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28 May 2020

Electricity Authority Board Members  
Electricity Authority  
P O Box 10041  
Wellington 6143

By email

Dear Board Members,

**Re: TPM Peak Charge papers released 12 March 2020**

The Electricity Authority's 2019 Transmission Pricing Methodology (TPM) proposal perpetuated the Electricity Authority's view that the TPM should not include a permanent charge to signal peak usage periods on the transmission grid from day one of any new TPM. The Independent Electricity Generators Association Incorporated (IEGA), along with numerous other organisations, submitted comprehensive reasons why we disagreed.<sup>1</sup>

The IEGA feels compelled to write to the Electricity Authority Board Members at this time to:

- a) express our disappointment that the planned process in respect of further engagement about the peak charge component of the TPM has been unilaterally changed
- b) try to understand the status of the Information Paper the Authority has released
- c) try to understand the status of the paper by Professor Hogan
- d) highlight the lack of acknowledgement by the Authority and its expert of the numerous and varying views in submissions on the peak charge component (included in comments under sections c) and d) below)
- e) provide further evidence about why the IEGA continues to strongly support a peak charge in recovery of transmission costs.

The IEGA suggests this letter, and any others received in relation to the Information Paper, and any response by the Authority should be posted on the Authority's website.

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<sup>1</sup> The Committee has signed off this submission on behalf of members.

## **a) Unilateral change to engagement on proposed peak charge component of the TPM**

The IEGA declined the opportunity to do an oral submission in December 2019 on the basis that our key submission points related to the proposed approach to a peak charge and the CBA and that the Authority clearly planned to hold further engagement on each of these topics. The Market Brief of 26 November 2019<sup>2</sup> stated:

*“The Authority expects to engage with submitters in a range of ways, as we work towards making final decisions on the TPM guidelines:*

*In the new year the Authority is likely to:*

- *engage further on the cost benefit analysis, acknowledging stakeholders will wish to understand the Authority’s thinking on the concerns raised in two expert reports. The Authority is confident that changing the TPM guidelines will result in significant benefits to consumers, given the inefficient incentives for consumption and investment created by the current RCPD charge*
- *engage further on the peak charge issue to support efficient grid use and transmission investment. We acknowledge stakeholders’ concerns about the potential implications from removing the RCPD charge, and instead relying on nodal prices, and any transitional peak charge proposed by Transpower. The Authority agrees this transition needs to be carefully considered”*

The Authority fulfilled its promise to engage further on its CBA analysis. An acknowledgement of this promise was included in introductory comments by Rob Bernau at the CBA webinar:

*“... One of the things that we promised was that we would come back to you in relation to the CBA and explain to you how we took account of your feedback and what that has led to in terms of the conclusions that the Electricity Authority is drawing. The paper that we have published and this webinar, which is both an opportunity for us to explain what we have done and take questions and answers, is fulfilling that promise to come back to you. ...”*<sup>3</sup>

Why has the promise to engage further on the peak charge issue not been fulfilled in the same way as the CBA with a webinar?

The IEGA, and others, are now denied the opportunity to discuss differing views and to influence the Authority’s position. In our view a workshop or “targeted”<sup>4</sup> engagement is an effective way to hear, and be heard, the differing views on a peak charge and to move the debate to more of a consensus on the topic.

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<sup>2</sup> See <https://www.ea.govt.nz/dmsdocument/26058-market-brief-26-november-2019#mctoc1> and update on Authority website 26 November 2019 <https://www.ea.govt.nz/development/work-programme/pricing-cost-allocation/transmission-pricing-review/development/tpm-process-update/>

<sup>3</sup> 3.53 - 4.19 minutes into Part 1 of the webinar <https://www.youtube.com/watch?v=kOInbRoNtFk&list=PLWgCj1eKZwJk6oy2Bw3KOtm0PnxSMJJkq>

<sup>4</sup> Word used by the Authority in its 26 November 2019 Market Brief <https://www.ea.govt.nz/dmsdocument/26058-market-brief-26-november-2019#mctoc1>

## b) The Information Paper

The IEGA queries the status of this Information Paper at this stage in the development of TPM Guidelines? The Information Paper clearly reiterates the Authority's views on the role of a peak charge in recovering transmission costs while:

- adding very little in the way of new information compared with the Authority's perspectives in the 2019 consultation papers
- acknowledging only a minimal number of submitters and points raised in the numerous submissions on this topic. For example, the IEGA was referenced once throughout the Information Paper in footnote 2<sup>5</sup> - a footnote that listed all organisations that submitted about the proposed approach to a peak charge.
- not expecting or requesting any feedback on the Authority's views in the Information Paper – that is denying/avoiding an iterative process to finalise a position (like a cross submission process)
- appearing to be a decision paper in all but name.

