

31 May 2024

Jo Hendy
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Sent via email: haveyoursay@climatecommission.govt.nz

Dear Jo

Draft advice on Aotearoa New Zealand's fourth emissions budget

1. This is a submission from the Major Electricity Users' Group (MEUG) on the Climate Change Commission's (Commission's) consultation paper "*Draft advice on Aotearoa New Zealand's fourth emissions budget*"¹ published for consultation in April 2024.
2. MEUG members have been consulted on the approach to this submission. Members may lodge separate submissions. This submission does not contain any confidential information and can be published on Commission's website unaltered.

Changes needed to underlying electricity policy settings to enable the changes sought from the fourth emissions budget

3. MEUG welcomes the opportunity to review the Commission's three consultation documents, that each separately, but collectively, will guide and support New Zealand's journey towards net zero emissions by 2050. Our submission focuses primarily on the advice surrounding the development of the fourth emissions budget and work across the electricity sector. We appreciated our opportunity to meet with Commission staff earlier this month, to discuss in person the points that we have raised below.
4. MEUG supports the proposed level of emissions set for the fourth emissions budget. We consider that it is ambitious, builds upon the direction of travel signalled by the prior three emissions budgets, and will drive the level of change required across 2036 to 2040. However, we do have concerns with some of the policies that underpin the assumptions for the Energy sector, and whether New Zealand's existing policies, rules and settings for the electricity market will be sufficient to drive the change needed, while still ensuring an affordable and reliable electricity system for households and businesses. In summary:

¹ <https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/preparing-advice-on-emissions-budgets/advice-on-the-fourth-emissions-budget/draft-advice-emissions-budget-4/>

- **Demand-side response** is noted as playing a key role in helping to reduce peak electricity, and therefore electricity supply costs. However, it is unclear what level of demand-side response is needed to support these outcomes. While there has been some positive progress with introducing demand side response agreements into the market, MEUG believe greater refinements are needed to encourage further participation in the market.
 - MEUG has serious concerns about the **affordability of electricity supply**. Wholesale electricity prices have more than doubled in the last five years significantly impacting businesses. There are concerns over whether consumers are paying a fair or justifiable price and the state of competition in the market. This will hamper the move to greater electrification and the possible emissions savings.
 - It is important that New Zealand continues to have a **reliable electricity supply as we transition to a great proportion of renewables**. The shifting role for thermal generation will need to be carefully monitored and managed, to ensure sufficient peaking and firming capacity during peak periods and dry years.
 - There are also **significant increases forecast for electricity transmission and distribution charges** over the coming five-year regulatory period. More emphasis needs to be placed on optimising the use of networks, smoothing the demand curve, more Time of Use (ToU) tariffs, and encouraging non-network solutions.
5. We expand on each of these below, while referencing the Commission to other relevant submissions made by MEUG. We believe these issues need to be addressed to support the level of emissions reductions sought out to 2040.

Understanding the role of demand side response

6. The Commission's consultation paper outlines how demand side response has the "*potential to save consumers money on bills and minimise the emissions associated with running fossil-fuelled plants to meet demand peaks*".² MEUG supports the use of demand side response in the electricity market, as one of the possible tools for optimising the electricity system.
7. Positive progress has been made in recent years,³ albeit there are currently few demand side agreements in place and limited participants in the Authority's dispatchable demand mechanism. However, one of the most recent and beneficial examples is the announcement today of New Zealand Aluminum Smelter's (NZAS) 20-year supply agreement with Meridian Energy, Contact Energy and Mercury, which will enable up to 185 MW of dry year demand response.⁴
8. It is not clear to MEUG what is the volume of demand side response that the sector is seeking to support both the electricity market and our emissions goals. Understanding the magnitude of the opportunity is important so the market can source the most cost-effective options and develop policies and mechanisms to enable this option.
9. MEUG considers that much greater work needs to be done to remove barriers and incentivise demand response from a broader range of consumers, from industrial and commercial consumers through to individual households. We have long advocated for demand-side participants to be able to receive a form of payment that reflects the full benefits of the service provided and reflects the costs to the participant (i.e., lost production). This could be equivalent

² Page 85 of the consultation paper.

