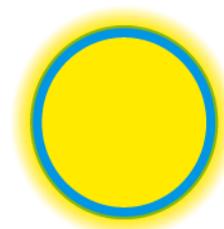


28 October 2014

Submissions
Electricity Authority
PO Box 10041
WELLINGTON 6143



Dear Sir/Madam

Re: Transmission Pricing Methodology Review: Problem definition relating to interconnection and HVDC assets

This is Powerco Limited's submission on the Electricity Authority's working paper *Transmission Pricing Methodology: Problem definition relating to interconnection and HVDC assets*. Thank you for the opportunity to submit on this paper

We have seen and contributed to the submission made by the Electricity Networks Association (ENA) and agree with that submission. The comments in this submission should be read as additional to or complementary to the ENA submission. We have reviewed the consultation questions, but have decided not to respond to them directly because, in many cases, we feel they are poorly drafted and leading in nature.

The essence of the working paper's argument that a problem exists with the current transmission pricing methodology (TPM) appears to be:

- the current TPM produces cross-subsidies and, consequently, inefficient price signals;
- the current TPM is not durable;
- the current TPM promotes inefficient grid investment decisions.

These claims are discussed below.

Cross subsidies and inefficient price signals

The working paper suggests that the current TPM results in cross subsidies and makes the bold claim that "the interconnection charge only applies to load, which means the cost of supplying interconnection services to generators is fully cross-subsidised by load¹".

In economics, a cross subsidy only exists if the charge for a good or service is below the incremental cost of providing it or above its standalone cost². Connection charges are allocated to generators (and other connected parties) to reflect the actual costs of connecting them to the interconnected grid and the injection overhead charge ensures

¹ Working paper, para. 8.5, p.39.

² Faulhaber, G.R. and Levinson, S. (1981) "Subsidy free prices and anonymous equity", *American Economic Review* 71 (5) December pp.1,083-91.

that generators bear a share of Transpower's overheads. Hence, generators are subject to at least the incremental cost for connecting them to the grid, so their charges do not represent a cross-subsidy.

The original reasons for allocating the interconnection charge to load only were:

- the economic incidence of the interconnection charge would always fall mainly on load regardless of whether or not generators were charged, because a charge on generators would affect their offer behaviour in the wholesale market and, given the low price elasticity of demand for electricity, this would result in most of the cost being borne by load as part of the variable energy charge, which would distort the energy charge to some degree and obscure any peak demand pricing signals in the transmission charge;
- although "mass market" offtake customers see a "rolled up" energy, distribution and transmission charge, many larger commercial and industrial loads see these charges separately, and the best way to ensure that the transmission charge remains distinct and does not "infect" the energy charge is to charge load directly.

There is also no evidence that any transmission customers are being charged more than the standalone cost of providing them with the transmission service. If they were, this situation could be dealt with by the prudent discount policy and, as the working paper notes, prudent discount applications are rare.

Hence, on the face of it, the current TPM does not appear to produce cross-subsidies and, therefore, inefficient price signals.

Durability of the TPM

We agree with the working paper that durability of the TPM is a very important consideration and we further agree that the impacts of poor durability can be far reaching and negatively affect investment decisions and dynamic efficiency. A good way of measuring durability is, first, the incidence of disputes about the application of the methodology and, second, the degree to which there is lobbying for change.

In the working paper the Authority seems to urge the industry to see the interconnection charge as controversial and dispute its application but, in reality, the interconnection charge is well understood and non-controversial, as evidenced by the fact that there have been very few disputes about it in recent years. This is partly due to the very clear definitions in the current TPM. Although there is a clear financial incentive for customers to prefer assets to be classified as interconnection rather than connection, with the current TPM it is almost always clear which category they fall into.

By contrast, an allocation method that would be controversial, and therefore unlikely to be durable, is the Authority's proposed SPD method. Because the solution of "but for asset A" plus "but for asset B" plus "but for asset C" would not necessarily equal the solution of "but for A+B+C" we would expect to see many disputes about the definitions of assets and their treatment by the SPD method, if it were ever implemented. The scope for disputes would also be increased when a \$2million+ asset that forms part of a group of assets that work together, and were commissioned before 28 May 2004, was replaced or upgraded, as it is not clear whether such an investment would change the status of the whole group of assets to SPD method assets or only the replaced or upgraded asset would become an SPD method asset. Past experience has shown that it is these sorts of definitional ambiguities that can easily cause the number of charging disputes to explode and bring the durability of a pricing methodology into question.

