TPM amendment to correct adjustment for entry of a new customer

Consultation paper

9 January 2024

ELECTRICITY AUTHORITY
TE MANA HIKO

Executive summary

This paper sets out an amendment the Authority proposes to make to the Transmission Pricing Methodology (TPM) to correct an issue that has been identified with a TPM adjustment provision that sets transmission charges for new customers. In particular, the issue is with the simple method adjustment calculation for new customers greater than 10MW who are joining certain regional customer groups. Details of this amendment are provided in the body of this paper.

The Authority considers that this amendment meets the requirements of clause 12.94A of the Electricity Industry Participation Code 2010 (the Code) and section 39(3)(a) of the Electricity Industry Amendment Act 2010 (the Act), including because the proposed amendment is technical in nature and/or is non-controversial, given that it corrects an unintended issue by changing an adjustment formula, in order to ensure that the TPM achieves its policy intent.

Because the amendment meets section 39(3) of the Act, the Authority is not required to consult on it. The Authority is nevertheless consulting on the amendment so it can consider feedback from stakeholders on the proposed change, particularly the technical aspects of the proposal. Following consideration of submissions, the Authority will decide whether to make this Code amendment.

Contents

1. What you need to know to make a submission

1.1 Please see Appendix A for a template for making a submission on this proposal.

1.2 Any feedback on the proposed amendments would be greatly appreciated. Submissions are due by **5pm, 23 January 2024**.

1.3 Please direct any further questions related to this consultation by email to network.pricing@ea.govt.nz.

1.4 Please note the Authority intends to publish all submissions it receives. If you consider that the Authority should not publish any part of your submission, please:

(a) indicate which part should not be published,

(b) explain why you consider we should not publish that part, and

(c) provide a version of your submission that the Authority can publish (if we agree not to publish your full submission).

1.5 If you indicate part of your submission should not be published, the Authority will discuss this with you before deciding whether to not publish that part of your submission.

1.6 However, please note that all submissions received by the Authority, including any parts that the Authority does not publish, can be requested under the Official Information Act 1982. This means the Authority would be required to release material not published unless good reason existed under the Official Information Act to withhold it. The Authority would normally consult with you before releasing any material that you said should not be published.

2. Background

The TPM

2.1. The Transmission Pricing Methodology (TPM) allows Transpower to recover its maximum allowable revenue from transmission customers. This revenue is expected to amount to an average of $853 million per year between 2020 and 2025, rising to more than $1 billion per year by 2030.

2.2. A new TPM took effect from 1 April 2023. This replaced the previous methodology, which had been used since April 2008.[1] The Authority's review of the TPM was required to accommodate a material change in circumstances in the electricity industry. The Authority determined that the new TPM would better promote efficient use of, and investment in, transmission and other electricity assets, to promote the efficient operation of the electricity industry for the long-term benefit of consumers.

2.3. At the heart of the new TPM is a benefit-based approach. Those who benefit from transmission investments will pay for them, through benefit-based charges. Benefit-based charging is intended to promote more efficient investment decisions. A residual charge recovers unallocated costs and the remaining costs of the historical transmission investments that are not recovered through other charges. These fixed-like charges help to avoid incentivising participants to take inefficient actions to avoid transmission costs and shift them to others. The methodology also includes connection charges, a prudent discount policy, and a transitional cap.

Benefit-based charges

2.4. Benefit-based charges (BBCs) recover the costs of investments in the interconnected grid,[2] known as benefit-based investments (BBIs),[3] from customers that are expected to benefit from that investment.[4] A customer's starting allocation for the BBI is the customer's share of expected benefits from the investment.

2.5. Each customer's starting allocation for a BBI is calculated to be broadly in proportion to the benefits the customer is expected to derive from the BBI, as viewed from an early point in its lifecycle (in most cases, some point before the investment decision is made). That is, the BBC paid by a customer reflects the

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[1] In 2020, the Authority issued new TPM guidelines for development of a proposed new TPM following completion of a review and consultation process. Transpower subsequently developed a proposed TPM consistent with the TPM guidelines. The Authority consulted on this proposed TPM and in April 2022 it amended the Code to incorporate a new TPM into the Code.

