Amendments to correct issues in the new TPM

Consultation paper

18 October 2022

Executive summary

This paper sets out several amendments the Authority proposes to make to the Transmission Pricing Methodology (TPM) to correct issues that have been identified during its implementation. Details of these amendments are provided in the body of this paper.

The Authority considers that these amendments meet the requirements of clause 12.94A of the Electricity Industry Participation Code 2010 (the Code) and section 39(3) of the Electricity Industry Amendment Act 2010 (the Act), including because:

(a) these amendments are technical in nature and should be non-controversial, given that they generally address minor drafting issues, correct mistakes in formulae or address small omissions, while otherwise ensuring that the TPM achieves its policy intent

(b) the policy intent of the relevant clauses was subject to consultation in 2021 on the proposed TPM (which in turn built on the Authority's previous consultation and decision on the TPM guidelines); and the Authority therefore considers that all relevant views should have been raised and considered, and it is now simply proposing minor amendments to ensure that the policy that was consulted on is achieved.

The above means the amendments can be made without the Authority meeting the requirements for reviewing the TPM in the Code, and the requirements in the Act to publicise a regulatory statement and consult on the statement and proposed amendment.

The Authority is nevertheless consulting on the amendments for feedback. As noted above, the policy underlying the relevant aspects of the TPM has been consulted on previously, hence the Authority is focusing on the technical drafting at this stage.

The Authority intends to address the following ten issues by amendment of the TPM:

1. correcting various minor issues with the TPM (such as typographical errors)
2. correcting the formula for calculating rebates under the Type 1 First Mover Disadvantage (FMD) mechanism
3. ensuring that grid injection points (GIPs) are treated the same as grid exit points (GXPs) for benefit-based charge (BBC) adjustment events
4. ensuring new customers in some regions will receive BBC simple method allocations in relation to investments made during a certain period
5. correcting omissions and providing greater clarity that the timing of an adjustment event should not affect whether relevant transmission charges are adjusted
6. improving the workability of the continuing benefit-based investment (BBI) mechanism
7. clarifying how the Type 2 FMD mechanism works when only part of a connection asset is anticipatory, to ensure the capital cost of anticipatory capacity is spread as intended
8. providing Transpower with the ability to apply the most appropriate adjustment mechanism to historical events
9. correctly identifying a generator, that was treated as grid-connected for the purpose of calculating the allocations in Schedule 1 of the TPM guidelines (which are reflected in Appendix A of the TPM), as embedded. We also propose a minor edit to Appendix A to correct an administrative error made when transposing summary values to Appendix A.

10. correcting the formula for calculating residual charge reduction events to ensure that reduction events are correctly assessed.

Next steps

Following consideration of submissions, the Authority will decide whether to make these Code amendments. Any of the amendments made into Code will be reflected in the new TPM that Transpower applies when it consults later this year on pricing to apply from 1 April 2023.

Contents

1 Introduction: amendments to correct issues in the TPM

Background

1.1 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. The new TPM comes into force on 1 April 2023.

1.2 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, and that it can amend the TPM, for limited reasons, without needing to meet the full Code change process or the process requirements for reviewing the TPM otherwise contained in the Code.[1]

1.3 New 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 40 of the Act. These matters are:

(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)); or

(d) it is necessary or desirable in the public interest that the proposed amendment be made urgently (section 40).

Issues identified

1.4 Several issues have subsequently been identified that require minor corrections to the TPM. These issues were identified by Transpower and in two cases by participants. Transpower provided suggested drafting to correct the issues it identified, as did one participant.

1.5 The Authority assessed the identified issues and the proposed drafting against the policy intent underlying the TPM as consulted on to determine whether it agreed the amendments should be made. The Authority is satisfied that all the proposed amendments in this paper need to be made to correct issues where the TPM as currently drafted contains clear errors or does not otherwise adequately implement the consulted on, and decided upon, policy intent.

1.6 The Authority considered, in respect of each of the proposed amendments, whether it was satisfied on reasonable grounds regarding any of the matters set out above. The

[1] Refer to www.ea.govt.nz/development/work-programme/pricing-cost-allocation/transmission-pricing-review/development/decision-on-tpm-related-code-amendments/

Authority is satisfied that all the amendments proposed in this paper are either technical and non-controversial and/or the basis for the amendments has been subject to adequate prior consultation (section 39(3)(a) and (c)). This is because all the proposed amendments are corrections to ensure the drafting of the TPM accurately reflects the policy underlying it as consulted on.

Consultation being undertaken

1.7 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.

1.8 The Authority nevertheless is consulting on these amendments for feedback, noting that scrutiny of the drafting may result in improvements. However, the policy underlying the relevant provisions has been sufficiently consulted on previously, with the relevant issues addressed in the Authority's final TPM decision.[2] 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.

1.9 Each of the proposed amendments are set out below along with an explanation of the issue that the amendment seeks to correct.

Making a submission

1.10 Please see Appendix A for details on how and by when you can make a submission on this proposal.

1.11 Any feedback on the proposed amendments would be greatly appreciated. Submissions are due by **5pm on Monday 31 October 2022**.