## c) The paper by Professor Hogan

This paper is basically economists arguing with economists – and the profession has a reputation for not agreeing with each other. Professor Hogan has only read the submissions of Axiom Economics, Creative Energy Consulting and The Lantau Group<sup>6</sup> and dismisses these three expert economists by saying:

*“The various critiques of the proposal fail to address the underlying connection between transmission cost and the allocation of beneficiaries.”<sup>7</sup>*

*“The various criticisms of the Authority's proposal are either incorrect or are based on implicit assumptions that do not apply to the real transmission system.”<sup>8</sup>*

Professor Hogan strongly implies a lack of support for the Authority's proposals is due to a lack of understanding of the proposals. The IEGA suggests any lack of understanding cannot be dismissed outright but must be thoroughly addressed by the Authority – if not the TPM will not be durable.

From the perspective of the IEGA, neither the Information Paper nor Professor Hogan's expert report have contributed to an improved level of understanding that engenders new support for the Authority's proposals.

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<sup>5</sup> Page 1 <https://www.ea.govt.nz/dmsdocument/26542-peak-charges-under-proposed-tpm-guidelines-information-paper-and-next-steps-march-2020>

<sup>6</sup> While Professor Hogan cites six papers he has previously been involved in publishing. See References on page 30-31. <https://www.ea.govt.nz/dmsdocument/26543-william-w-hogan-transmission-investment-beneficiaries-and-cost-allocation-feb-2020>

<sup>7</sup> End of first paragraph on page 1 <https://www.ea.govt.nz/dmsdocument/26543-william-w-hogan-transmission-investment-beneficiaries-and-cost-allocation-feb-2020>

<sup>8</sup> Ibid Last sentence on Conclusion on page 14

## e) Further evidence the Authority's reliance on nodal pricing is flawed

### *The importance of other workstreams*

The Authority's Information Paper confirms that the Authority is relying on timely and successful implementation of numerous other workstreams to ensure its approach to a peak charge in recovery of transmission costs is efficient.

- 4.23 Nevertheless, we agree the proposal could increase the volatility of nodal prices, increasing wholesale market price risk for parties such as standalone retailers. That in turn could impede the entry and growth of new retailers and stymie competition.<sup>18</sup>
- 4.24 This underlines the importance of continuing to improve the hedge market, as well as other risk management tools, including demand response and access to DER. The Authority is progressing work that will improve and expand the options for participants, including market-making in the hedge market, information disclosure in the wholesale market, and Dispatch-Notification in RTP. In future, the number of Financial Transmission Rights (FTR) nodes and products could also be revised, depending on demand.

Put another way, the recovery of 10.5% of a consumer's bill<sup>9</sup> will be economically efficient if:

- there are continuing improvements to the *hedge market*
- there are continuing improvements to *other risk management tools* including *demand response* and *access to distributed energy resources*
- the Authority progresses work that will *improve and expand the options for participants*, including *market-making in the hedge market*, *information disclosure in the wholesale market*, and *Dispatch-Notification in RTP*
- the *number of Financial Transmission Rights (FTR) nodes and products* could also be revised, depending on demand

In total, work on 10 topics (in italics) is identified by the Authority as being needed to address the expected increase in volatility in nodal prices as a result of the proposed TPM.

### **Concept Consulting's analysis of the Winter Capacity Margin**

The IEGA acknowledge the world post COVID-19 lockdown may well be quite different from the environment when Concept's analysis of the potential effect of removing the RCPD charge on the Winter Capacity Margin.

However, the Winter Capacity Margin remains a significant measure of security of supply (defined in the Code) with the economic optimum where the expected cost of supply shortages is equal to the expected cost of new generation. Taking the report as written:

While Concept's assumed response from distributed generation (149MW not available) does not of itself result in a breach of the Winter Capacity Margin in the Base Case – when this is combined with the assumptions on demand response the resulting margin is at the top of the allowed range. A sensitivity case 2 assumes an additional 234MW reduction in firm capacity from distributed

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<sup>9</sup> <https://www.ea.govt.nz/consumers/my-electricity-bill/>

generation which (+the base case assumption for demand response) results in a Winter Capacity Margin of 548MW – this is below the assessed economic optimum such that the expected cost of supply shortages is greater than the expected cost of new generation.