[2] The cost recovered through the BBCs for a BBI is referred to as the BBI's 'covered cost'. A BBI's covered cost includes capital components (return on and of investment) and an allocation of Transpower's total operating costs (including overheads). The covered cost is calculated annually, for each BBI.

[3] Benefit-based investments (BBIs) are investments in interconnection assets and interconnection transmission alternatives (interconnection investments). They typically include investments in the replacement and refurbishment of existing interconnection assets and transmission alternatives that avoid or defer the need to invest in interconnection assets.

[4] When we use the term benefit in this paper, this refers to the positive net private benefit which is the sum of quantified benefits (positive values) and disbenefits (negative values) the regional customer group or customer is expected to receive from the relevant BBI.

benefit that customer is expected to receive from the BBI (if any), relative to all other customers.

Methods for allocating benefit-based charges

2.6. The TPM includes three methods for calculating expected benefits and starting allocations. There are two standard methods and one simple method.[5] A standard method allocates costs of future "high-value" grid investments.[6]

2.7. The simple method is used to calculate the expected benefits and starting allocations for post-2019 BBIs that, at the time of the investment decision, are expected to be "low-value" investments.

2.8. The simple method is designed to be simpler than the standard methods. The simple method allocates charges to regions identified based on historical power flows, as a proxy for benefits from Transpower's 'everyday' asset investments (eg, tower painting), and to individual customers within regions in proportion to their share of a region's injection or offtake over a five-year "simple method period".

Adjustments

2.9. In general, connection, benefit-based and residual charge allocations between designated transmission customers are intended to be relatively fixed.[7] This is desirable, because it limits any inefficient incentives on transmission customers to take actions to avoid paying their share of charges.

2.10. However, there are some circumstances where it is necessary for allocations to change (eg, because a party enters or exits). In addition, it is desirable to strike a balance between charges being relatively fixed (and so unavoidable) and adjusting to reflect transmission customers' changing circumstances. The new TPM provides for certain circumstances in which charges can be adjusted.

2.11. For the simple method, adjustments are only required for the period between the event in question and the end of the current five-year simple method period. This is because, from the beginning of the next simple method period, a new customer's offtake and injection would be reflected in the historical data underpinning the simple method electricity flow analysis. It would therefore be taken into account from that point.

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5 The standard method consists of a price-quantity method for investments that provide market, reliability, ancillary service, or 'other' benefits; and a resiliency method for the subset of grid investments that mitigate high-impact, low probability risks such as of a cascade failure.

6 Initially, "high-value" grid investments were those valued at over \$20m; and "low-value" investments were \$20m or under. This \$20m threshold in the TPM is set to align with a separate threshold set by the Commerce Commission in the Input Methodologies under Part 4 of the Commerce Act: the threshold for a "major capex project", for which Transpower must undertake a cost-benefit analysis. The Commission is able to change the threshold for a major capex project from time to time. In its final decision on its 2023 Input Methodologies review, released on 13 December 2023, the Commission decided to increase the threshold for a major capex project from \$20 million to \$30 million. As a consequence, the threshold for application of the "standard method" for allocation of benefit-based charges in the TPM will rise by the same amount.

7 www.ea.govt.nz/documents/1809/2022-TPM-Decision-paper1358263.1.pdf para 8.1 to 8.2

Adjustment provision: allocating low-value investment costs: new customers

2.12. The issue we seek to address with the proposed amendment arises when certain large new customers connect. Connections with a nameplated capacity exceeding 10MW trigger an adjustment to BBCs under the TPM.[8]

2.13. Adjustments to the allocation of the costs of low-value BBIs (which are allocated via the simple method) are calculated under clause 83(3) of the TPM. Clause 83(3) states that, for a BBC adjustment event, for a new customer Transpower must:

(a) estimate the value of the new customer's intra-regional allocator (IRA) (this is the mean historical annual injection and offtake values for injection and load customers respectively) for each regional customer group (that is, all generation or all load customers in a particular simple method region) and

(b) calculate the new customer's individual net private benefit for the relevant BBIs

(c) scale down allocations so that the right amount of costs is recovered.