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

Supporting information

1.13 Alongside this consultation document we have published:

(a) a marked-up version of the TPM showing proposed amendments as tracked changes

(b) Transpower's Code amendment proposal forms for issues 1 to 8

(c) correspondence with Electra in relation to issue 9

(d) Northpower's Code amendment proposal (issue 10)

(e) a workbook showing workings for the proposed amendment to Appendix A.

2 Refer to the Authority's website at www.ea.govt.nz/development/work-programme/pricing-cost-allocation/transmission-pricing-review/development/final-tpm-decision/#c19159

2 Issue 1: Various minor amendments

2.1 This section explains our proposal to correct various minor issues with the TPM (such as typographical errors).

Issue and basis for the amendment

2.2 In applying the TPM, Transpower has identified several minor amendments that are desirable to make to the TPM. These minor amendments are detailed in the form "Transmission pricing methodology (TPM) - Minor changes" submitted by Transpower to the Authority.

2.3 The Authority considers all of the proposed amendments satisfy section 39(3) (technical and non-controversial and/or adequate prior consultation).

Proposed amendments

2.4 The proposed amendments are described in Transpower's proposal form: "Transmission pricing methodology (TPM) - Minor changes".

2.5 These amendments will correct typographical errors in, and make some other minor improvements to, the new TPM.

2.6 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

3 Issue 2: Calculating rebates under the Type 1 FMD mechanism

3.1 This section explains our proposal to correct an issue with the formula for calculating rebates under the Type 1 FMD mechanism.

Issue and basis for the amendment

3.2 There is an issue with the formula in clause 29(3) of the TPM that could result in some connection charges being higher, and residual charges being lower, than was intended. This amendment is detailed in the form "Transmission pricing methodology (TPM) – FAC rebate (rebate calculation for Type 1 FMD mechanism)" submitted by Transpower to the Authority. Transpower provided the following explanation of this issue, and its proposed resolution:

> The formula in clause 29(3) [of the TPM] is for the calculation of the rebate a prior contributing customer receives in respect of a funded asset component (FAC) amount paid by a non-contributing customer. The purpose of the FAC is to ensure that customers who would otherwise not contribute to the capital cost of a connection asset pay the "first mover" customer(s) who have contributed, or are contributing, an equitable contribution to that cost.
>
> The intent of the formula is that the entire FAC amount is rebated by Transpower, so that (a) the prior contributing customers receive the full benefit of the non-contributing customer's FAC amount, and (b) Transpower does not "over-recover" the asset component of connection charges for the relevant connection asset.

However, the formula does not achieve this because the variable $AMDIC_{total}$ in the denominator captures total AMDIC which includes the AMDICs of subsequent customers as well as the AMDICs of prior contributing customers. While the denominator removes the AMDIC of non-contributing customer i, future calculations may include the AMDICs of customers who join after customer i (subsequent customers). This means, if there is a subsequent customer in respect of a non-contributing customer, the sum of the rebates to all prior contributing customers is less than the FAC amount paid by the non-contributing customer. The amount not rebated reduces residual revenue and therefore load customers' residual charges (which, as noted, is not the intent).

[Transpower] also consider that the formula would be more intuitive, and easier for stakeholders to understand, if the AMDIC ratio were a ratio of customer allocations instead. After the AMDIC values have been used to calculate customer allocations, the allocations themselves are sufficient for the other connection charge calculations, and mathematically equivalent to AMDIC in the clause 29(3) formula.

3.3 The Authority agrees with Transpower's assessment and proposed resolution.

3.4 The Authority considers that this amendment is technical and non-controversial in nature, merely correcting an error in an existing formula and so fits within the criteria for amendment under section 39(3)(a) of the Act (technical and non-controversial). It further notes that the policy behind the funded asset component has previously been consulted on in the 2021 TPM consultation and so fits within the criteria for section 39(3)(c) (adequate prior consultation).

Proposed amendment

3.5 The formula in clause 29(3) of the TPM is amended to correct the above issue and to provide greater clarity.

3.6 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendment.

4 Issue 3: Treating GIPs the same as GXPs for BBC adjustment events

4.1 This section explains our proposal to ensure that grid injection points (GIPs) are treated the same as grid exit points (GXPs) for benefit-based charge (BBC) adjustment events.

Issue and basis for the amendment

4.2 The TPM contains a BBC adjustment event for a distributor connecting its local network to a new GXP but it does not contain an equivalent adjustment event for a distributor connecting its local network to a new GIP. This amendment is detailed in the form "Transmission pricing methodology (TPM) – New distributor grid point of connection adjustment event" submitted by Transpower to the Authority.

4.3 This is clearly an omission. As well as resulting in distributors being treated differently depending on whether their network contained primarily load or generation, it would result in a distributor injecting into the grid at a new point of connection not receiving a

BBC allocation in respect of the new point of connection, even though a generator with the same injection profile connected at the same point would pay BBCs.

4.4 The Authority's previous consultation documents are clear that this is not intended. See for example paragraph D.78 of the 2019 TPM Issues Paper, which states "This leads to our fifth principle for transmission pricing: Charges for a transmission user should be similar to those for other competing users after adjusting for their size and location."

4.5 Although both the 2021 TPM Consultation Document and the 2022 TPM Decision Document consistently refer to GXPs and not GIPs, in both case the reasoning makes clear that the Authority has all forms of grid point of connection in mind, not just GXPs.

