Beyond the Boundaries

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Rob Bernau
Director, Network Pricing Directorate
Electricity Authority
By email to tpm@ea.govt.nz

Dear Rob

Re: Proposed Transmission Pricing Methodology Consultation paper

Introduction

1. This is a submission by Oji Fibre Solutions (NZ) Ltd (OjiFS) on the "Proposed Transmission Pricing Methodology" consultation paper published 8 October 2021. We refer to the consultation paper as 'the Paper' throughout this submission.

Background to Oji Fibre Solutions

2. Oji Fibre Solutions is an Australasian pulp, paper and packaging products processing business with substantial direct investment in the New Zealand economy. OjiFS exports to global markets, predominantly in Asia, with major competitors spread around the globe. OjiFS is also a substantial employer with over 1500 direct employees based in NZ.
3. OjiFS operates some of New Zealand's largest industrial sites and is one of the largest producers of biofuel renewable energy, with over 80% of our process energy needs derived from renewable sources. OjiFS generates approximately 300 GWh per annum of electricity via cogeneration plants utilising some of this process heat, but nevertheless is one of New Zealand's largest electricity consumers, with gross load in the order of 850 GWh per annum.
4. OjiFS has sites throughout NZ, but has two large electricity points of supply at Kinleith and Kawerau. At present, OjiFS is not a direct connect transmission customer, but is supplied via various EDBs.
5. OjiFS is a member of the Major Electricity Users Group (MEUG). To the extent that this submission does not conflict with anything in the MEUG submission, OjiFS supports and endorses the MEUG submission.
6. This submission is not confidential.

Submission Response

General Comments

The Authority's Objectives

7. We note that the Authority has used the argument that changes to the TPM are required in order to promote new renewable generation. However, we make the observation that many of the Authority's proposed changes to the TPM will if anything, undermine Government policy and in particular act as a disincentive for new renewable generation. In particular, we note that the proposal creates a significant disincentive for OjiFS to invest in bioenergy infrastructure in the central North Island.

Increased costs to OjiFS

8. We also note the changes in the TPM will result in substantial increase in OjiFS transmissions costs. Our current estimate is an increase of approximately $3M p.a., an increase of approximately 75% on our current interconnection charges of approximately $4M p.a. OjiFS supplies products into the international commodities market and is unable to pass these costs to customers.

9. We also note that the transitional cap does not apply to OjiFS as OjiFS is not a transmission customer but is connected to the grid via distribution networks.

Issues with the current TPM

10. We disagree with the Authority's view on flaws with the current TPM. In particular, our view is that the RCPD mechanism is an effective means for reducing peak demand and deferring grid investment. We agree that it is perhaps stronger than it needs to be, but that it has the desired effect and provides correct incentives for reducing congestion on transmission and distribution networks.

11. We disagree with the comment that the RCPD charge "distorts the costs of using transmission". For Oji FS, and indeed most consumers, peak periods are not necessarily the times when we most value it. OjiFS requires electricity 24 hours a day, 365 days a year, and electricity at any one point in time is equally as valuable as at any other point in time. We believe that this is likely to apply to most, if not all, consumers to some extent. Electricity demand is highly inelastic, with significant amounts of load unable to respond to RCPD signals, and the majority of load also insulated from locational marginal pricing signals. Consequently, to move load from peak periods, a strong and predictable pricing signal is required for customers to respond.

12. We also disagree with the statement that the RCPD charge "promotes unnecessary investments in processes and technologies to avoid and shift transmission charges to others" Our view is that such investments defer transmission investment, reducing Transpower's costs, and therefore reduces charges to multiple customers. We also note that any investment in batteries and distributed generation also reduce the requirement for further investment in both distribution networks and grid-connected generation. Indeed, without such investment in new renewable distributed generation, the marginal fuel source will continue to be thermal generation, thereby increasing carbon emissions.

13. In particular, we note the events of 9 August 2021, where various events contributed to a shortfall of energy and scarcity pricing. Transpower has previously estimated that responses to

RCPD signals contributes to approximately 2% reduction in gross demand. The 130 MW additional demand which would have been on the system if participants had not already reduced load would have exacerbated the situation even further, resulting in additional disconnection of load.

Specific Comments

14. OjiFS has three major issues with the proposed TPM:

    a) Embedded generation, and particularly cogeneration which is an intrinsic part of an industrial site, should be netted off for the purposes of calculating the residual charge;

    b) Load at a single site connecting to multiple GXPs should be considered as coincident peak demand in calculating the residual charge, rather than the sum of AMD of each individual GXP;

    c) the cap should not discriminate between load that is directly connected and load that is embedded in a distribution network.

    Detailed comments regarding these issues are included below.