³ We refer the Commission to the Electricity Authority's consultation paper, *Potential solutions for peak electricity capacity issues*, published for consultation on 12 January 2024,

https://www.ea.govt.nz/documents/4385/Consultation_paper_-_potential_solutions_for_peak_electricity_capacity_issues.pdf

⁴ See NZAS announcement here:

<https://cdn.sanity.io/files/jhthdezs/production/f909522546cfb16fd8852698e9669ab772c58317.pdf>

to the spot market electricity price for the volume participants have bid into the price stack at that this would allow clearer price discovery in the electricity market. Further details on MEUG's views on demand-side response and recommendations for improvements to the market mechanisms have been set out in submissions to the Electricity Authority, and we are happy to discuss these further with the Commission.⁵

Affordability of electricity could hamper electrification

10. MEUG has serious concerns about the affordability of electricity supply. As outlined in our Briefing to the Minister of Energy last year,⁶ wholesale prices have more than doubled in the last five years, significantly impacting businesses.⁷ The Electricity Authority and at least one private investment firm⁸ have estimated that consumers are paying between around \$1 billion and \$2 billion a year more than they would be expected to pay in a workably competitive market. The Market Development Advisory Group⁹ has also warned that market concentration and, as a result, pricing will get worse under a more renewable future – not less.
11. There is a disparity between wholesale electricity prices and cost drivers and given the impacts on businesses and productivity, we believe there is merit for further assessment that the market is working as it should. It is important that businesses and consumers believe they are paying a fair or justifiable price for their electricity within a competitive market. Increases in price also have an impact on business decisions around electrifying process heat. In short, it is unrealistic to expect industrial companies to significantly increase their load while the electricity price remains so elevated. These elevated prices also flow through to and impact all electricity consumers across the country.
12. We believe that work on market competition and affordability must be prioritised in the short to medium term, to ensure the benefits of a more renewable electricity system can flow through to consumers and lead to reduced emissions.¹⁰ Much of this work falls within the remit of the Electricity Authority, including its work to implement the recommendation of the Market Development Advisory Group final report.¹¹

Ensuring a reliable electricity supply through the transition

13. MEUG believes that it will be important to carefully manage the energy transition, as we increase the level of renewable electricity generation while reducing the role of thermal generation in the electricity system.¹² It will be important to address¹³ the:
 - Supply risk for winter 2024 and 2025, given the substantial increase in frequency of trading periods when the available supply is tight (or insufficient) compared to projected electricity demand and normal reserve requirements. The potential shortage on 10 May¹⁴ is illustrative of how tight the system can get during peak periods during winter.
 - Risk of operational coordination problems and risk of insufficient investment in additional flexibility resources such as additional fast-start thermal plant.
 - Commercial incentives for maintaining existing thermal plant for dispatching into the market, the need for fast start gas peakers, and the availability of fuel as natural gas

⁵ See <http://www.meug.co.nz/node/1324> and <http://www.meug.co.nz/node/1347>

⁶ <http://www.meug.co.nz/node/1331>

⁷ <https://www.ea.govt.nz/documents/2243/Promoting-competition-in-the-wholesale-electricity-market.pdf>

⁸ <https://businessdesk.co.nz/article/energy/some-doing-rain-dances-as-hydro-lakes-shrink>

⁹ <https://www.ea.govt.nz/documents/1006/MDAG - Price discovery in a renewables-based electricity system - options paper.pdf>

¹⁰ See MEUG submission on future of the power system here: <http://www.meug.co.nz/node/1358>

¹¹ <https://www.ea.govt.nz/news/general-news/authority-finalises-response-to-mdag-report/>

¹² <http://www.meug.co.nz/node/1303>

¹³ As discussed in this MEUG submission: <http://www.meug.co.nz/node/1298>.

¹⁴ <https://www.transpower.co.nz/news/new-zealanders-asked-reduce-power-use-tomorrow-morning>

supplies decrease and investigation into renewable alternatives is only in early stages.

- Technical issues that are likely to arise in a system with greater use of inverter-based resources such as wind generation and solar photovoltaic (frequency keeping etc.).
14. We believe the transition away from thermal generation should be progressed as a priority for the Electricity Authority but will require coordinated input from many stakeholders to ensure we find the best solutions.