4.6 The 2021 TPM Consultation Document explicitly compares a distributor to a generator, when it says at paragraph 8.26 "However, in the Authority's view, the reasons for adjusting the benefit-based charge for a large generator or plant would seem to apply equally to a distributor"[3] and the 2022 TPM Decision Document confirms that in this respect, the Authority's decision is unchanged.

4.7 The Authority therefore considers that there has been adequate prior consultation on this issue so that all relevant views have been considered, meeting the requirements for amendment under section 39(3)(c).

Proposed amendment

4.8 References to "GXP" and "offtake" in clauses 81(1)(h) and 87 of the TPM have been replaced with "grid point of connection" (which covers both GXPs and GIPs) and "offtake or injection" respectively.

4.9 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

5 Issue 4: Simple method regional customer groups with RNPB=0

5.1 This section explains our proposal to correct an issue where new customers in some regions would not receive BBC simple method allocations in relation to investments made during a certain period.

Issue and basis for the amendment

5.2 Transpower has identified an issue with simple method allocations for new generation customers in particular regions: some customers would not receive any BBC allocation for certain low-value BBIs, even if they would receive some benefit from them. This amendment is detailed in the form "Transmission pricing methodology (TPM) – Simple method regional customer groups with RNPB = 0" submitted by Transpower to the Authority.

5.3 The simple method is used to calculate customer allocations for low-value BBIs. Simple method allocations are based on historical electricity flows, offtake and injection during a historical 5-year capacity measurement period (CMP C) and apply to a simple method period (typically five years):

[3] www.ea.govt.nz/assets/dms-assets/29/Proposed-Transmission-Pricing-Methodology-Consultation-paper-v2.pdf

(a) Modelled regions are determined before the start of each simple method. For all BBIs commissioned in a given modelled region (the investment region), regional net private benefits (RNPBs) are calculated for each "regional customer group" (a group of customers in a modelled region). There are generally two regional customer groups in each modelled region: a supply group (comprising injection customers) and a demand group (comprising offtake customers).

(b) Individual net private benefits (NPBs) are calculated for each customer in each regional customer group. Each customer's individual NPB is a share of the group's RNPB for each group the customer is a member of. The intra-regional allocators (IRA) for a group is the customer's mean annual injection (for a supply group) or offtake (for a demand group) over CMP C.

(c) A customer's BBI allocation for a low-value BBI is the customer's individual NPB from the BBI as a proportion of total individual NPB for all customers from the BBI.

5.4 When a new customer connects to the grid, its simple method allocations for previously commissioned BBIs are calculated using the adjustment mechanisms in the TPM. The new customer's individual NPBs, and hence allocation for BBIs commissioned in each investment region, are based on the RNPB of the regional customer group they are expected to be a member of and an estimate of their IRA (see clause 83).

5.5 When the new TPM was drafted, it was assumed that every regional customer group under the simple method would have at least one member and RNPB greater than zero in respect of all investment regions, and a non-zero total IRA. However, Transpower has identified that for the first simple method period, there are some regional supply groups (ie, for generators) where this is not the case.

5.6 If a customer joins an empty regional customer group with total IRA = 0 and RNPB = 0:

(a) the customer's individual NPB would be mathematically "undefined" because the denominator in the formula in clause 61(2) would be zero (the new customer's estimated IRA is excluded from the denominator under clause 83(3)(b)(ii); and

(b) even if the calculation in clause 61(2) could be done, the customer's individual NPB would be zero in respect of the RNPB = 0 investment regions applying the formula in clause 61(1).[4]

5.7 This means the customer would never receive an allocation for existing low-value BBIs in the investment regions in respect of which RNPB=0, or for future low-value BBIs commissioned during the relevant simple method period, even if the customer would receive some benefit from them.

5.8 This is clearly not an intended outcome under the new TPM.

5.9 We therefore consider that the TPM should be amended so the simple method can always produce allocations for new customers. Not addressing this issue would undermine the certainty and durability of the new TPM.[5]

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4 This would not change even if the relevant modelled region still exists in a subsequent simple method period and the regional customer group has a non-zero value of RNPB in respect of the relevant investment regions (clause 61(4)).

5 Transpower told us it is currently dealing with applications from four new generation customers in simple method regions with RNPB=0, which may connect over the next 24 months.

5.10 We consider the proposed amendment is a workable solution to a technical problem, which assists in providing certainty to future customers of the benefit-based charges they will receive when they connect, and supports the durability of the new TPM.[6] We consider that this amendment is technical and non-controversial, correcting a clear error in the existing TPM drafting to ensure that it achieves the policy intent consulted on (including that the TPM accounts properly for adjustment events). The amendment therefore meets the requirements for amendment under section 39(3)(a) and (c) (technical and non-controversial and adequate prior consultation).

Proposed amendment

5.11 We propose an amendment to specify a formula to calculate RNPB values for any empty regional customer group with no positive RNPB and no total IRA under the simple method, for a given simple method period. This amendment was proposed by Transpower. Under its proposal, each new entrant would receive allocations consistent with the average across all regional customer groups of the same type (supply or demand) as the connecting customer.

