11 Chews Lane
PO Box 10568
The Terrace
Wellington 6143
New Zealand

Genesis Energy Limited

Fax: 04 495 6363

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Carl Hansen
Electricity Authority
2 Hunter Street
WELLINGTON

By email: submissions@ea.govt.nz

Dear Carl

Transmission Pricing Methodology: Beneficiaries-pays options

Genesis Energy Limited welcomes the opportunity to provide a submission to the Electricity Authority ("the Authority") on the working paper "Transmission Pricing Methodology Review: Beneficiaries-pay options" ("the working paper") dated 21 January 2014.

Executive summary

We are encouraged to see that the Authority has responded positively to some of the significant concerns raised by Genesis Energy, and other submitters, with the October 2012 "Transmission Pricing Methodology: Issues and Proposal" consultation paper. In particular, we are pleased to see the working paper considers options that seek to address volatility in future transmission pricing, and remove unnecessary complication.

However, despite these positive steps, we are disappointed that the working paper does not progress the industry's discussion of beneficiaries-pay options. This is because the working paper:

- fails to quantify the price signal required to entice the supposed benefits from a beneficiaries-pay approach;

- shows no indication of any learning's from the submissions made on the cost benefit analysis working paper. In particular, the working paper does not use a consistent set of criteria to robustly evaluate beneficiaries-pay options; and

- is only focused on one type of beneficiaries-pay methodology (namely SPD based). Our own research identifies a broader range of beneficiaries-pay options that warrant analysis and industry debate.

Genesis Energy has commissioned Castalia Strategy Advisors ("Castalia") to identify a broader range of beneficiaries-pay options and to evaluate these options against consistent efficiency criteria ("the Castalia report"). Their report is attached as Appendix A to this submission.

The Castalia report identifies a range of existing beneficiaries-pay models that have been developed internationally since the Authority's October 2012 TPM Issues Paper. Not all of these options are valid in a New Zealand context. However, it is worth emphasising that none of these comparisons seek to use SPD as the basis for allocating transmission costs. The Authority's approach remains unique.

Four options are evaluated in the Castalia report (including the Simplified SPD and the Zonal option). The Castalia report does not identify any significant efficiency gains from *any* of the beneficiaries-pay options – including the international models. However, Castalia identifies an approach that avoids the potential market distortion impacts of the SPD-based approaches, whilst improving efficiency incentives for transmission investment. At the very least, we consider that this "Area of Benefit" option warrants further consideration by the Authority and industry.

In our view, the impact of the proposed TPM on consumers is an important issue that the Authority needs to carefully assess in terms of its impact on durability and implementation. It is essential that the second issues paper presents clear information on the relative changes in transmission charges that different regions may expect. In this regard, we note that the Authority's modelling of the four SPD beneficiaries-pay options highlights the potential for transmission charges to increase significantly in some regions. Without any additional information or analysis, this presents a worrying picture for consumers in these areas.

We do not agree with the Authority's preliminary view that retailers, rather than distributors, should be subject to the simplified SPD charge (alongside generators and direct consumers). There is no compelling evidence in the working paper of any tangible benefit to this approach. In fact, we suggest that any decision to make retailers subject to the beneficiaries-pay charge will have significant costs as it:

- will reduce the transparency of retail charges to the end-consumer;
- will create a barrier to entry for new retailers; and
- adds unnecessary complexity, and associated cost, to an already complex proposed TPM.

Finally, we are very concerned with the process that the Authority continues to take for the TPM review. Although the release of working papers on key topics is an improvement, there has been little or no visibility of how the Authority has considered any of the suggestions provided by submitters on the working papers. This lack of transparency falls well short of meeting the expectations outlined in the Authority's own consultation charter. This, coupled with the working paper's focus on SPD-based beneficiaries-pay options, suggests that the Authority has not been sufficiently open minded during its' working paper process. To help address these issues, we strongly encourage the Authority to release a "response to submissions" for each working paper, prior to the release of the second issues paper. This will assist with reassuring submitters that their views have been considered by the Authority in its decision-making.

