Transmission pricing methodology technical amendments

Consultation paper

Implementing regulatory asset base indexation and clarifying the simple method benefit-based charge cap

1 August 2025

ELECTRICITY AUTHORITY
TE MANA HIKO

Executive summary

The Electricity Authority Te Mana Hiko (Authority) adopted a new transmission pricing methodology (TPM), which came into effect in April 2023. By providing clearer transmission pricing signals to support timely and well-placed investment, the TPM better supports the electrification of the economy and paves the way for new and emerging technologies, which will bring substantial benefits to consumers in the future.

This paper sets out two proposed technical amendments to the TPM that will ensure it continues to function as intended and brings ongoing benefits to consumers:

- **Implementation of indexation:** Consequential changes to the TPM the Authority considers are necessary due to the Commerce Commission's (Commission) decision to index Transpower's regulatory asset base (RAB) as part of Transpower's regulation under Part 4 of the Commerce Act 1986 (Commerce Act).[1] These changes aim to ensure the TPM remains consistent with Commerce Act regulation and works as intended.
- **Clarification to the simple method benefit-based charges cap:** Standardise the allocators used in the simple method benefit-based charges (BBC) cap formula to ensure a consistent calculation of the cap in any pricing period.

Implementation of indexation

As part of the regulation of electricity lines services under Part 4 of the Commerce Act, the Commission sets Transpower's maximum allowable revenue every five years in the price-quality path. From 1 April 2025, the Commission has decided to set Transpower's maximum allowable revenue based on annual revaluations of its RAB (indexing the RAB for inflation). This change was made in the Commission's 2023 Input Methodologies review.[2] Indexing the RAB for inflation pushes Transpower's recovery of capital costs further into the future, compared to the approach used previously.[3]

The Commission's decision to apply indexation to Transpower's RAB means we need to make a consequential change to the TPM, to remain consistent with Commerce Act regulation and with the Authority's original policy intent. That policy intent is that the approach to valuation and depreciation of assets in the TPM should be consistent with the approach used for the annual cost recovery profile under Transpower's individual price-quality path, as determined by the Commission under Part 4 of the Commerce Act.

The Commission's indexation decision removes this required consistency. Our proposed amendment is necessary to bring the TPM back into alignment with the Authority's intended policy objectives. If we did not make this change there would be a workability issue within the TPM, whereby the asset revaluation for indexation would have introduced a second, overlapping inflation allowance, resulting in a double counting of inflation. This would distort

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1 Regulatory asset base or RAB means Transpower's record of commissioned assets and their depreciated values, used by the Commerce Commission to calculate maximum revenue.

2 Transpower-Input-Methodologies-IM-Review-2023-Amendment-Determination-13-December-2023.pdf (comcom.govt.nz) and Transpower-Input-Methodologies-Amendment-Determination-2024-29-August-2024.pdf (comcom.govt.nz)

3 Part-4-IM-Review-2023-Final-decision-Risks-and-Incentives-topic-paper-13-December-2023.pdf (comcom.govt.nz)

incentives for efficient use of the grid, as well as entry and investment, by transmission customers.

Proposed solution

To resolve this issue, we propose amending the TPM to be consistent with the Commission's indexation approach, ensuring that cost recovery is again aligned with the methodologies set under Part 4 of the Commerce Act.

As asset value inputs to BBCs and connection charges are reflected with a two-year delay, the first pricing year when BBCs and connection charges would reflect revaluations, consistent with the Commission decision, would be the pricing year starting 1 April 2027.

Clarification to the simple method benefit-based cap

Transpower has identified a timing-related issue in the current calculation of the simple method benefit-based charge cap (SMBC). The SMBC was designed to avoid new customers being allocated disproportionately high charges that could discourage efficient entry and investment as detailed in the consultation paper *TPM amendment to correct adjustment for entry of a new customer.*[4]

The current formula is overly sensitive to when and in what order adjustment events (such as new customer connections) are processed. This can result in lower caps for later-arriving customers and inconsistencies depending on when other adjustment events are processed. This could create arbitrary outcomes, depending on the timing of connection, and could inefficiently affect new customers' entry decisions.

Proposed solution

The proposed amendment involves changing the SMBC formula so it always uses the same customer allocations that applied at the start of the relevant (five-year) simple method period. This change would ensure the result of the cap calculation is the same regardless of when the adjustment occurs within the five-year simple method period.

Both of these proposed technical amendments will help to ensure the TPM continues to function as intended. This will support timely and well-placed investment, support the electrification of the economy and bring substantial benefits to consumers in the future.