5.12 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

6 Issue 5: Pre-commencement and pre-start adjustment events

6.1 This section explains our proposal to correct omissions and provide greater clarity that the timing of an adjustment event should not affect whether the charges are adjusted.

Issue and basis for the amendment

6.2 This amendment is detailed in the form "Transmission pricing methodology (TPM) – Pre-commencement and pre-start adjustment events" submitted by Transpower to the Authority.

6.3 Reflecting the TPM guidelines, the TPM makes provision for a variety of adjustment events that result in changes in transmission charges. However, there are some restrictions on, and hence potentially some arbitrariness relating to, adjustment events (for charges to recover investments):

(a) before the first pricing year of the TPM; or

(b) before the start pricing year for a new (post-2019) BBI.

6.4 The proposed amendments seek to remove any suggestion that the timing of an adjustment to should affect whether charges are adjusted.

6.5 The Authority considers that the proposed amendments are consistent with the TPM's policy intent as consulted on (i.e. that all adjustment events should be treated equivalently) and the need for the TPM to be workable. The Authority considers that the nature of the proposed amendments is technical and non-controversial, thereby meeting the requirements for amendment under section 39(3)(a). It also considers there has

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6 In Transpower's proposal it also considered an alternative, which it did not prefer, which would involve retrospective modelling. We also considered this option but ruled it out because would provide less certainty to future customers about the simple method BBCs they would receive once they connect.

been adequate prior consultation so that all relevant views have been considered (meeting the requirement for amendment under section 39(3)(c)) as the amendments simply confirm the consulted policy intent.

Proposed Amendment

6.6 The following amendments are proposed:

(a) Amending clause 3 to:

(i) delete the definition of "cut-off date" (as it is no longer used in clause 75)

(ii) amend the definition of pre-commencement adjustment event

(iii) add the definition "pre-start adjustment event"

(iv) add the definition of "specified pre-start adjustment event"

(b) Amending clause 65 (Intra-regional allocators) to insert new subclauses (12) and (13)

(c) Amending clause 75 (Adjustment Events) to replace subclause (4) and (5) with new subclauses (4) to (8).

6.7 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

7 Issue 6: Continuing benefit-based investments

7.1 This section explains our proposal to improve the workability of the continuing benefit-based investment (BBI) mechanism.

Issue and basis for the amendment

7.2 This amendment is detailed in the form "Transmission pricing methodology (TPM) – Continuing BBIs" submitted by Transpower to the Authority.

7.3 The TPM provides for adjustments to benefit-based charges that apply if an existing customer exits. Where a transmission customer closes one of its plants but remains a customer, it would remain liable for benefit-based charges in respect of that plant until ten years from the relevant grid investments' commissioning date. These provisions help ensure that benefit-based charges are fixed-like and incentivise scrutiny of proposed grid investments.

7.4 To ensure these adjustments can be calculated in relation to all investments treated as BBIs in the new TPM (assets commissioned after 23 July 2019, and the seven historical investments in Appendix A) the adjustments use the continuing BBIs mechanism. This applies to all relevant BBIs (including Appendix A BBIs). However, for the purposes of explaining the workability issues it is useful to distinguish between the following:

(a) High-value intervening BBIs, which are defined as high-value post-2019 BBIs (which are themselves assets commissioned after 23 July 2019, with a value of $20m or above) with:

(i) a final investment decision date prior to 1 April 2023; and

(ii) a commissioning date prior to 30 June 2023.

(b) Low-value post-2019 BBIs, ie any investments with a value of less than $20m and which were commissioned after 23 July 2019.

7.5 There is an implementation issue with the continuing BBI mechanism as currently drafted whereby:

(a) the commissioning dates for some Appendix A BBIs, the Clutha Upper Waitaki Lines Project (CUWLP), and potentially other high-value intervening BBIs are difficult or impossible to determine precisely

(b) applying the continuing BBI mechanism to low-value post-2019 BBIs would require Transpower to adopt a costly asset-by-asset approach.

7.6 In relation to some high-value intervening BBIs the TPM as currently drafted requires information that may not exist, because the investments were made before the information requirements of the new TPM were known and as such necessary information was not recorded, or it may be costly to obtain. Transpower expects that it would be able to record a specific commissioning date for any BBIs commissioned in the future (i.e. between now and 30 June 2023). However, there may have been BBIs that were commissioned before now but since 23 July 2019 for which specific commissioning dates will be difficult or impossible to discern. Therefore, in addition to proposing a specific commissioning date for CUWLP, Transpower has proposed a change to allow it to set an appropriate commissioning date for such BBIs.

7.7 Transpower's financial management information system (FMIS) tracks low-value post-2019 BBIs at an asset level. Each asset is assigned to an investment region and simple method period at the time it is commissioned. Assets, which are each a separate low-value BBI as far as Transpower's FMIS is concerned, are grouped together in this way, by region and period, for administrative workability.[7]

7.8 This aggregation presents an implementation challenge to precisely apply the continuing BBI mechanism: disaggregation to low-value BBI level would be required, which would be costly.

7.9 For the continuing BBI mechanism to operate as intended and achieve its policy intent, the TPM drafting requires that a commissioning date be established for relevant investments. Given the issues noted above, the Authority proposes to clarify how such a commissioning date should be established for investments for which this is not clear.