The working paper notes that costs that are relevant to quantifying the durability problem include:

- the cost of an ongoing TPM review or more regular reviews;
- dynamic efficiency effects, as uncertainty as to the future TPM has a detrimental impact on investment³.

We find it rather ironic that the Electricity Authority has identified these costs as part of the durability problem, as it is the Authority itself that is creating the cost of an ongoing TPM review and creating uncertainty about the future form of the TPM, which may have a detrimental effect on investment. The Authority could easily resolve these problems by bringing its ongoing review of the TPM to a close.

We also found it surprising that the Authority should cite Transpower's request for the Authority to approve the classification of NAaN assets that would ultimately be interconnection assets as interconnection assets (rather than connection assets) when they were initially commissioned in stages as evidence that the TPM was not durable. In our view, this application by Transpower was simply an attempt to facilitate the optimal commissioning of these assets and could not in any sense be viewed as evidence of a problem relevant to the TPM's durability. All industry participants knew what the ultimate status of the assets would be, so there was no controversy with respect to the TPM. The only controversy followed the Authority's decision, as most industry participants viewed it as unreasonably narrowly focused and not consistent with promoting the overall efficiency of the electricity industry for the long-term benefit of electricity consumers.

Further, we do not agree that the possible need to modify the "n" value used for the Upper North Island RCPD or the need to review the use of HAMI as the allocator for the HVDC charge indicates that the current TPM is not durable. We would instead classify these sorts of changes as simply refinements to a basically sound methodology which has stood the test of time. It was anticipated at the time the current methodology was introduced in 2008 that the "n" values would need to be reviewed once the major grid upgrades had been completed. Transpower is also currently considering the future use of HAMI as part of its operational review of the TPM. In our view, this is the sort of practical incremental review that is appropriate, as opposed to a revolutionary change.

As we have noted before, the only part of the current TPM that is genuinely controversial is the HVDC charge. The reasons for this are well known and we will not repeat them here. Consequently, we would recommend that the Authority limit any future work on its current TPM review to reviewing and possibly reforming the HVDC charge.

Promotion of inefficient grid investment decisions

Grid investment decisions are approved by the Commerce Commission based on a form of national net benefit test. The Authority provides some anecdotal observations to support its view that some investment decisions could have been better made or subsequently reviewed, but does not provide any concrete evidence (including in relation to the Kawerau example) that any of the Commission's decisions were wrong.

The working paper also states that "the Authority considers that certain transmission customers have specialist knowledge"...and "when those customers are faced with the cost of Transpower investments, as long as their share of the costs are (sic) sufficiently material, it is expected that those transmission customers would provide comprehensive scrutiny on (sic) those investments⁴".

³ Working paper, para. 10.21, p.62.

⁴ Working paper, para. 9.8, p.45.

No mention is made of who these “certain transmission customers” are, but for most commercial and industrial customers, electricity represents less than 10 per cent of their total costs and transmission is less than 10 per cent of the electricity cost, so the incentive being referred to relates to an adjustment to a cost allocation that comprises less than 1 per cent of a business’s total costs. In our view an adjustment of this magnitude is unlikely to be sufficient to incentivise any significant change in behaviour. Our view is supported by the 2009 NERA report⁵ to the New Zealand Electricity Industry Steering Group (known informally as “the CEOs’ Group”) which concluded that the practical impact of further adjustments to the allocation of transmission revenue would usually be negligible.

We were also surprised at the Authority’s assertion that “it is the price for transmission services that determines parties’ demand for transmission services, which in turn determines the transmission investment required⁶.” In reality, transmission is always consumed together with electrical energy as a joint good, and the price of that joint good is always dominated by the price of the energy. Hence, to the extent that the demand for transmission services is driven by price (as opposed to income) it is the price of energy that principally determines the amount of transmission consumed, not the price of transmission alone.

In summary, the Authority’s working paper has provided no concrete evidence that any of the Commerce Commission’s grid investment decisions were wrong, or that changing the way that transmission revenue is allocated would improve the efficiency of grid investment decisions or even materially alter the consumption of transmission services.

Conclusion

In our view the Authority’s working paper has not established that there is any problem with the current TPM that could not be addressed by incremental refinements of the sort being considered by Transpower’s operational review, other than, possibly, in relation to the HVDC charge. Consequently, we recommend that the Authority limit any further work on its TPM review to examining the HVDC charge.

Yours sincerely



Ross Weenink
Chief Regulatory Adviser

⁵ NERA, *New Zealand Transmission Pricing Project: A Report for the New Zealand Electricity Industry Steering Group*, 28 August 2009.

⁶ Working paper, para. 8.6(a), p.40.