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Submissions  
Electricity Authority  
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By email: [network.pricing@ea.govt.nz](mailto:network.pricing@ea.govt.nz)

Dear Electricity Authority Board Members,

**RE: Consultation Paper – consultation on ACOT payments to distributed generation**

The Independent Electricity Generators Association Incorporated (IEGA)<sup>1</sup> is surprised by this additional consultation.<sup>2</sup>

The Grid Owner has been asked approximately seven questions and responded within 5 working days to what are complicated issues. The IEGA submits that this set of questions is grossly insufficient analysis of the level and value of the transmission benefit being provided by distributed generation.

The IEGA strongly submits that these questions and the responses do not substitute for the detailed power system modelling commissioned by Transpower from Mitton ElectroNet.

We reiterate:

- The Authority “*required Transpower to identify which distributed generation was required for Transpower to meet its Grid Reliability Standards*”<sup>3</sup>.

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

<sup>2</sup> It is unclear from the title of the document on the website that it is in fact a consultation paper. The Authority received information from Transpower on 10 November and released this information for submitter feedback on 17 November (at the same time as publishing all cross submissions) with a 6 working days deadline.

<sup>3</sup> Source: Paragraph A.10(a)(ii) of the Authority’s consultation paper.

- The Transpower commissioned Mitton ElectroNet analysis<sup>4</sup> investigated whether the National Grid can reasonably be expected to meet (n-1) security requirements<sup>5</sup> without distributed generation that existed in December 2016 supplying part of end consumer demand.
- Distributed generation that was needed to ensure n-1 supply security was defined as ‘eligible’ for payment for this service, as a legitimate alternative to transmission investment – a “*transmission benefit provided by distributed generation*”<sup>6</sup>.
- Transpower amended the analysis as it progressed looking at different regions. One change was the introduction of an effectiveness hurdle “*to ensure that reliability benefits from distributed generators were genuine*”<sup>7</sup>. [emphasis added]
- Mitton ElectroNet noted “*If the DG was not available to meet the load, then Transpower would have to invest in the substation, by upgrading the transformer capacity, or engage in load shedding (or ask the distribution utility to shift load, if possible) during a transformer outage, at peak times.*”<sup>8</sup>
- The analysis was based on both winter and summer peak demand, and for 2021 and 2025.
- The analysis was at every GXP and analysed collectively all distributed generation supplying demand behind that GXP that Transpower did not have to have the transmission capacity to supply.

The above demonstrates the Authority designed the scope of the analysis to identify efficient distributed generation and the results revealed distributed generation that is and has been providing transmission benefits (ie. a service).<sup>9</sup>

As we said in our submission, if there are shortcomings in this analysis of eligible distributed generation the Authority must elaborate on these. Further, robust system analysis must be undertaken before making any change to the current arrangements, otherwise the Authority’s claim that ACOT payments are inefficient is self-serving and unsubstantiated.

The Authority cannot rely on the Grid Owner’s Transmission Planning Report (TPR) to substitute for Transpower’s previous analysis of how distributed generation provides transmission services as the TPR:

- assumes existing distributed generation continues to operate as it has in the past
- is NOT a ‘with’ and ‘without’ distributed generation analysis of the security performance of the grid or required transmission investment.

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<sup>4</sup> This is the only system modelling analysis that has been completed during the entire debate (since 2013) about whether ACOT payments are ‘efficient’.

<sup>5</sup> Part 12 of the Code requires Transpower to produce “a Grid Reliability Report (GRR) setting out 10-year forecasts of demand at grid exit points, generation at grid injection points, and whether the National Grid can reasonably be expected to meet (n-1) security requirements, and proposals for assessing identified issues”. This obligation is fulfilled by the Transmission Planning Report. Source Page 3 of Transpower’s 2022 Transmission Planning Report.

<sup>6</sup> Source: Paragraph A.11 of the Authority’s consultation paper.