Residual Charge Issues

15. The size and allocation methodology of the proposed residual charge is of concern to OiFS:

    a) allocating the large residual charge primarily to consumers;

    b) Allocating on gross demand ignoring on-site generation. In OjiFS's case cogeneration fuelled by process heat forms an intrinsic part of our operation.

    c) basing the residual charge allocation on historic AMD for each GXP, rather than on site coincident peak demand;

16. Clause 7.5 of the Paper states "Residual charges are to be paid by all transmission customers to the extent they are load customers…..based on each customer's historical gross anytime maximum demand, averaged across….2014-2017."

17. We are concerned that this focus on load customers does not reflect the use of the grid by generation customers. Generators use the interconnected grid equally (excluding losses) as much as load customers. We therefore believe that the residual should be distributed evenly between generators and load.

18. As a large industrial which has been undertaking energy efficiency and energy reduction projects over a longer period than 2014-2017, our view is the methodology should take into account more recent load. We also note that many businesses may have made a significant step change in operation over this period, and that it would be more appropriate to assess load over the period 2015-2021. In our view there should even be a weighting factor applied to more recent years, say 40% for 2021, 30% for 2020, 20% for 2019 and 10% for 2018.

19. This methodology also does not take into account site cogeneration. OjiFS site cogeneration generates electricity using steam produced from the combustion of 'black liquor' biofuel produced during the Kraft pulp process. This electricity is effectively a byproduct of the process, with the steam produced then reinjected into the Kraft pulping process. The electricity generation is therefore only using steam as part of the site processes, and has extremely limited ability to increase generation in response to pricing signals. Our view is that this any calculation

methodologies should reflect the fact that cogeneration is an intrinsic part of the site process and should be netted of in setting charges.

20. OjiFS Kinleith site has three 11kV GXPs which the Kinleith pulp and paper mill is connected. OjiFS pays (via Powerco as the connected party) for the connection assets for these GXPs, and the majority of the connection charges for the substation. Load can be shifted between the GXPs depending on the configuration of the site. OjiFS regularly moves load between the three GXPs, particularly when Transpower has issues on specific equipment. Consequently, the load on each of the GXPs can change, however the total load across the three sites is relatively stable. Our view is that the residual charge should reflect the level of use of the interconnected grid, and that the calculation methodology does not do this for complex sites such as Kinleith which have multiple points of connection to the grid.

21. Our strong view is that the calculation methodology for complex sites connecting to a single substation should be on the basis of coincident peak demand for the GXPs at that site. Continued insistence on using a non-coincidental peak demand at a single location reinforces the view that historic anytime AMD at the Customer level is a purely arbitrary allocator and undermines credibility and durability of the TPM proposals.

22. Our view is that the starting position should reflect average load over a more recent period than 2014-2017. Our view is that a calculation over the period 2018-2021 would be more reflective of the use of the grid.

23. We agree that allocations should be updated annually, based on changes in customers four year rolling average. However, this should not be lagged. There should be minimal lag as possible, so as to align charges with ability to pay as promptly as possible. Ideally we would see the four year assessment period ending in a timely manner to allow charges to be adjusted for the following pricing year (e.g. 31 August as is currently used for RCPD calculations). Our view is that using net annual energy use with a minimal lagging period will reduce the risk of misalignment of assessed charges and grid use.

Secondary Issues

Transitional Cap

24. The concept of transitional cap no doubt started as a well-intended means to soften the significant increase some customers face should the changes proposed with the new TPM be implemented. However, the outcome now has the appearance of arbitrary calculations that have very limited and short-lived application.

25. Based on the information we have reviewed, it appears as if OjiFS has an annual increase in transmission charges of approximately 75%. We note that the cap is intended to apply to the total cost of electricity, but the number is difficult to establish and in our view the cap should apply as a percentage increase in transmission costs only.

26. For example, annual electricity costs could include:

    a. Spot market cost of gross physical electricity supplied to site;
    b. Hedge contracts in place;
    c. Cost of on-site generation
    d. Spot market revenue of on-site generation
    e. Distribution charges
    f. Transmission charges

27. Given 50% of OjiFS electricity is generated on-site by means of cogeneration fuelled by steam produced during the pulp process, there is no direct relevance to market prices when compiling a total bill- for this component of the cost. Due to the huge variance in spot prices on an annual basis, we don't believe that a percentage increase applied to the total cost of electricity is appropriate, but that the cap should apply to the cost of transmission only.
28. Given a cap was conceived to assist in the transition to very much higher transmission cost for the large industrial consumers such as OjiFS, we suggest that it would be appropriate to review this methodology to ensure that there is no discrimination between large users which are embedded and those which are direct connect transmission customers.

OjiFS is more than happy to meet with the Authority to discuss our concerns and our suggestions as above.

Feel free to contact me if you have any questions on our submission.

Regards

Darren Gilchrist
Energy Manager