Concerns with Authority's approach to working paper

Genesis Energy welcomes the Authority's decision to release a working paper further exploring the beneficiaries-pay component of the proposed TPM. We appreciate the work the Authority has undertaken to develop a Simplified SPD option that addresses submitters' substantial concerns with the volatility of the October 2012 proposed TPM. We also welcome the consideration of the "GIT plus SPD" and "SPD plus GIT" options, that make a direct link to the Commerce Commission's transmission investment process.

However, we are concerned that the Authority has not:

- carefully considered what degree (or accuracy) of signal is required to achieve the supposed benefits from a beneficiaries-pay approach;
- established a robust and consistent set of evaluation criteria for the proposed TPM; and
- explored a full range of beneficiaries-pay options.

In our view, this has led to a policy development process that is below par, and not up to a world best practice standard. We expand on each of these concerns below.

<u>Quantifying the scale of beneficiaries-pay signal required</u>

A key benefit that the Authority hopes to realise from a beneficiaries-pay approach is improving transmission investment decisions. In theory, a beneficiaries-pay allocation should incentivise beneficiaries to better engage in transmission investment decisions. However, the working paper does not establish *how much* of a price signal is necessary for industry participants and consumers to better engage in the transmission investment process. This is a critical quantification for the Authority to understand and communicate to the wider sector.

We consider that the Authority needs to be realistic about what can be achieved through a beneficiaries-pay approach. First, we note that most of the current investment decisions have already been made, and a price signal may entice inefficient decisions around how these investments are used. We appreciate that the Authority has sought to address this issue through the sunk cost working paper, but as noted in our previous submission[1] on this paper, we:

- were concerned that the paper did not addressed the fundamental issues raised by submitters at the TPM conference, as well as in their submissions; and

- consider that dynamic efficiency benefits will be much easier to realise for future or proposed assets.

Secondly, the Authority must also take into account the ability of consumers to effectively engage with the Commerce Commission's process. Most consumers have limited resources and time available to engage in the Commerce Commissions investment process. These consumers rely on other parties, such as consumer groups, retailers or distributors, to comment on the specifics of an investment proposal. However, it is questionable how effective retailers or distributors can be in advocating for or against an investment, given the diverse drivers and interests amongst their customer base. Having a more accurate beneficiaries-pay signal set through a complex SPD will not change these dynamics.

[1] *Submission on Transmission Pricing Methodology sunk cost working paper*, Genesis Energy submission to the Electricity Authority, 19 November 2013.

A consistent set of evaluation criteria is needed

Genesis Energy has significant concerns with the criteria that the working paper uses to select the four beneficiaries-pay options included in the working paper.

The Authority has selected nine criteria for assessment, based on submissions received on the October 2012 TPM issues paper and the Authority's economic and decision-making framework paper.[2] The Authority discusses the qualitative impacts of each of the options against these criteria, then summarises its overall assessment of the four options, plus the October 2012 proposed TPM, in table five.[3]

There are a number of short-comings with this approach. As noted in our submission on the loss and constraint excess (LCE) working paper, [4] the criteria selected:

- have been tailored too specifically to this component of the proposed TPM; therefore appear to pre-determine an outcome;
- are unduly biased towards the criticism of October 2012 TPM proposal; and
- are therefore inconsistent with the criteria used for evaluating other aspects of the TPM.[5]

In addition, we note that the Zonal option is a more complete solution than the other three options presented in the working paper, as it also addresses what might occur with the residual charge. This makes a fair comparison across options difficult.[6]

We consider that this approach does not lead to a robust examination of the beneficiaries-pay options. It will not aid the Authority with its decisions around what changes are necessary for its revised TPM proposal, or how to make any trade-offs between the benefits and costs of the different components that make up the TPM proposal.

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[2] Paragraph 11.15 of the Authority's working paper.

[3] Page 100 – 102 of the Authority's working paper.

[4] *Use of LCE to offset transmission charges*, Genesis Energy submission to the Electricity Authority, 4 March 2014.

[5] We refer the Authority to the analysis we set out in Table 1 of our submission on the LCE working paper.