<sup>7</sup> Source: Page 1 <https://www.ea.govt.nz/assets/dms-assets/23/23436Appendix-C-Explanatory-note-from-Transpower.pdf>

<sup>8</sup> Source : Page <https://www.ea.govt.nz/assets/dms-assets/23/23432Appendix-B-Mitton-ElectroNet-report.pdf>

<sup>9</sup> As an aside we have included in Appendix 1 a summary diagram of the benefits of distributed generation identified by FERC in a 2017 report.

And Transpower Grid Owner responded to the Authority “we do not have a view on how removing ACOT will impact on generation sufficiency over any term or grid reliability (and additional grid investment to deal with reliability issues) over the longer term”.<sup>10</sup>

Further, the Grid Owner stated “The conclusion is that generation from the Kaimai, Mangahao and Ngawha generating stations, respectively, helps meet the n-1 criterion at those GXPs”.<sup>11</sup>

Transpower’s response includes a debate about whether n-1 security and the GRS are one and the same. Clarifying the Code may be useful in the future. However, this debate is not relevant now as Transpower makes it clear that the GRS and n-1 security are essentially one and the same.<sup>12</sup>

### **System Operator information**

The Authority sought additional information from Transpower Grid Owner because of the System Operator’s submission – described in the Authority’s paper:

2. The position of Transpower, as the System Operator, in relation to system security is very clear from those submissions:

*“Transpower, as the system operator, does not support the immediate removal of provisions for ACOT payments from the distributed generation pricing principles. We support a phase-out.*

*While ACOT payments were not intended to assist with system security, nevertheless as they provide a financial incentive for distributed generation to operate at peak times there is a risk that their removal could impact system security.”*

Since receiving this response, the System Operator has updated its June 2022 review of system security for winter 2023 and 2024 in a report released on 11 November “Market Insights Report – winter review 2023”. “That report sets out system operator concerns that tight peak supply conditions may be more prevalent in winter 2023 than indicated in its June 2022 Security of Supply Assessment.”<sup>13</sup>

This System Operator report has motivated the Authority to consult on “a need to consider whether there are underlying incentive and information gaps that hinder the emergence of efficient generation and demand response decisions to balance demand and supply, and appropriately manage security of supply risks”. Significant Authority, and industry, resource is being applied to addressing this tight supply situation.

The System Operator has estimated winter peak demand has increased by 138MW. If distributed generation is not incentivised to generate during peak demand periods this increases the energy supply gap during peak periods by a further 627.6MW.

The IEGA submits ACOT payments are providing cost effective and efficient incentives to supply energy during peak demand periods. In making a decision at this time about ACOT payments, the

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<sup>10</sup> Answers to questions 7 and 9b. The Authority’s questions of Transpower relating to a participant’s reaction to wholesale prices overlooks the fact that in fulfilling its obligations Transpower is indifferent to the actual wholesale price – its interest is in ensuring least cost dispatch.

<sup>11</sup> Answer to question 9a.

<sup>12</sup> In our view, it is dubious regulatory practice to assume any future changes in the Code are already made.

<sup>13</sup> Page 3 Authority consultation paper <https://www.ea.govt.nz/assets/dms-assets/31/Driving-efficient-solutions-to-promote-consumer-interests-through-winter-2023.pdf>

Authority is making a decision about whether to worsen, or not, an already identified problem of energy security during winter 2023 and the follow on impacts of shortages for end consumers.

### **Negotiating with a monopoly**

The IEGA has reviewed Transpower's Grid Support Contracts (GSC) guidance. It is clear this contract will not be signed with existing distributed generation. Further, no counterparty (not even a utility-scale generator) has signed a GSC with Transpower (we understand detailed work went into negotiating one agreement but in the end it was rejected by Transpower).