2.14. A customer's individual benefit from a low-value BBI is calculated by summing the product of the regional benefit for the relevant customer group and the customer's simple method factor (SMF)[9] for every regional customer group with positive regional benefit (in respect of the relevant investment region) of which the customer is a member.

Section 39(3) amendments

2.15. The TPM is a long and technically complex piece of the Code and so it was recognised that minor issues may arise, requiring correcting amendments. In June 2022, the Authority amended the Code to clarify that certain provisions of the Act apply to amendments to the TPM just as they would to any other Code amendment.[10]

2.16. Specifically, clause 12.94A of the Code clarifies that the Authority may amend the TPM where it is satisfied on reasonable grounds regarding any of the matters in section 39(3), or that section 40 of the Act applies.

2.17. The matters in section 39(3) are:

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8 New customers (load or generation) over 10 MW are subject to the same BBI allocations irrespective of whether they connect directly to the grid or whether they connect indirectly to the grid via a distribution network (notional new customer). As stipulated in clause 85 of the TPM, connections of this magnitude should be treated as if they were new customers at the relevant Transpower connection point, with an adjustment applied to reflect their entry. Applying an adjustment irrespective of whether a new customer connects directly to the grid or indirectly via a distributor reduces financial incentives to embed to avoid transmission charges.

9 A customer's SMF is its share of historical injection (for a regional supply group) or offtake (for a regional demand group) in the relevant region over a historical five-year capacity measurement period, calculated based on mean annual injection and offtake.

10 Refer to: https://www.ea.govt.nz/documents/1790/Decision-paper-Code-amendments-to-support-TPM-implementation.pdf

(a) the nature of the amendment is technical and non-controversial (section 39(3)(a)); or

(b) there is widespread support for the amendment among the people likely to be affected by it (section 39(3)(b)); or

(c) there has been adequate prior consultation so that all relevant views have been considered (section 39(3)(c)).

2.18. Where section 39(3) applies, the Authority is not required to consult on an amendment (although it may nevertheless choose to do so). Section 40 provides that the Authority may amend the Code without complying with section 39(1) if the Authority considers it is necessary or desirable in the public interest that the proposed amendment be made urgently.

3. Problem definition

3.1. The Authority has become aware of an issue that may arise in some regional customer groups relating to the calculation of BBCs for post-2019 BBIs under the simple method where a new customer (or notional new customer) adjustment event occurs.[11]

3.2. Transpower has informed the Authority that, in the scenario in question, where the new customer is expected to have a significant amount of generation, and where the existing customers in the regional customer group have a low IRA value, the new customer may receive a high individual benefit and high BBI customer allocation. This results in a BBC that is high in comparison to many existing customers on a dollar per MWh basis.

3.3. The Authority assessed this issue and found that, in line with Transpower's assessment, in certain circumstances (for example where a supply group's injection is dominated by embedded generation) the current simple method adjustment provisions can lead to new generators being allocated very high charges that are not proportional to the benefits they receive from the relevant investments (as interpreted by the simple method). This risks discouraging efficient new entry and investment in the electricity industry.

3.4. The Authority's view is that such an outcome would be inconsistent with the policy underlying the TPM and would not promote the Authority's main statutory objective.

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[11] For a discussion of notional new customers, see footnote 8 above.

4. Proposed amendment

Proposed amendment

4.1. The proposed amendments would address the identified issue by applying a dollar per MWh cap based on charges received by an identified comparator customer (or customers). The proposed method involves:

(a) applying the status quo adjustment allocation

(b) comparing the status quo allocation (in dollars per MWh) to that of the comparator(s) that is electrically closest to the new connection location[12]

(c) adopting the lower of the status quo or the comparator allocation as the final adjustment.

4.2. The proposed amendments were put forward by Transpower. Please refer to the marked-up version of the TPM and Transpower's proposal form published alongside this consultation paper for the full details of the proposed amendment.

The proposed amendment is technical and non-controversial

4.3. The Authority assessed the identified issue and Transpower's proposal against the policy intent underlying the TPM (as previously consulted on and set out in the 2020 TPM Guidelines) to determine whether it agreed the amendments should be made.

