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Carl Hansen
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By email: submissions@ea.govt.nz

Dear Carl

Submission on Transmission Pricing Methodology sunk cost working paper

Genesis Energy Limited welcomes the opportunity to provide a submission to the Electricity Authority ("the Authority") on the working paper "Transmission pricing methodology: Sunk Cost" dated 8 October 2013.

We appreciate the Authority attempting to set out the underlying economic theories that explain how transmission assets can best be characterised. While going some way to achieving its goal, we do not, however, consider that the paper addresses the fundamental concerns raised in submissions to the October 2012 TPM proposal and at the TPM conference about the likely efficiency impacts of changes in the TPM. In particular:

- The paper does not acknowledge the importance of the Commerce Commission's ("the Commission's") regulatory framework when considering the nature of transmission assets. It risks generating confusion and inconsistency between the Commission's application of the Investment Test in the input methodology for Transpower's major capital expenditure, how Transpower's total revenues are determined, and how transmission costs are ultimately recovered via the Authority's TPM.

- The paper should consider how transmission pricing might deliver different benefits over the different stages of an asset's life. For example,

the scope for achieving dynamic efficiency gains must be strongest at the investment proposal stage, before Transpower has incurred any fixed costs.

The overall conclusion that we draw is that the Authority needs to clearly establish the nature of the benefits that it expects to realise from any change to the TPM. This will enable the Authority to properly identify a methodology that is likely to produce the desired result, and to evaluate whether those efficiency gains outweigh any potential efficiency losses that are likely to arise. Together with several other generator/retailers, we engaged Castalia to help provide clarity on the possible efficiency impacts of a change in TPM[1]. We discuss these issues in more detail below.

The working paper is distanced from the main debate of the proposed TPM

We agree that the terminology around fixed and sunk costs in the TPM debate has, to date, been relatively loose. We also agree that it is helpful to set out how economic theory differentiates between these types of assets. However, we do not consider that the working paper takes the debate any further than the discussion in the TPM conference.

Our concern is that the paper does not address the fundamental issues raised by submitters at the TPM conference as well as in their submissions. The issue is the degree to which dynamic and static efficiency effects arise from allocating the costs of Transpower's assets. The nature of these assets is a factor that will influence efficiency. But it is only relevant when considered in the context of the overall regulatory framework applied to Transpower. The stage in an asset's life-cycle will also be relevant for efficiency.

Regulatory Framework

The Commission, in its application of the Investment Test, is responsible for approving major transmission investments by Transpower. The allocation of the cost of these investments – once approved – is determined by the Authority under the TPM.

These two processes are both exercised for the "long-term benefit of consumers". But the working paper highlights the importance of ensuring that the processes, although separate, are aligned. The Authority and the Commission also recognise this in principle in their Memorandum of Understanding, which requires (amongst other things) that the regulators will:

1 Castalia's paper is available at: http://www.castalia-advisors.com/news_at_castalia.php&news_id=223

> "a. [w]ork together to coordinate activities to avoid potential overlaps or duplication of effort between the parties, and to maximise efficiency and effectiveness…
>
> f. seek to minimise any scope for uncertainties regarding jurisdictional issues."

To achieve these outcomes, the definition of a "sunk" or "fixed" asset for the purposes of the TPM should be consistent with how those assets are treated under the Investment Test. We consider that the working paper misses this key regulatory context.

Further, given the Authority's undertaking to avoid duplication, we consider that the Authority needs to better understand the degree to which any dynamic efficiency benefits are factored into decisions made under the Investment Test. That is not to say that the Investment Test process cannot be improved – rather that the Authority must recognise that generating dynamic efficiency benefits under the TPM requires some inherent failure in the Investment Test (which has not yet been shown).

The final relevant piece of regulatory context is that all of Transpower's approved asset costs are recoverable through revenues. This is material because it means that the costs associated with any potential under-utilisation of existing assets will be faced entirely by participants (that is, Transpower faces no asset stranding risk). It is unclear whether the TPM could modify this position—but any changes in this assumption will clearly have a direct impact on the Commission's future consideration of asset approvals and allowable revenue recovery.

The nature of the benefits depends upon the asset life-cycle

We agree with the general proposition that dynamic efficiency benefits can be generated by changing how the costs of the assets are allocated by the TPM. However, we suggest that dynamic efficiency benefits are *less likely* to be realised from assets that have been commissioned (or constructed), and that any such benefits are likely to be outweighed by the losses in static efficiency.

Figure 1, below, illustrates the types of efficiency benefits that we expect to arise at different stages in an assets life. For the purposes of this diagram, we have identified three "stages" – future or proposed transmission investment, approved transmission investments, and existing (commissioned) transmission assets. For different stages of an assets life where dynamic efficiency effects or static efficiency dominate, these are shown in red or blue respectively.