[6] At our meeting with Authority staff on 19 February 2014, the Authority stated that for the other options, it should be assumed the residual charge is applied in the most efficient way.

As identified by Castalia,[7] there are five different efficiency outcomes that the Authority must assess potential TPM options against. These are the degree that an option:

- provides efficient investment signals for load;
- provides efficient investment signals for generation;
- provides efficient signals for new transmission investment;
- enables efficient outcomes in the wholesale market; and
- enables efficient outcomes in the retail market.

As noted in previous submissions, a consistent approach will provide a more robust assessment framework that considers the impact of each component across all aspects of the electricity market. It also provides a clearer framework for quantifying benefits (where possible) and developing the cost benefit analysis of the revised TPM proposal (notably facilitating a bottom-up approach to assessing costs and benefits).

<u>Broader consideration of non-SPD "beneficiaries-pay" approaches</u>

It is also of significant concern that the Authority has not taken the opportunity presented to fully explore a more complete range of beneficiaries-pay options. It is our view that the failure to compare across a range of options has reduced the effectiveness of the working paper process, and limited the industry's engagement on what a beneficiaries-pay approach could look like.

The Authority's working paper only presents four options for consideration – a Simplified SPD, a SPD plus GIT option, a GIT plus SPD option, and a Zonal option. All of these options are essentially variants of the SPD approach proposed in the October 2012 issues paper. We note that in the October 2012 issues paper, the Authority did consider some non-SPD beneficiaries-pay options.[8] However, it is disappointing that given the high level of criticism and concern generated by the SPD method, that the Authority has not taken the opportunity to re-consider non-SPD options. We consider this an unreasonable level of analysis for such an important issue.

[7] *Review of the Electricity Authority's Cost Benefit Analysis of the Proposed Transmission Pricing Methodology*, Castalia Strategic Advisors report to Genesis Energy, 25 February 2013.

[8] Section 6.5 of the Authority's October 2012 issues paper.

A best practice approach to policy development by a "world-class regulator"[9] would see the regulator identify a broad range of feasible policy options that are directed at solving the problem, and minimise the risk of unintended consequences.[10,11] Having a broad range of options enables parties to debate the strengths and weaknesses of the varying and often contrasting approaches. This is the type of approach that the industry would have expected from the Authority,

It is particularly disappointing that the Authority is not abreast of international developments in beneficiaries-pay options since October 2012. The October 2012 issues paper refers to the Federal Energy Regulatory Commission (FERC) Order 1000 that "requires transmission costs to be allocated in a way that is roughly commensurate with benefits".[12] The Authority draws on this work to support its case for a beneficiaries-pay approach and its SPD approach. However, the working paper is silent on the progress that the United States' Regional Transmission Organizations (RTOs) are making with implementing this order. As discussed below, a number of RTOs have successfully implemented transmission pricing methodologies with a beneficiaries-pay aspect. In our view, developments in the United States will usefully inform the debate on the application of beneficiaries-pay approaches in New Zealand.

A range of different beneficiaries-pay options

Genesis Energy asked Castalia to examine and evaluate a broader range of beneficiaries-pay options than those considered by the working paper. Table 1 (below) usefully identifies the range of beneficiaries-pay approaches that can be used, based on whether they use revealed or forecast benefits, and whether they use an analysis of market interactions or physical power flows.

This table includes the Authority's SPD options, and some of the approaches taken by RTO's in the United States. As discussed above, it appears that the RTO's have made significant developments in implementing workable beneficiaries-pay options or methods into their transmission pricing. We also note that the key difference between these RTO approaches, and the working paper's SPD-based options, is that the market-based RTO approaches avoid using revealed pricing information in their beneficiaries-pay options. We suggest

[9] *Vision, values, mission*, Electricity Authority website, http://www.ea.govt.nz/about-us/what-we-do/vision-values-mission/

[10] Figure 1.1, *Review of the Transmission Pricing Methodology: CBA - Working Paper*, Castalia Strategic Advisors report to Genesis Energy, October 2013.

[11] Chapter 5, Part 2, Regulatory Impact Analysis (RIA) Handbook, The Treasury, 2 Aug 2013, http://www.treasury.govt.nz/publications/guidance/regulatory/impactanalysis.