7.10 These changes address a workability issue with the TPM drafting, with a view to ensuring that the policy behind the TPM is implemented as intended. The Authority therefore considers that they are technical and non-controversial amendments to achieve a policy on which it has previously consulted on. The amendment therefore meets the requirements for amendment under section 39(3)(a) and (c) (technical and non-controversial and adequate prior consultation).

Proposed amendment

7.11 We are proposing amendments to clauses 81, 84(5) and (6), and 85(4) and 85(5) to ensure the continuing BBI mechanism is workable.

7 There will be many thousands of low-value BBIs commissioned each simple method period. For example there are about 10,000 low-value BBIs commissioned in FY 2021/22.

7.12 The effect of these changes is to estimate a commissioning date where this information is not available, with the continuing BBI mechanism then applying for 10 years from that estimated date. The proposed change to the intervening BBI mechanism may result in a difference in the time elapsed between the actual commissioning date and the estimated date.

7.13 Specifying these additional rules means the mechanism is workable and improves certainty.

7.14 In relation to high-value BBIs, for the purposes of the intervening BBI mechanism, the TPM now provides that:

(a) The only Appendix A BBI that is a continuing BBI is Bunnythorpe - Haywards.[8]

(b) For the purposes of the continuing BBI mechanism, CUWLP's commissioning date is 1 January 2021.[9]

(c) In relation to other high-value post 2019 BBIs Transpower must determine the commissioning date for any other high-value intervening BBI whose commissioning date is not known, for the purposes of the continuing BBI mechanism.[10]

7.15 In relation to low-value BBIs, the amended TPM requires that the low-value BBIs in each group cease to be continuing BBIs 12.5 years after the start of the simple method period during which they were commissioned.[11]

7.16 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

8 Issue 7: Type 2 FMD mechanism

8.1 This section explains our proposal to clarify how the Type 2 First Mover Disadvantage mechanism works when only part of a connection asset is anticipatory, to ensure the capital cost of anticipatory capacity is spread as intended.

Issue and basis for the amendment

8.2 This amendment is detailed in the form "Transmission pricing methodology (TPM) – Type 2 FMD mechanism" submitted by Transpower to the Authority.

8.3 The new TPM introduces the anticipatory BBI mechanism to deal with the first mover disadvantage (FMD) issue. While the policy intent of the provision is clear, Transpower has identified two areas where certainty as to how the mechanism for type 2 FMD applies could be improved.

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8 This reflects an assumption that a commissioning date for each Appendix A BBI was exactly one year after investment approval.

9 Transpower knows the first asset for CUWLP was commissioned at some point during FY 2020/21. 1 January 2021 is the midpoint. This means the maximum "error" in the deemed commissioning date is +/- 6 months.

10 Transpower expects to record a specific commissioning date for any BBIs commissioned in the future (i.e. between now and 30 June 2023).

11 The maximum "error" in the assumed commissioning date is +/- 2.5 years (for a standard 5-year simple method period). However, the effect of errors in the assumed commissioning dates for individual low-value BBIs in a group will offset towards a maximum error for the group in aggregate that is considerably smaller.

8.4 Clause 26(3) contemplates a situation where Transpower designates part of a connection asset to be anticipatory for a pricing year, as opposed to the entire asset.[12] Clause 26(3) says the anticipatory capacity is deemed to be comprised in a separate (notional) anticipatory connection asset (asset X) but does not explicitly say how the (actual) physical asset (asset C+X) should be treated.

8.5 The remainder of the physical asset (i.e. C) is intended to be treated as a separate connection asset for the purposes of calculating the asset components of connection charge. That is, assets C and X are addressed separately under the TPM (rather than a possible alternative interpretation where X is subject to the anticipatory connection asset provisions, while the entire of C+X is subject to the ordinary provisions for connection charges).

8.6 This clarification is clearly in line with the policy intent behind the TPM:

(a) applying the alternative interpretation at paragraph 8.5 would result in an overallocation of capital cost of X to the customers connected to asset C+X. Instead of the replacement cost of C, the replacement cost of C+X could go into the calculation of the asset component under clause 26(6).

(b) applying such an alternative interpretation would be contrary to the intent of the Type 2 FMD mechanism which is to reduce barriers to efficient investment in anticipatory capacity and remove an incentive for customers to inefficiently delay connection.

8.7 As such, the Authority considers that this amendment is technical and non-controversial, while the policy behind it has been sufficiently consulted on previously. The amendment therefore meets the requirements for amendment under section 39(3)(a) and (c) (technical and non-controversial and adequate prior consultation).

Proposed amendment

8.8 Clause 26(3) is proposed to be amended

(a) to provide for the creation of two connection assets, one of which represents the remainder of the connection asset (ie, asset C), which is required for the correct calculation of charges under the type 2 FMD mechanism

(b) to clarify that asset C and asset X are only created for the purposes of the clauses relating to the asset component (clauses 26 and 27).[13]

8.9 Please refer to the marked-up version of the TPM and Transpower's proposal published alongside this consultation paper for the full details of the amendments.

9 Issue 8: Definition of pre-commencement adjustment event

9.1 This section explains our proposal to provide Transpower with the ability to apply the most appropriate adjustment mechanism to historical events.