The most important aspect, and one that a regulator can be expected to assist with as per the genesis of Part 6 of the Code, is that asymmetry of information and grossly unbalanced bargaining power means an individual distributed generation investor will always struggle to negotiate with a monopoly like Transpower.<sup>14</sup> Is the Authority proposing a remedy to this well-known and understood issue?

Other submitters highlighted the difficulty of negotiating with Transpower:

*NgaWha Generation "Transpower will not be incentivised to investigate the benefits provided by DG without explicit regulatory guidance in place"*

*Network Tasman: "There needs to be some consistency in the regulatory approach to DG that provides such [grid support] services and this needs to align Authority's statutory purpose to promote reliability of the electricity system for the long term benefit of consumers."*

### **Other submitter's calling for detailed analysis**

Distribution companies agree with the IEGA that robust analysis of the benefits provided by distributed generation must be undertaken before any change to the ACOT mechanism:

*Electra: "While the Authority's proposal is a solution to the problem identified in its Consultation Paper, we believe that the Authority's proposal is premature. The Authority has not yet explored alternative approaches that would recognise the benefits arising from DG as well as effectively and appropriately compensating investment in DG" and recommends "that the Authority permit ACOT payments to be made until it has considered in full an effective and appropriate alternative framework that recognises the benefits of DG to the energy sector."*

*Ngawha Generation: "It is our understanding that after the 2016 amendment Transpower has not conducted any further analysis to determine if any given DG is in fact "essential to reliability". This cannot be where the analysis is left, ...." "Consideration of, and consultation on how ACOT payments can be used to avoid network upgrades, which will reduce costs to customers in the long term, has not yet been undertaken."*

*Powerco: "The Mitton report which informed the status of generation on our network was agreed with Transpower and used previous analysis methodologies developed as part of Transpower's published 2017 Transmission Planning Report. It's possibly more than a high-level assessment. For example, the assessments of eligibility are framed as "DG contribution required" and appear separate to the method of pricing."*

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<sup>14</sup> An analogy is a farmer with two cows negotiating milk supply with Fonterra

Top Energy: “... where an avoided transmission cost has been identified, an alternative mechanism for compensation should be implemented before the removal of the current ACOT payment for those identified to ensure continued reliability and security of supply.” “Further, it could also be the case that not only the host network is benefitting from the DG and that there are regional benefits. This is the sort of issue which the Authority needs to resolve before amending the Code and if it doesn’t then it may be enacting regulation which is contrary to its statutory purpose.”

The Authority should ensure these submitters respond to the current additional consultation.

### Concluding remarks

From our perspective the Authority’s additional questions appear to pitch the two parts of Transpower against each other. The System Operator is clear there are security of supply risks associated with removing ACOT payments and the Grid Owner is being asked to support, or not, the Authority’s position that ACOT payments are inefficient based on the Grid Owner’s investment in the grid. The scenario we are thinking about is:

- the Grid Owner agrees with the Authority that it inefficient to pay ACOT to all distributed generation<sup>15</sup> (despite being identified as being eligible for payments because robust analysis revealed the capacity is required for Transpower to meet Grid Reliability Standards)
- in winter 2023 the System Operator calls for more distributed generation output in a GEN Notice (as it did, for example, on 7 October 2022) and the output from distributed generation does not change<sup>16</sup>
- the Authority can then point the finger at the Grid Owner when the System Operator can not match supply and demand and there is administered demand reductions at a cost of \$10,000/MWh.

The consultation process to date has not revealed any evidence, from the Authority or submitters, that ACOT payments are inefficient.

The only evidence that is available on which to base a decision is the detailed modelling<sup>17</sup> commissioned by Transpower that identified the distributed generation that is providing a transmission benefit thus ensuring n-1 supply security.

Until this independent detailed power system modeling is repeated the Authority cannot be sure that transmission capacity and real-time matching of supply and demand will ensure secure reliable supply to every consumer if the incentives enabled by ACOT payments no longer exist.