4.4. The Authority considers the proposed amendment would be a workable solution to the identified technical problem. It would assist in providing certainty to future customers on the benefit-based charges that they would expect to pay when they connect and would improve the consistency of those charges with the benefits the customer would be expected to receive from the relevant transmission investments. For these reasons the proposed amendment would be consistent with the 2020 TPM Guidelines. This would also support the durability of the new TPM.

4.5. The Authority is satisfied that the amendment proposed in this paper is technical and non-controversial (section 39(3)(a)). This is because the proposed amendment corrects an unintended outcome in the TPM drafting, to ensure the drafting of the TPM accurately reflects the policy underlying it as consulted on (including that the TPM accounts properly for adjustment events).

The Authority has chosen to consult on the proposed amendment

4.6. Where the requirements of section 39(3) of the Act are met, the Authority is not required to publicise a regulatory statement, or to consult on the relevant amendments or a regulatory statement.

4.7. The Authority nevertheless is consulting on these amendments for feedback, noting that scrutiny of the drafting may result in improvements. However, the policy

[12] The comparator customer is chosen in a similar way as a comparator customer for calculating new customers' BBCs for Appendix A BBIs under subclause 83(6). "Electrically closest" describes a situation where the distance between location A connected by line to another location B is closer than all the other location connected by line to A.

underlying the relevant provisions has been sufficiently consulted on previously, with the relevant issues addressed in the Authority's final TPM decision.[13] Hence the focus of this consultation is on the technical drafting of the particular provisions identified as potentially requiring clarification/correction. A regulatory statement has also been provided for completeness.

Q1. Do you agree with the amendment proposed in section 3?

[13] Refer to: https://www.ea.govt.nz/documents/1809/2022-TPM-Decision-paper1358263.1.pdf

5. Regulatory Statement for the proposed amendment

Objectives of the proposed amendment

5.1. The objective of the proposed amendment is to address an unintended result that may arise when Transpower calculates certain new customers' benefit-based investment (BBI) customer allocations for post-2019 BBIs under the simple method. Specifically, the amendment seeks to avoid any new customer receiving very high allocations and benefit-based charges (BBCs) that are not broadly proportionate to benefits.

Q2. Do you agree with the objectives of the proposed amendment? If not, why not?

The proposed amendment

5.2. The proposed amendment is shown as tracked changes in a marked-up version of the TPM that is attached alongside this paper.

The proposed amendment's benefits are expected to outweigh the costs

5.3. The Authority has assessed the benefits and costs of the proposed Code amendment against a counterfactual of no Code amendment and considered whether there were any feasible alternative means of addressing the identified issues.

5.4. Making no Code amendment has no benefit and comes at the cost of the TPM not fully achieving its intended policy intent as consulted on. The proposed amendment is to correct an issue in the TPM, which could result in anomalously high charges for certain new entrants. Making no Code amendment would result in some customers receiving higher than intended transmission charges, which may discourage efficient investment. The Authority therefore considers that this aspect of the TPM, in its current form, is inconsistent with the underlying policy intent.

5.5. As an alternative, we considered applying a fixed charge cap on simple method charges for a new customer (eg, $100,000 per annum). While this alternative would be feasible, the Authority's view is that the proposed amendment, applying a dollar per MWh cap based on charges received by an identified "electrically closest" comparator customer, would be more likely to improve the consistency of charges with the benefits the customer would be expected to receive from the relevant transmission investments. On this basis, compared to the alternative, the proposed amendment would be more consistent with the 2020 TPM Guidelines and would better promote the efficient operation of the electricity industry.

5.6. The Authority concludes that the benefits of the proposed Code amendment outweigh the costs of making no Code amendment or choosing an alternative means of addressing any of the issues.

Efficiency

5.7. The proposed amendment supports the efficiency limb of the Authority's statutory objective by correcting an issue in the TPM that could otherwise result in:

(a) new customers receiving allocations and BBCs for post-2019 BBIs under the simple method that are not broadly proportionate to the positive benefit the customers are expected to receive from the BBIs; and

(b) inefficient investment decisions being made by potential investors.

5.8. The amendment achieves the policy intent which the Authority determined was necessary or desirable to promote the efficient operation of the electricity industry.