Investment in electricity transmission and distribution

15. Considerable investment is needed in both the electricity transmission and distribution system to support greater electrification of our economy and to continue to provide consumers with a secure and reliable electricity system. However, this investment will come at a significant cost, with the recent Commerce Commission's draft decisions for Transpower and regulated electricity distribution businesses (EDBs) forecasting substantial increases in charges for the next five years (2025 to 2030):

"The Commission is proposing to set Transpower's maximum allowable revenues at a total of \$5.8 billion for the next five years. This represents an increase of 43% compared to the previous five years. However, the Commission's proposed revenue smoothing means annual increases are capped at 15% in each of the first two years and 5% for the remaining three years of the regulatory period....."

For local lines companies subject to revenue limits, the Commission is proposing to set the maximum allowable revenues at a total of \$12 billion. This represents an increase of 50% compared to the previous five years. However, revenue smoothing means increases are approximately 24% on average for the first year, before rising gradually over time."¹⁵

16. While it is important to invest in the network, MEUG has been advocating for a stronger focus on:
- a. The varying performance of electricity distribution businesses (EDBs) when it comes to managing demand and innovation across the country's distribution networks.
 - b. The need to address the "bias to build" by EDBs. We need to look at how we can greater incentivise all EDBs to develop non-network / non-traditional solutions and first optimise the use of the current network (by flattening peak demand) before investing in more infrastructure.
17. As outlined in our April 2024 submission to the Electricity Authority, MEUG believes that further work must be done to understand why some EDBs are performing better and innovating, and why others may not be or at a slower pace. It is also concerning if there are increasing differences in the performance of exempt versus non-exempt EDBs.¹⁶ MEUG supports all EDBs providing a relatively level playing field for its consumers and supporting greater electrification and demand growth across the country. We consider that both the Commission and the Electricity Authority have a role to play here, to look at what levers are available under the Part 4 regime and Electricity Industry Participation Code to drive performance.
18. Secondly, MEUG recommends that the Authority and the Commerce Commission strongly focus on how we can better encourage EDBs and Transpower to fully optimise the use of the transmission and distribution networks and develop non-traditional solutions, before seeking to build additional infrastructure.

¹⁵ <https://comcom.govt.nz/news-and-media/media-releases/2024/commission-balances-necessary-investment-in-electricity-networks-against-rising-consumer-prices>

¹⁶ As raised in the following MEUG submissions: <http://www.meug.co.nz/node/1340> and <http://www.meug.co.nz/node/1355>

19. We consider that the current system for electricity infrastructure has a strong “bias to build” – EDBs and Transpower have continuously built “poles and wires” infrastructure to meet a relatively steady growth in demand, with assets historically sized to meet a network’s peak capacity. The Part 4 regulatory model for both Transpower and EDBs is largely based around the Regulated Asset Base (RAB), which influences the revenue that a regulated entity can earn and the subsequent prices that will be charged onto consumers.
20. MEUG believes that more must be done to “flatten or smooth” the demand curve, rather than continuing the practice of building networks to deal with the ever-increasing peak demand on infrequent winter evenings. We note that system peaks have increased in recent years with 6 of the top 10 record demand peaks occurring in winter 2023. Flattening the demand curve over a 24-hour period can involve several options, including:
 - a. Greater use of time of use pricing.
 - b. Addressing the disparity between pricing approaches for distribution and transmission pricing.
 - c. Incentivising greater use of non-traditional / non-network solutions to meet network demand.
 - d. A stronger focus on ensuring that Transpower and EDBs have fully optimised the use of the existing network, before getting approval to build new assets.
21. Our April 2024 submission referenced above outlines our views and recommendations on each of these areas. We believe work in this space is essential to enable the level of emission savings sought through New Zealand’s emissions budgets, both now and out to the fourth emissions budget.

Look forward to release of first monitoring report

22. MEUG welcomes the release of the Commission’s first monitoring report later this year that will report back on progress towards meeting New Zealand’s emissions budgets, emissions reduction plans and the 2050 target. It will be insightful to see the effectiveness of policies and programmes currently underway to address emissions in the energy sector, and to aid discussions around what further action may be needed.

Next steps

23. If you have any questions regarding our submission, please contact MEUG on 027 472 7798 or via email at karen@meug.co.nz.

Yours sincerely



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