Concept's work is based on Transpower's Annual Security Assessment (ASA) completed in Feb 2019. Using Transpower's Draft ASA at Feb 2020 (with information about the wind farms that have been committed to in the last 12 months) the Winter Capacity Margin will be breached in 2022 under the Sensitivity 2 assumptions. This is the same time as the Authority expects a new TPM to be in place.

That is, Transpower's transitional peak/congestion charge will have to have features / be at a level similar to the RCPD amount to ensure distributed generation operates to avoid a shortage.

Even without any assumptions about how distributed generation and demand response respond to the removal of the RCPD charge, Transpower's latest ASA analysis shows new generation will be required by 2024-2025 to maintain the Winter Capacity Margin. Uncertainty about the new TPM might impact the timing of decisions on new generation capacity.

### ***New generation build***

The only generation being built currently and forecast is:

- wind technology which has no ability to respond to peak pricing and demand
- to a lesser extent solar technology which also has no ability to respond to peak pricing and demand
- gas peakers which have some flexibility with fuel use and make money on peak pricing, however their consideration for meeting demand is secondary.

The Authority has made assumptions about the output of wind generation in its TPM CBA analysis. An assumption is made that peak output from wind generation is 83% of off-peak output. This is based on observed ratios of peak to off-peak output from wind generation in the past decade.

While this peak period output assumption may be based on actual experience, it is well understood that there is no ability to 'ramp up' wind output during a period of high demand. Increasing investment in generation capacity that makes no contribution to peak pricing and demand will reduce the Winter Capacity Margin and increase the pressure on nodal prices to manage transmission network congestion (if this is possible). Again, Transpower's transitional peak/congestion charge will have to have features / be at a level similar to the RCPD amount to ensure sufficient generation capacity, including distributed generation, operates to avoid an energy shortage.

In addition, the Authority's analysis of wholesale market conditions uses the lack of wind as a contributing reason for higher spot prices, particularly during peak demand periods.

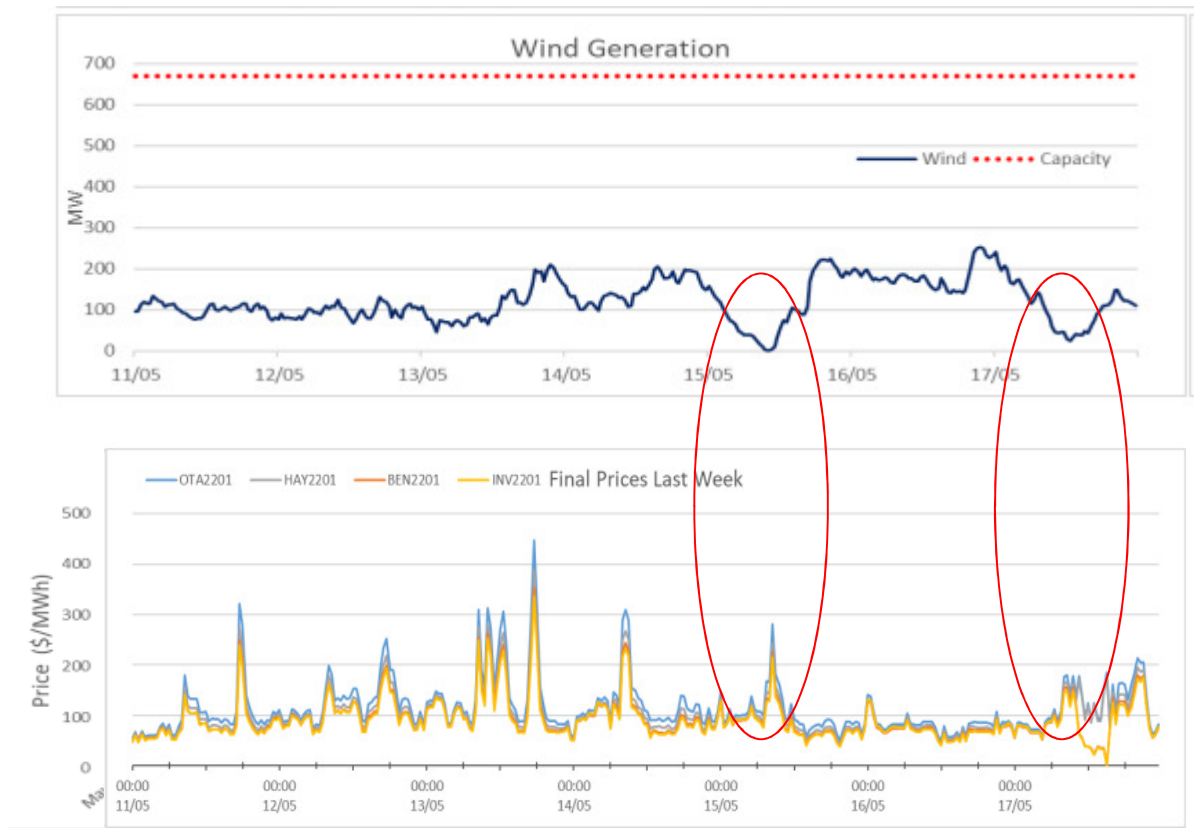
The IEGA requests the Authority investigate the causality of low wind generation on higher spot prices before relying on the nodal spot price to manage / constrain peak demand. This is particularly important as an additional 252MW<sup>10</sup> of wind capacity will be added to the system within the next twelve months, an increase of 36% on the 689MW currently operating<sup>11</sup>.