[12] An example of this is a new transformer with a higher capacity than currently required, as some of the capacity will be required for the pricing year, but some will not.

[13] Otherwise under the new TPM the relevant asset is asset C+X.

Issue and basis for the amendment

9.2 This amendment is detailed in the form “Transmission pricing methodology (TPM) – Historic events analogous to adjustment events” submitted by Transpower to the Authority.

9.3 The TPM provides for specific adjustments to charges in some circumstances. For example, when a new customer enters, its charges are set by taking into account similar existing customers (if any), with consequential changes to all other customers’ charges.

9.4 These adjustment provisions are intentionally limited to a relatively narrow set of changes in circumstances where there is an actual change in the circumstances of some party – for example when a party sells part of its business. The rigid categories and lack of discretion for Transpower means that, where the criteria for a particular adjustment event are triggered, Transpower is required to treat the event as that form of adjustment event, even if it is more comparable to a different type of event. This is the case even where it is clear that it would be the sensible outcome, consistent with the policy intent underlying the adjustment event provisions, to apply the adjustment for a different event type.[14]

9.5 The example that has been specifically raised by Transpower in its proposal is one where, due to the historical facts in a particular situation, it is more appropriate for the partial sale of a business adjustment event to be applied, despite the scenario technically falling within the provisions for a new customer connecting adjustment event.[15]

9.6 The proposed amendment has been limited to pre-commencement adjustment events, as the potential for ambiguity, which might justify an event being treated as analogous to an adjustment event, is more likely to arise in respect of historical events.

9.7 The Authority considers this amendment to be technical and non-controversial, and that there has been adequate prior consultation on this matter, as providing this discretion to Transpower simply enables the previously consulted and agreed upon policy intent of the adjustment provisions in the TPM to be properly implemented. The amendment therefore meets the requirements for amendment under section 39(3)(a) and (c) (technical and non-controversial and adequate prior consultation).

Proposed amendment

9.8 To ensure that changes in circumstances that are analogous to an adjustment event are treated the same way as if there had been an adjustment event, it is proposed that the definition of a pre-commencement adjustment event be modified to include circumstances that “Transpower determines is analogous to an adjustment event”.

9.9 Please refer to the marked-up version of the TPM and Transpower’s proposal published alongside this consultation paper for the full details of the amendments.

[14] For example, it could lead to inconsistency with principle 5 of the principles for efficient transmission pricing set out in Appendix D of the 2019 TPM Issues Paper that “charges for a transmission user should be similar to those for other competing users after adjusting for their size and location”.

[15] See Transpower’s Code amendment request for more information.

10 Issue 9: Correction of Appendix A BBI allocations

10.1 This section explains our proposal to correct two technical issues with Appendix A of the TPM:

(a) correctly identifying a generator, that was treated as grid-connected for the purpose of calculating the allocations in Schedule 1 of the TPM guidelines (which in turn are reflected in Appendix A of the TPM), as embedded

(b) a minor edit to Appendix A to correct an administrative error made when transposing summary values into Appendix A.

Issue and basis for the amendment

10.2 Appendix A of the TPM sets out customer allocations for seven historical investments.

Treatment of embedded generator Mangahao in Schedule 1

10.3 On 18 August 2022, Electra notified the Authority that, for the purposes of determining the allocations of BBIs in Schedule 1 of the TPM guidelines (and subsequently the corresponding Appendix A of the final TPM), Mangahao power station had been incorrectly treated as grid-connected – when it was actually embedded in the Electra distribution network.

10.4 The Authority has assessed the issue and determined that Mangahao should have been treated as embedded for the purpose of determining the relevant allocation. The Authority intends to correct this error by amendment to the TPM. The proposed correction reduces Electra's Appendix A allocations by approximately $350k per year (and a corresponding increase spread across all other customers).[16]

10.5 The Authority considers this amendment to be technical and non-controversial and therefore suitable for amendment under section 39(3)(a) of the TPM. A similar issue was identified in respect of Southern Generation and a correction made in the TPM guidelines decision.[17]

Appendix A correction

10.6 This amendment is detailed in the form "Transmission pricing methodology (TPM) – Appendix A correction" submitted by Transpower to the Authority.

10.7 As referred to in clause 42(2) of the TPM, Appendix A was created based on Schedule 1 of the TPM guidelines, but with some adjustments to reflect customer-related changes before and after the Authority published the TPM guidelines. Transpower communicated the specific adjustments to the Authority before consultation on the proposed TPM.

10.8 The per-customer allocations in Appendix A are built up from per-connection location allocations kept in a Transpower spreadsheet outside the TPM (which itself is derived from the Authority's data supporting its calculation of the allocations in Schedule 1 of the TPM guidelines). All of the adjustments referred to above were made in the per connection location allocation spreadsheet that Transpower prepared and provided to the Authority before consultation on the proposed TPM.

10.9 However, not all of the adjustments are reflected in the per-customer allocations in Appendix A. This is because the per-customer allocation pivot table was inadvertently

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16 Electra in its letter estimates the impact of the error to be $520k per year.

17 Paragraph A.60 of Appendix A of the TPM guidelines decision paper available at: https://www.ea.govt.nz/assets/dms-assets/26/26851TPM-Decision-paper-10-June-2020.pdf

not refreshed using the final per-connection location allocation data before the proposed TPM was published.