Competition

5.9. The proposed amendment is not expected to have a material impact on competition in the electricity market. At the margin, however, the proposed amendment may have a positive impact on competition. That is because under the status quo, high charges might result in connecting parties (for example, generators) choosing not to connect. The proposed amendment, by addressing the identified issue, could result in marginally more connections, which could lead to an improvement in competition (for example, between generators).

Reliability

5.10. The proposed amendments are not expected to have a material impact on the reliable supply of electricity to consumers. At the margin, however, the proposed amendment may have a positive impact on reliability. That is because under the status quo, high charges might result in a generator choosing not to connect. The proposed amendment, by addressing the identified issue, could result in slightly more generation, which could result in a marginal improvement in overall reliability.

Q3. Do you agree the benefits of the proposed amendment outweigh its costs?

Summary

5.11. The table below summarises the benefits of the proposed amendments. The costs involved with the change are minor administrative costs for Transpower to implement the amendment, which we expect will be outweighed by the benefits.

Efficient operation of the industry	Promotes efficient operation by promoting efficient investment and contributing to the successful implementation of the TPM.
Competition	Marginal positive effect.
Reliability	Marginal positive effect.
Overall (long-term benefits to consumers)	Promotes the long-term benefits to consumers by ensuring the TPM is operated as intended.

Alternative means of achieving the objective

5.12. As noted above, we considered, as an alternative solution, applying a flat charge cap on simple method charges for a new customer (eg, $100,000 per annum). While this alternative would be feasible, the Authority's view is that the proposed amendment, applying a dollar per MWh cap based on charges received by an identified "electrically closest" comparator customer(s), would be more likely to improve the consistency of charges with the benefits the customer would be expected to receive from the relevant transmission investments. On this basis, compared to the alternative, the proposed amendment would be more consistent with the 2020 TPM Guidelines and would better promote the efficient operation of the electricity industry.

Q4. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.

The proposed amendment complies with section 32(1) of the Act

5.13. The Authority's main objective under section 15(1) of the Act is to promote competition in, reliable supply by, and efficient operation of, the electricity industry for the long-term benefit of consumers.

5.14. The Authority's additional objective under section 15(2) of the Act is to protect the interests of domestic and small business consumers in relation to their supply of electricity. The additional objective only applies to the Authority's activities in relation to the direct dealings between participants and these consumers. The proposal in this consultation paper does not relate to such direct dealings. So, this proposal is being progressed under the Authority's main statutory objective.

5.15. Section 32(1) of the Act says that the Code may contain any provisions that are consistent with the Authority's objectives and are necessary or desirable to promote any or all of the matters listed in section 32(1).

5.16. The Authority considers that the proposed amendment is necessary or desirable to promote the efficient operation of the electricity industry for the reasons set out above.

Q5. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?

Q6. Do you have any comments on the drafting of the proposed amendment?

The Authority has had regard to the Code amendment principles

5.17. When considering amendments to the Code, the Authority is required by its Consultation Charter to have regard to the following Code amendment principles, to the extent that the Authority considers that they are applicable. Table 1 (below) describes the Authority's regard for the Code amendment principles in the preparation of the proposal.

Table 1: Regard for Code amendment principles

Principle	
1. Lawful	The proposal is lawful, and is consistent with the Authority's statutory objectives and with the requirements set out in section 32(1) of the Act.
2. Provides clearly identified efficiency gains or addresses market or regulatory failure	The efficiency gains are set out in the evaluation of the costs and benefits above.
3. Net benefits are quantified	Net benefits are not able to be accurately quantified, so the Authority's assessment is qualitative.
4. Preference for small-scale 'trial and error' options	Not applicable
5. Preference for greater competition	Not applicable
6. Preference for market solutions	Not applicable
7. Preference for flexibility to allow innovation	Not applicable
8. Preference for non-prescriptive options	Not applicable
9. Risk reporting	Not applicable

Appendix A Format for submissions

Submitter	

Questions	Comments
Q1. Do you agree the issues identified by the Authority are worthy of attention?	
Q.2 Do you agree with the objectives of the proposed amendment? If not, why not?	
Q3. Do you agree the benefits of the proposed amendment outweigh its costs?	
Q4. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	
Q5. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	
Q6. Do you have any comments on the drafting of the proposed amendment?	