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<sup>15</sup> The Authority should consider if the Grid Owner is actually incentivised to say that distributed generation is not providing transmission services, that it is inefficient, so that it gets to build more ‘poles and wires’? The System Operator is ambiguous to where electricity supply and demand comes from – as long as it can achieve a real-time match.

<sup>16</sup> Transpower’s GEN Notice specifically requested increased output from distributed generation to decrease demand for electricity from the transmission grid. <https://tpow-corp-production.s3.ap-southeast-2.amazonaws.com/public/interfaces/gen/GEN%20Insufficient%20Generation%20offers%20North%20Island%204497985737.pdf?VersionId=7uRDZXri6b65t9GQoghUpDTsfxDclWmV>

<sup>17</sup> We understand this analysis cost Transpower ~\$1 million to complete 4-5 years ago.

Top Energy puts this succinctly: its “*main concern is that the Authority has underestimated the immediate potential impact on reliability and security of supply with the removal of ACOT payments. This could immediately impact our consumers ....*”

We reiterate our request that the Authority commission independent analysis of the power system to identify / confirm distributed generation that is providing a transmission service and avoiding future transmission costs prior to any change to the current ACOT payments.

Yours sincerely

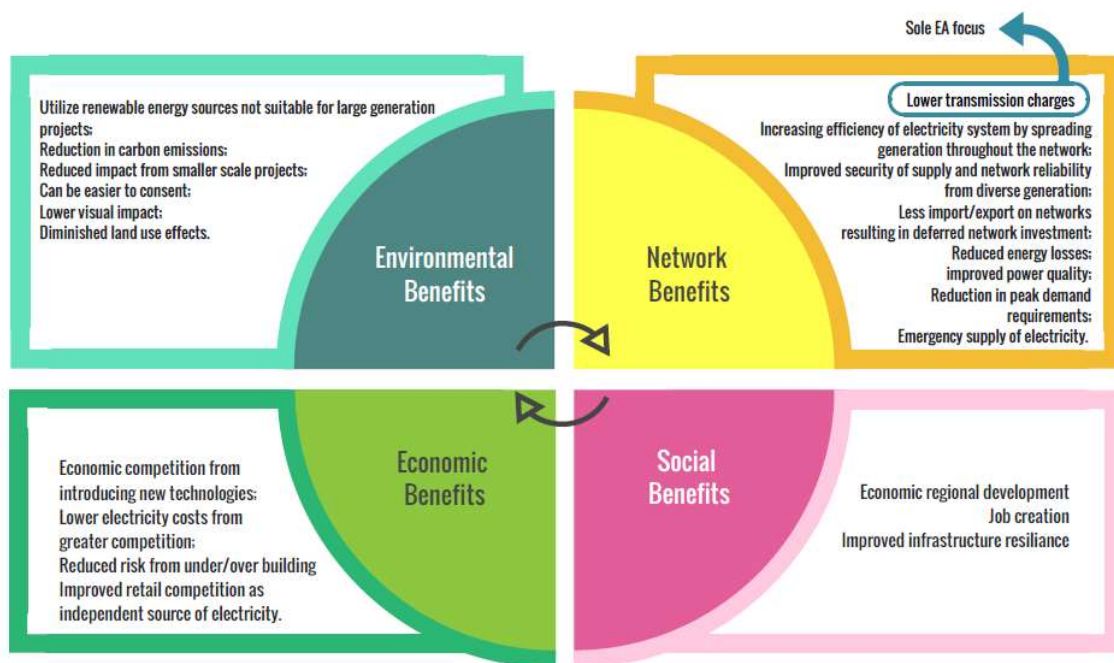


**Warren McNabb**

Chair

**Appendix 1:** Summary diagram of the benefits of distributed generation identified by FERC (2007)

## Benefits of distributed generation



Agencies involved: Commerce Commission, Electricity Authority, MBIE, MfE, Treasury, Transpower, Callaghan Innovation Regional and Local Councils