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<sup>10</sup> Stage 1 of Turitea (119MW) plus Waipipi 133MW

<sup>11</sup> Source:

A cursory look at the following graphs shows some visual relationship between wind generation at less than 100MW and high spot prices (circled) using Transpower data for the week ended 17 May 2020.<sup>12</sup>



**Reducing diversity in peak management options**

The Authority’s increasing reliance on nodal energy prices, and now a transitional congestion charge, reduces diversity in peak management options and, in our view, increases the risks of a market failure.

These short-term marginal price signals are unreliable from an investment perspective as the wholesale and spot markets have shown to be dominated by hydrology events and gas field outages which are somewhat random, rather than predictable, price signals.

In addition, the introduction of Real Time Prices and Dispatch Lite does not encourage investment or market participation of distributed generation, as the investment value drivers for distributed generation not behind a meter are the opposite to demand response participation.

The IEGA submits the most efficient investment signals should continue to underpin distributed generation operation and investment. Nodal prices and congestion charges are too unreliable for

[https://www.energynews.co.nz/resources?field\\_resource\\_type\\_tid=4325&title=&field\\_region\\_value=&field\\_owners\\_value=&op\\_stat=1&items\\_per\\_page=20](https://www.energynews.co.nz/resources?field_resource_type_tid=4325&title=&field_region_value=&field_owners_value=&op_stat=1&items_per_page=20)

<sup>12</sup> Source: Transpower’s Market Summary report for the week ended 17 May 2020

<https://www.transpower.co.nz/sites/default/files/bulk-upload/documents/Market%20Summary%20for%20week%20ended%202017%20May%202020.pdf>

investors in long term assets. For example, distributed generation may choose not to generate this week due to congestion because there is a gas or HVDC outage next week.

Why does the Authority continue to ignore the fact that the correlation between price and peak has too many outliers?

## **Conclusion**

For completeness we reiterate our views on how components of the current TPM can be adjusted to achieve an allocation of transmission costs that instils trust, confidence and support, and therefore an enduring TPM:

- amend the current measure of regional coincident peak demand to reduce the strength of the peak time price signal;
- introduce a permanent peak price signal that is more flexible – could be location specific with a variable price as constraints become more prevalent;
- reallocate the historic and future HVDC costs to the wider group of parties that benefit from this asset; and
- if there is a need for a new charge that recovers the balance of Transpower’s allowable revenue that is based on the average or median demand so that network companies and industrials have some benefit from local generation.

We acknowledge that the current RCPD signal is too strong (reflecting recent transmission investment and the limited number of trading periods used to measure peak demand) and agree that the HVDC provides benefits to other parties as well as South Island generators.

As discussed above, the Information Paper (or Professor Hogan’s paper) do not demonstrate the Authority has ‘listened’ to all submitters. These papers have not persuaded the IEGA to change its view – we do not support the Authority’s TPM proposal as it creates significant uncertainty at a time when certainty is required.

Further, we suggest the Authority has a moral obligation to carry through with further engagement on the peak charge issue as promised in November 2019 (particularly as time has been allowed for further engagement on the other promised topic of the CBA analysis) and to ensure a fair hearing from interested parties.

To make a unilateral decision on the peak charge issue without fulfilling the promise of further engagement is, in our view, a breach of your moral obligations, statutory duty and most certainly a clear breach of natural justice.

We would welcome the opportunity to discuss this submission with you.

Yours sincerely



**Warren McNabb**  
Chair