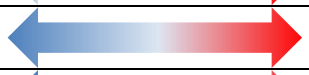
Future or proposed transmission investment	Static Efficiency		Dynamic Efficiency
Approved transmission investments	Static Efficiency		Dynamic Efficiency
Existing (commissioned) transmission assets	Static Efficiency		Dynamic Efficiency

Figure 1: Asset commission stages and potential efficiency benefits

All efficiency benefits will depend on changing the behaviours, or choices, made by Transpower and grid users:

- Dynamic efficiency benefits result from better decisions being made on future or proposed transmission investments, which we consider are much more likely to be realised at the approval stage of a transmission asset's life (the top row of Figure 1). Once approved, it will be more difficult to obtain dynamic efficiency benefits from pricing that asset in a different way. For example, it is not possible to incentivise greater participation in the approval process for a transmission asset after that asset has been built.

- There are, however, still some opportunities to improve dynamic efficiency even after a transmission project has been approved (the middle row of Figure 1), as long as the asset has not yet been built. For example, Transpower can decide not to implement the project if it turns out not to be needed, or can change the design of the project to respond to new information.

- Changing user behaviour on the utilisation of existing assets (the bottom row of Figure 1) may have some benefits in that Transpower could, for example, reduce maintenance requirements on the asset. However, these relatively minor benefits are static efficiency effects (productive efficiency gains), and will likely not outweigh the other static efficiency costs of under-utilising the existing asset (allocative efficiency losses).

Overall, we consider that dynamic efficiency benefits will be much easier to realise for future or proposed assets. A participant with knowledge that the cost (or a portion) of the cost of an asset will be determined on a beneficiary pays basis has a clear incentive to engage in the approval process. Care will still need to be taken to ensure that the incentive is sufficient to encourage participation in the approval process, while avoiding incentives for inefficient generation decisions or unnecessary costs for consumers.

Paper should set out the nature of efficiency costs and benefits from change

Castalia advice on economic efficiency impacts

We consider it is important to establish the nature of the benefits that the Authority is seeking to realise from the TPM. In particular, the Authority needs to identify, describe, and (where possible) quantify the costs and benefits that may arise from applying a "beneficiary pays" approach. In this regard, we (together with Contact Energy, Mighty River Power, and Trustpower) have asked Castalia Strategic Advisors ("Castalia") to identify the potential economic efficiency impacts that may arise from such a change.

The Castalia advice is provided separately to the Authority[2]. The advice confirms that:

- The benefits of a variable beneficiary pay's charge are likely to be limited. The current Investment Test process already considers the long-term costs and benefits of transmission investment proposals. While there may be some benefits in identifying and incentivising direct beneficiaries to participate more fully in the approval process, these benefits need to linked to some clear failure in the Investment Test to be credible.

- A variable beneficiary's pays transmission charge is likely to introduce inefficiency into the current market structure due to the effect that such a variable charge may have on participants' decisions to generate, or to use power, from the transmission network. This is because the parties identified as beneficiaries will be charged more, and may therefore choose to reduce their use of the grid rather than pay higher transmission prices.

Need to clearly identify and quantify costs and benefits

We are of the view that an ideal TPM should achieve both static and dynamic efficiency benefits when compared with the current TPM. However, these benefits will not attach equally to all stages of an asset's life. The TPM must be sufficiently flexible to avoid creating net-efficiency losses for particular assets, while also generating efficiency gains overall.

We consider that a beneficiary pays approach can be part of the solution. The current HVDC charge is an example of a beneficiary pays type approach that, despite its design faults, has some good features. For example, the recovery of HVDC costs has been achieved with only small changes in behaviour (an

[2] http://www.castalia-advisors.com/news_at_castalia.php&news_id=223

example of the type of "infra-marginal" pricing that the Authority refers to in the working paper). However, to successfully implement an improved beneficiary pays model, we suggest the Authority needs to focus on:

- ensuring that costs and benefits are clearly quantified, in particular, that the costs are examined on an asset stage basis to establish where benefits can be maximised (or even achieved) via a beneficiary pays approach;
- avoid static efficiency losses for existing transmission assets; and
- minimise volatility. It is critical that any variable charge is proportional to the behaviour change that is being sought. This depends upon assessing what level of volatilityis necessary,,both in terms of amount and frequency, to drive the desired dynamic efficiency benefits. Excessive volatility will not only introduce inefficiency into participant's behaviours, but will also be reflected in higher pass-through costs to consumers.

We suggest that this focus needs to be reflected in the options that the Authority puts forward as part of the "beneficiary pays" working paper, and how those options are evaluated.

If you would like to discuss any of these matters further, please contact me on 04 495 3348.

Yours sincerely

Jeremy Stevenson-Wright
Regulatory Affairs Manager