[12] Paragraph 5.63 of the Authority's October 2012 issues paper.

that there is a clear reason for the RTO's preference for forecast benefits, rather than those revealed via SPD. A forecast approach avoids the significant risk of distorting participant behaviours in the energy market.

Table 1: Approaches to Identifying Beneficiaries and Estimating Benefits[13]

	Revealed	**Forecast**
Market analysis	Observed benefits received • Simplified SPD • Zonal SPD	Expected benefits • GIT-charge in GIT-plus-SPD option • MISO • NYISO
Physical flow analysis	Actual power flows • PJM	Expected power flows • MISO's earlier process for reliability investments

Including this international context, Castalia has assessed four beneficiaries-pay options:

- the Authority's Simplified SPD and Zonal SPD options;
- an Area of Benefit option. This option models market interactions to forecast the expected benefits from transmission assets, and covers both reliability and economic investments. It is based on the approach used by the Midcontinent Independent System Operator (MISO); and
- a Vote and Pay option. This option identifies beneficiaries through modelling economic benefits from the proposed investment, and assigns the beneficiaries voting rights. This type of approach is used by the New York Independent System Operator (NYISO).

We suggest that these options provide a good representation of contrasting beneficiaries-pay approaches. Castalia's analysis of these options, against the five efficiency criteria, is shown below in Table 2.

[13] Table 2.1 of Castalia's report.

Table 2: Summary of Efficiency Impacts

Efficient operational & investment signals	Simplified SPD	Zonal SPD	Area of Benefit	Vote and Pay
For loads	🟠	🟠	🟠	🔴
For generation	🟠	🟠	🟠	🔴
For new transmission investment	🟠	🟠	🟢	🟢
In wholesale market	🔴	🔴	🟠	🟠
In retail market	🟠	🟠	🟠	🟠

Key

🟢	Improves efficiency
🟠	No material impact on efficiency
🔴	Reduces efficiency

There are four key conclusions from Castalia's analysis that we consider particularly useful for the Authority:

- none of the beneficiaries-pay options considered provide overwhelming efficiency gains. As Castalia concludes "this result is not surprising given the relatively limited impact that transmission prices can have on market participants' future decisions";[14]
- the SPD-based options will reduce efficiency of the wholesale market. This is because these options will create new incentives for generator and load behaviour;

[14] Page 22, section 5 of Castalia's report.

- the RTO-based beneficiaries-pay options both potentially improve the efficiency of transmission investment decisions. Both of these options are directly linked to the investment approval process; and

- the Area of Benefit option is preferable as it is likely to deliver net benefits (all other options are likely to result in net reductions in efficiency). It has no material impact on load or generation decisions, nor will it impact on the wholesale or retail markets. This is because beneficiaries are identified via a forward-looking economic model, rather than historical energy prices.

Genesis Energy considers that the Area of Benefit option warrants further investigation and consideration by the Authority. There are a number of unanswered questions with the Area of Benefit option that will need resolving. For example, how to "re-run" allocation of transmission charges so the model responds to changes in market dynamics over time. However, an advantage is that the Area of Benefit option has already been developed by MISO in the United States. It should be relatively easy to adapt their approach to meet the Authority's requirements.

Consumer impact of the beneficiaries-pay options

The Authority's working paper[15] provides heat maps that illustrate the regional incidence of the beneficiaries-pay charge, based on the four options. While we appreciate that this is not a complete picture of the total transmission charges to consumers,[16] it does highlight the potential for transmission charges to increase significantly in some regions. For example, under the GIT plus SPD option, North Auckland and Northland would face significantly higher charges than load in other areas.[17]

We encourage the Authority to carefully consider the impact on consumers, when developing and evaluating its revised TPM proposal. While we appreciate that the Authority does not have the mandate to expressly consider social impacts, we consider that the consumer impacts of the revised TPM proposal is an issue of both implementation and durability.

[15] And the Authority's presentation on the TPM beneficiaries-pay options working paper on 29 January 2014.

[16] We understand that the Authority has received requests to provide updated data on the impact of the proposed TPM on consumers, by distribution region.

