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Submissions
Electricity Authority
PO Box 10041
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Dear Sir/Madam

Re: Transmission pricing methodology: sunk costs

This is Powerco Limited's submission on the Electricity Authority's consultation paper *Transmission pricing methodology: Sunk costs*. We appreciate the opportunity to comment on this paper.

With respect to transmission pricing, the discussion about whether particular costs are genuinely sunk (and therefore also fixed), or merely fixed and not sunk seems rather sterile, given the following statement in paragraph 1.10 of the consultation paper:

> "The debate in the economics literature is about how best to recover fixed costs (and sunk costs are fixed costs), and not whether a distinction is required between sunk and other costs for efficient pricing."

We agree with this statement and also with the following statement from paragraph 1.7:

> "Static efficiency requires the price for the marginal unit to equate the willingness to pay of the marginal consumer with the marginal cost of producing the marginal unit."

In brief, for static efficiency to be achieved the marginal price should equal the marginal cost of supplying the good or service and the fixed costs should be recovered via charges that distort consumption behaviour as little as possible. Dynamic efficiency, on the other hand, is promoted when charges correctly reflect the long run marginal cost (LRMC) of new investment.

There is always an element of tension between the achievement of static and dynamic efficiency (albeit that dynamic efficiency is generally considered to be the more important of the two). The problem with the Authority's proposed SPD-based charge is that it does not appear to comply with any of these efficiency objectives. The short run marginal cost of providing transmission services is close to zero and does not vary to any significant extent from one half hourly period to the next. However, the SPD-based charge would set prices for the marginal units of transmission service that would vary very considerable between half hourly periods and would only ever correctly reflect the marginal cost of providing the service by chance.

We agree with the Authority that transmission charges in total must recover the full economic cost of providing the service and infra-marginal charges can exceed marginal costs and still be efficient. However, to promote static efficiency, the charges that

recover the fixed costs of providing the service should aim to modify consumption behaviour as little as possible. The ideal charge would either be fixed and unavoidable or be consistent with so-called "Ramsey pricing", such that charges are set in inverse proportion to the consumer's price elasticity of demand. Some airline charges aim to do this by charging higher prices to those customers that are least able to alter their time of travel. However, the SPD-based charge seems to be a long way from satisfying these criteria – it would be highly variable and unpredictable, and so would promote changes in consumption behaviour from half hour to half hour rather than disincentivising such behaviour, and it does not pretend to give effect to the Ramsey pricing concept by charging different prices to customers with different demand characteristics.

Finally, the SPD-based charge does not aim to or actually reflect the LRMC of new investment, so the price signal it provides would not promote dynamic efficiency.

It appears that the Authority has identified a relatively innocuous looseness of expression by some submitters, who consider that most of Transpower's fixed costs are sunk with respect to the provision of the transmission service and have therefore referred to those costs as sunk, when they should have described them more correctly as either fixed or fixed and sunk. We have noted above that we agree with the Authority that the economic characteristic of these costs that is relevant to transmission pricing is that they are fixed and that lengthy discussion of the distinction between sunk and fixed costs is therefore nugatory with respect to the TPM reform proposal.

Nevertheless, we think it is worth commenting on the claim in the consultation paper that the capital employed in the transmission grid is not sunk because the Crown could sell Transpower. We think this is a little disingenuous, because it is the physical assets that comprise the grid that are largely sunk, insofar as they would have limited value in any alternative use. Some of the assets could be removed and sold second hand, and many would have a small scrap value, but we think the Authority's quotation from Stafanadis that "the amount recovered when a railway corridor is abandoned is very low compared with the amount that would be required to reassemble the corridor" is also true for the transmission grid, which means that the grid assets are mostly sunk with respect to delivering the transmission service and have a relatively small opportunity cost to society relative to their value in providing the transmission service.

Conclusion

Although we agree with most of the technical points made in the Authority's sunk cost working paper, in particular that it is the fixed nature of most grid costs that is important to the design of transmission charges not whether or not those fixed costs are sunk, it is not clear how the discussion in the paper advances the development of the Authority's transmission pricing methodology proposal. In order to do this, the Authority will need to demonstrate to what degree the SPD-based charge will:

- set marginal prices that approximate the marginal cost of providing transmission services;
- recover fixed costs in a way that distorts consumption decisions as little as possible;
- reflect the long run marginal cost of new grid investment.

To help it with this analysis, the Authority might wish to refer to principles (a), (b) and (d) of the pricing principles that it has adopted for assessing the efficiency of electricity distribution pricing, viz.:

> "(a) Prices are to signal the economic costs of service by (i) being subsidy free; (ii) having regard to the extent practicable the level of available capacity; and (iii) signalling to the extent practicable, the impact of additional usage on future investment costs.

"(b) Where prices based on 'efficient' incremental costs would under-recover allowed revenues, the shortfall should be made up by setting prices in a manner that has regard to consumers' demand responsiveness.

"(d) Development of prices should be transparent, promote price stability and certainty for stakeholders, and changes to prices should have regard to the impact on stakeholders."

Yours sincerely

Richard Fletcher
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