10.10 The correct allocations (after refreshing the pivot table, ie without the error) have been used by Transpower for the indicative pricing Transpower sent to customers earlier this year. The indicative prices were calculated using the (correct) per-connection location data, not the (incorrect) per-customer allocations in Appendix A. This means the correct allocations for the Appendix A BBIs have been communicated to Transpower's customers in their indicative prices, so the proposed amendment will not result in unexpected pricing outcomes for any of them.

10.11 There are only very small differences between the allocations currently in Appendix A and the correct allocations. The larger the allocation, the more noticeable the difference is, but even the largest differences border on immaterial. For example, the largest allocations in the current Appendix A are Vector's 50.97% shares of NIGU and UNIDRS.

10.12 These shares are 51.07% in the proposed revised allocation – a difference of only 0.1%. For many allocations there is no difference at all (to four decimal places).

10.13 The Authority considers this amendment to be technical and non-controversial and therefore suitable for amendment under section 39(3)(a) of the TPM.

Proposed amendment

10.14 This proposed amendment consists of a corrected Appendix A table.

10.15 Please refer to the marked-up version of the TPM published alongside this consultation paper for the full details of the amendments. We have also published a spreadsheet that provides further detail on the changes.

11 Issue 10: Residual charge reduction event

11.1 This section explains our proposal to correct an issue with the formula for calculating residual charge reduction events to ensure that reduction events are correctly assessed.

Issue and basis for the amendment

11.2 This issue was brought to the Authority's attention by Northpower, who subsequently submitted the form "Amend TPM Residual Charges Reduction Event Calculation" to the Authority.

11.3 The TPM provides for a customer's initial residual charge (when the TPM first takes effect) to accommodate circumstances where the customer has experienced a substantial reduction in anytime maximum demand prior to the TPM coming into effect. This carried over the intent reflected in clause 29 of the TPM guidelines.

11.4 The relevant clause in the TPM (clause 72), however, does not properly capture this intent as there is no requirement on Transpower to reduce a customer's lagged average total gross energy (LATGE) when it reduces that customer's anytime maximum demand (residual) (AMDR) baseline (under clause 72(1)). This is because the TPM correctly complied with the exact wording of the TPM guidelines, but the TPM guidelines themselves contained this same error meaning its intent is not properly achieved if the error is not corrected. The correct approach is that lagged average total gross energy should be reduced, as has already been provided for in respect of average total gross energy (ATGE) in clause 72(2). If it is not reduced, then when the equations for working out the appropriate residual charge adjustment factor (in clause 71(1)), anytime maximum demand (residual) (in clause 69(1)), and therefore a load customer's annual residual charge (in clause 68(2)) could produce unintended results. For example a reduction event could actually result initially, not permanently (all other things equal), in an increase in residual charges.

11.5 As the proposed amendment below simply corrects the relevant equations to provide for reduction events to be properly calculated in line with the consulted policy intent, the Authority considers that there has been adequate prior consultation so that all relevant views have been considered (meeting the requirements for amendment under section 39(3)(c)). The amendment is also in the Authority's view technical and non-controversial, in that it is a minor correction to an equation to make it achieve the consulted policy intent, thereby meeting the requirement for amendment under section 39(3)(a).

Proposed amendment

11.6 We sought technical feedback from Transpower on a small amendment to clause 72(2) to clarify that lagged average total gross energy as well as average total gross energy baseline must be reduced where Transpower reduces a pre-existing load customer's AMDR baseline (this amendment was similar to that proposed by Northpower itself).

11.7 In response to our request for technical feedback, Transpower proposed an alternative approach which removed any discretion from the reduction event. Transpower explained its proposal as follows:

> "Unlike the adjustments to AMDR and ATGE baseline, which are one-off adjustments, the adjustment to LATGE will be annual for eight years. It is possible there will be multiple LATGE adjustments for the same customer if there is more than one reduction event for the customer."
>
> "To eliminate Transpower discretion in the adjustment of LATGE, we propose the alternative TPM amendments below. These amendments:
>
> - reduce LATGE by the same proportion ATGE is reduced to maintain a stable RCAF;
> - phases out the LATGE reduction as measured LATGE catches up, using the simplifying assumption that the reduction event occurred exactly in the middle of a financial year; and
> - accommodates the possibility of multiple reduction events for the same customer."

11.8 The Authority considered Transpower's alternative proposal and decided that it meets the consulted policy intent.

11.9 The proposed amendments are to the calculation of a customer's lagged average total gross energy (LATGE) in clause 71(2) and new clause 71(3) of the TPM. This enables a reduction event to flow through into the calculation of the customer's residual charge adjustment factor (RCAF) in clause 71(1).

12 Regulatory statement for the proposed amendments

Objective of the proposed amendments

12.1 The objectives of the proposed amendments are described against each of the issues set out in this paper.

The proposed amendments

12.2 The proposed amendments are described against each of the issues set out in this paper and shown as tracked changes in a marked-up version of the TPM included in Appendix A.

The proposed amendments' benefits are expected to outweigh their costs

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

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

Counterfactual

12.5 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 amendments are all to correct issues in the TPM where the consulted policy intent is not fully achieved due to minor drafting issues, mistakes in formulae, or small omissions.