[17] Figure 21 and paragraph 8.26 of the Authority's working paper.

Do not support making retailers subject to the beneficiaries-pays charge

Genesis Energy does not support the Authority's preliminary view that retailers, rather than distributors, should be subject to the Simplified SPD charge. We disagree that "there are likely to be greater net benefits....due to [retailers'] greater familiarity with the wholesale market, and greater incentives [on retailers] to scrutinise transmission costs".[18] In addition, we consider that placing the transmission charge on retailers will:

- negatively affect the transparency of retail charges to the end-consumer;
- create a barrier to entry for new retailers; and
- add a layer of unnecessary complexity, and associated cost.

The overarching purpose of the TPM is cost-recovery, and it is therefore important that the Authority determine the most efficient, and non-distorting, method of achieving this.

<u>Incentives for retailers to scrutinise transmission charges</u>

We do not support the view taken by the Authority that one of the key reasons for proposing retailers be subject to the transmission charges from the Simplified SPD approach is that retailers may have greater incentives to scrutinise the charges. The Authority has provided no evidence or industry-based examples to back up this assumption, only an unrelated analogy to an experience in the airlines industry.[19]

Furthermore, we do not expect that retailers will be able to undertake any measures to reduce or potentially avoid the transmission charges allocated to their customer base.[20] In fact, any avoidance of transmission charges would be harmful to the use of transmission assets that have been already built.

We also fail to see how a retailer's understanding of the wholesale market is an advantage, unless the Authority is anticipating wholesale market impacts from the TPM. Our understanding of the working paper is that the options are seeking to reduce volatility, and therefore remove the incentive to manage the cost via wholesale market tools.

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[18] Paragraph 7.126 of the working paper.

[19] Paragraph 7.124(b) of the working paper.

[20] As opposed to generators, who could engage in gaming to reduce their share of transmission charges.

We agree that distributors are "better placed to provide input on consumers' behalf."[21] The core role of distributors is to manage the delivery of energy to customers. This is the basic service that retailers purchase off distributors, on behalf of their customers, and incorporates the provision and cost of transmission services. Distributors, therefore, should have better visibility of the technical strains and requirements of the physical network in their region.

<u>Reduces the transparency of retail charges to the end-consumer</u>

The breakdown of electricity retail tariffs is an issue that has received considerable recent media scrutiny and is the subject of current political debate.[22] In our view, making retailers directly subject to the transmission charge will reduce the impact of any transparency improvements in the way that tariffs are communicated to the end-consumers.

An industry consensus is developing on the merits of improving transparency of electricity tariffs. For example, work is continuing on the Authority's retail data project and the Retail Advisory Group's (RAG) work on the disclosure of the components of consumers' electricity bills. Many distribution companies, including Vector, are also already unbundling their transmission charges from their distribution charges.[23]

Combining the regulated recovery of Transpower's revenue with the market-determined wholesale and retail margins will reduce the effectiveness of these cost transparency initiatives. Put simply, it makes more sense to group the regulated prices (distribution and transmission) and the market-based prices (wholesale and retail) separately. Allowing, or requiring, one regulated price to remain simply promulgates any problem with the existing transparency of prices.

<u>Creates a barrier to entry for new retailers</u>

Making retailers directly subject to the beneficiaries-pay charge, via the Simplified SPD, is likely to introduce potentially significant obligations, expertise requirements and costs to existing (and new) retailers. [24] In our view, this has the

[21] Paragraph 7.122(d) of the Authority's working paper.

[22] For example, *Shearer: Electricity market is 'broken'*, 3 News, Friday 7 March 2014, http://www.3news.co.nz/Shearer-Electricity-market-is-broken/tabid/1607/articleID/334912/Default.aspx

[23] We estimate that approximately half of the distribution companies are making this change.

