We note that the report by KPMG commissioned by COAG Energy Council[3] and the report by Frontier Economics for the AEMC[4] provide some of this analysis.

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[2] Averch, H. and Johnson, L.L., 1962. Behavior of the firm under regulatory constraint. *The American Economic Review*, pp.1052-1069.

[3] http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/180228%20KPMG%20-%20DEE%20-%20network%20incentives%20optimisation%20-%20final%20for%20publication%20%28003%29.pdf

[4] https://www.aemc.gov.au/sites/default/files/content/ae0d3fc5-4b9a-496a-a072-50886bc5c86f/2017-12-20-Totex-frameworks-Final-report-STC.pdf

Both reports however are more focused on the rationale for and the design of the schemes than the outcomes. In particular we note that the strongest claim Frontier makes about Ofgem's implementation is that no one has objected to it. It remains noteworthy that the issue Ofgem was trying to address was a 'capitalisation bias' – that is the way that expenditure is categorized not the choice of solution chosen by the network.

As KPMG report noted:

> *There are broader cultural and decision-making aspects that affect capex bias, including shareholder preference for stable long-term returns through a regulated asset base. Indeed, Ofwat's analysis found that "although achieving financing efficiencies increases the likelihood of an opex bias for delivery outperformance, it is likely that the incentive to grow the RCV [regulated capital value] combined with the long run potential to achieve financing efficiencies is mitigating this. (Pp 115-116)*

We don't think that stakeholder consultation has really begun since we are unaware of any substantive model for proposed changes. All that appears to be available are the very brief suggestion in the Paper and the possibility of 'totex' rather than opex benchmarking which is alluded to.

Conclusion

Energy Consumers Australia believes that significant improvement is possible in the application of economic regulation to electricity networks. We are particularly committed to regulatory innovation, such as the New Reg project, that put consumer preferences and priorities at the centre of the regulatory decision-making process.

In our presentation to the AEMC workshop some alternatives to improving the performance of incentive regulation were identified. The purpose of this was not to advocate for any of them, but simply to indicate that the discussion of the economic regulatory framework needs to be much broader than simply about the method of framing expenditure forecasts or incorporating expenditure into the roll forward model.

We believe that the consideration of reform to the technical elements of the framework necessitates the development of a formal analytic framework of economic regulation. We have commenced this work and intend to deliver it in July 2019.

If you have any inquiries on this submission or an our work program please contact David Havyatt, Senior Economist on 02 9220 5508 or david.havyatt@energyconsumersaustralia.com.au.

Yours sincerely,

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