12.6 The TPM has not yet come into force and in the Authority's view its underlying policy intent is clear and was extensively consulted on. This should mean that parties will not be unduly affected by the amendments, as the amendments simply correct the TPM drafting to reflect the consulted policy intent, which should be widely understood.

12.7 The Authority has considered whether there are readily available alternatives to the TPM amendments it has proposed but considers that there generally are not. This is because the amendments are generally in the nature of corrections to things like existing formulae or addressing a minor point which has been omitted. There are therefore no clear alternatives to address the issues without getting back into substantive policy issues which have already been consulted on and addressed.

Efficiency

12.8 The Authority agrees with Transpower's view that all of the proposed amendments support the efficiency limb of the Authority's statutory objective by correcting issues to bring the TPM drafting in line with the consulted policy intent of the TPM. The amendments achieve that policy intent which itself the Authority determined was necessary or desirable to promote the efficient operation of the electricity industry. The Authority considers that it further promotes efficiency by providing greater clarity in the TPM thereby supporting its successful implementation.

Competition

12.9 The proposed amendments are not expected to have a material impact on competition in the electricity market.

Reliability

12.10 The proposed amendments are not expected to have a material impact on the reliable supply of electricity to consumers.

Summary

12.11 The table below summarises the benefits of the proposed amendments. The costs involved with the change are minor administrative costs that we expect will be outweighed by the benefits.

Efficient operation of the industry	Promotes efficient operation by contributing to the successful implementation of the TPM.
Competition	N/A
Reliability	N/A
Overall (long-term benefits to consumers)	Promotes the long-term benefits to consumers by contributing to the successful implementation of the TPM.

Alternative means of achieving the objective

12.12 As discussed above, the Authority has identified doing nothing, or in some cases considered whether there were any feasible alternative means of addressing the identified issues. The Authority concludes that making the proposed amendments is the right approach.

The proposed amendments comply with section 32(1) of the Act

12.13 The Authority's objective under section 15 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.

12.14 Section 32(1) of the Act says the Code may contain any provisions that are consistent with the Authority's objective and are necessary or desirable to promote one or all of the following:

Table 1: How the proposed amendment complies with section 32(1) of the Act

(a) competition in the electricity industry	The proposed amendments are not expected to have a material impact on competition in the electricity market
(b) the reliable supply of electricity to consumers	The proposed amendments are not expected to have a material impact on the reliable supply of electricity to consumers.
(c) the efficient operation of the electricity industry	The proposed amendments are expected to result in more efficient operation of the electricity industry
(d) the performance by the Authority of its functions	The proposed amendments are not expected to have a material impact on the Authority's performance of its statutory functions.
(e) any other matter specifically referred to in this Act as a matter for inclusion in the Code	The proposed amendments will help achieve the Authority's setting of a pricing methodology for Transpower under section 32(4)(b) of the Act.

The Authority has given regard to the Code amendment principles

12.15 When considering Code amendments, we are required by our Consultation Charter[18] to have regard to the following Code amendment principles, to the extent we consider them to be applicable. **Table 2** describes the Authority's regard for the Code amendment principles in the preparation of the proposed Code amendments.

Table 2: Regard for Code amendment principles

Principle	Comment
Lawful	The proposed amendments are lawful and consistent with the statutory objective and with the empowering provisions of the Act.
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.
Net benefits are quantified	Net benefits are not able to be accurately quantified, so the Authority's assessment is qualitative.
Preference for small-scale 'trial and error' options	Not applicable. Principles 4 – 8 apply when the assessment of costs and benefits of Code amendment options demonstrate a positive net benefit relative to the counterfactual but is inconclusive about which is the best option. Principles 4 – 8 do not apply in this case as the regulatory statement supports the proposed option.
Preference for greater competition	Not applicable.
Preference for market solutions	Not applicable.
Preference for flexibility to allow innovation	Not applicable.
Preference for non-prescriptive options	Not applicable.
Risk reporting	Not applicable.

[18] The consultation charter is one of the Authority's foundation documents and is available at: [Foundation documents — Electricity Authority (ea.govt.nz)]

Appendix A How to make a submission

A.1 The Authority's preference is to receive submissions in electronic format (Microsoft Word). Submissions in electronic form should be emailed to network.pricing@ea.govt.nz with 'Consultation Paper— settlement residue allocation methodology' in the subject line.

A.2 If you cannot send your submission electronically, please contact the Authority at network.pricing@ea.govt.nz to discuss alternative arrangements.

A.3 Please note the Authority wants 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 that part should not be published.

(c) Provide a version of your submission that can be published (if the Authority agrees not to publish your full submission).

A.4 If you indicate there is a part of your submission that should not be published, we will discuss with you before deciding whether to not publish that part of your submission.

A.5 However, please note that all submissions received, including any parts that are not published, can be requested under the Official Information Act 1982. This means the Authority would be required to release material that was 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.

A.6 Please deliver your submissions by **5pm on Monday 31 October 2022**.

A.7 We will acknowledge receipt of all submissions electronically. Please contact the Authority at network.pricing@ea.govt.nz or if you do not receive electronic acknowledgement of your submission within two business days.