[24] *Transmission Pricing Methodology: Issues and Proposal*, Genesis Energy submission to the Electricity Authority, 1 March 2013.

potential to significantly impact on new retailers, in particular. This is because it will:

- require a high technical understanding of how the SPD works, to understand how transmission charges are allocated to retailers. There is a risk of information asymmetry between large and small players;
- require additional systems in place to process these separate transmission charges. This will come at an additional cost;
- require each retailer to sign a benchmark agreement with Transpower, as retailers will now be considered transmission customers; and
- increases unnecessary complexity and cost.

As noted above and in our previous submission,[25] making retailers subject to the beneficiaries-pay charge will require the Authority to amend the definition of "designated transmission customers" and will require Transpower to sign a benchmark type agreement with all retailers. We consider that this increases the complexity of the proposed TPM, will require considerable time to develop, will require Transpower's systems to now interface with retailers' reconciliation systems, and will therefore be costly to implement. Transpower raised similar concerns in its March 2013 submission,[26] and provided detailed information about how this would provide considerable implementation issues.

We consider that this additional complexity and cost provides little or no benefit. This view is reaffirmed by Castalia's report that notes that:

> "we continue to see no observable efficiency gains from charging retailers directly for transmission instead of distributors. Indeed, much of the need for transmission charges that respond to changing market circumstances disappears, if distributors are charged for transmission. Distributors are an essential part of the physical supply chain, and therefore have a degree of permanence that retailers can never achieve".[27]

Given all of these reasons discussed above, the beneficiaries-pay charge is best left with distributers. Furthermore, we suggest that the working paper also comment on how any beneficiaries-pay charge should be allocated. As a start, we

[25] *Transmission Pricing Methodology: Issues and Proposal*, Genesis Energy submission to the Electricity Authority, 1 March 2013.

[26] *Transmission Pricing Methodology: Issues and Proposals Consultation*, Transpower submission to the Electricity Authority, 1 March 2013.

[27] Page 20 of Castalia's report.

suggest the establishment of a rate that limits the distortion of the market and maintains competitive neutrality in the retail market, for example, a $/kWh rate.

Concerns with TPM working paper process

Genesis Energy has substantial concerns with the process that the Authority is following for the TPM review. While the release of working papers to further explore issues is a positive step, we do not consider that that Authority is following a best practice approach to policy development and industry consultation. In particular:

- Lack of transparency in how the Authority is using submissions. The working paper process to date has not provided submitters with any assurance that their views have been fully considered, or, for some working papers, summarised correctly to, the Authority's Board. As well as potentially marginalising submitters themselves, this lack of transparency also raises real concerns of "pre-determination".[28] This is a very real concern for this current working paper, as it does not consider any methodology that does not rely on SPD in some way;

- Piecemeal revelation of the TPM review. Parties are being asked to comment on TPM options, without seeing the complete picture. This makes it difficult for submitters to provide a robust company view, and has consequently seen parties put caveats around their views presented in submissions;[29] and

- Working papers should follow a standard policy development process.[10,11] There has been considerable industry disagreement with the problem definition set out by the Authority in the October 2012 issues paper.[30] It is also clear that parties do not feel that issues such as application of the TPM to sunk costs have been resolved. This has affected the ability for the Authority to get consequential agreement on components of the proposed TPM.

We suggest that these concerns can be addressed, to some degree, with some relatively minor changes to Authority processes. Specifically, we recommend that the Authority release a "response to submissions" for each of the working

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[28] The Authority's consultation charter, that was based on the principles of consultation specified by the Court of Appeal, states that the "Authority must approach [a] matter with an open mind, and must be prepared to change or even start a process afresh" – page 13, paragraph 2.1(h), *Consultation Charter*, Electricity Authority foundation document, 19 December 2012.

[29] For example, we refer the Authority to our submission on the LCE working paper, where we reserve our full support for option two until we see the working paper on connection charges.

[30] *Summary of submissions* and *Summary of cross-submissions*, Electricity Authority, March – June 2013.

papers, prior to the release of the second issues paper. This would provide a further update on the TPM review process, and reassure submitters that their views have been adequately considered before the Authority move onto the second issues paper.

If you would like to discuss any of these matters further, please contact me on 04 495 6354.

Yours sincerely

Karen Collins
Senior Regulatory Advisor

Appendix A: Castalia's report on Beneficiaries-pay Options