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4 Refer to: TPM amendment to correct adjustment for entry of a new customer

Contents

1. What you need to know to make a submission

What this consultation is about

1.1. The purpose of this paper is to consult with interested parties on the Authority's proposal to amend the transmission pricing methodology (TPM) to:

(a) align the cost inputs for transmission charges with Transpower's regulation under Part 4 of the Commerce Act so that the approach to valuation and depreciation of assets in the TPM is consistent with the approach used for the annual cost recovery profile under Transpower's individual price-quality path, as determined by the Commission under Part 4 of the Commerce Act.

(b) Standardise the allocators used in the simple method BBC cap (SMBC) formula to ensure a consistent calculation of the cap in any pricing period.

1.2. Clause 12.94A(1)(b) of the Code provides that the Authority may amend the TPM where it is satisfied on reasonable grounds regarding any of the matters in section 39(3) (in which case sections 39(1)(b) and (c) of the Act will not apply to the amendment – the requirement to prepare a regulatory statement and to consult on the amendment and regulatory statement).

1.3. The matters in section 39(3) 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)).

1.4. The amendment to apply indexation within the TPM is considered a technical and non-controversial change. It is intended to realign the TPM with its original policy objective, which is to adopt the same methodology used in Transpower's price-quality path. This matter was consulted on in earlier consultations (including on the proposed TPM Guidelines in 2019). Given the Commerce Commission decision to index Transpower's RAB, it is necessary for the TPM to reflect this change.

1.5. The amendment to the SMBC is considered technical and non-controversial as it standardises the allocators used in the SMBC formula to avoid unintended inconsistencies in its application.

1.6. Both amendments relate to policy that was previously consulted on, resulting in the TPM in its current form. We therefore consider that there has been adequate prior consultation on the underlying policy that the amendments seek to implement and all relevant views have been considered.

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 Authority

considers that the substance of the policy underlying the relevant provisions has been consulted on previously, with the relevant issues addressed in the Authority's final decision on the TPM Guidelines and the TPM. The focus of this consultation is therefore on the technical drafting of the particular provisions identified as potentially requiring clarification/correction. A regulatory statement has also been provided for completeness.

How to make a submission

1.9. The Authority's preference is to receive submissions in electronic format (through the Authority's information provision platform info.ea.govt.nz) using the questions in Appendix B. Submissions in electronic form should be uploaded to https://info.ea.govt.nz/sl/76125a

1.10. If you cannot send your submission electronically or would prefer to send a Microsoft Word submission, please email to network.pricing@ea.govt.nz.

1.11. 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).

1.12. If you indicate that a 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.

1.13. 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.

When to make a submission

1.14. Please deliver your submission by 5pm on Friday 29 August 2025.

1.15. Authority staff will acknowledge receipt of all submissions electronically. Please contact the Authority network.pricing@ea.govt.nz or 04 460 8860 if you do not receive electronic acknowledgement of your submission within two business days.

2. Implementation of indexation

The existing arrangements

2.1. Transpower, owner and operator of the national grid, is regulated as part of the regulation of electricity lines services under Part 4 of the Commerce Act. Transpower's allowable revenues are determined by the Commerce Commission (the Commission) in five-yearly terms known as regulatory control periods. Transpower's Regulatory Control Period 4 (RCP4) commenced on 1 April 2025.

2.2. For RCP4 onwards, the Commission has decided to set the maximum allowable revenue to reflect revaluations of Transpower's regulatory asset base (RAB) based on Consumer Price Index inflation (rather than the RAB being fixed in nominal terms). This new approach is known as RAB indexation. The change was made in the Commission's 2023 Input Methodologies review and took effect at the start of RCP4 on 1 April 2025.

2.3. The introduction of RAB indexation has several effects on Transpower's allowable revenues. The increase in asset value resulting from RAB indexation is treated as a gain, which reduces Transpower's allowable revenues in the near term. However, Transpower's return on capital, and return of capital through depreciation, will increase over time as the asset base increases with indexation, which will increase Transpower's allowable revenues in the future.

2.4. The overall effect of RAB indexation is to push the recovery of a greater proportion of capital costs further into the future. Transpower will be allowed to recover a total allowable revenue that is equivalent to the previous approach in present value terms, but the timing of revenue collection is deferred.

2.5. The cost calculations in the current TPM do not provide for a revaluation component. For reasons discussed further below, the Authority considers that changes to the TPM are required to accommodate this.

Issues with existing arrangements

2.6. The 2019 issues paper sets out the Authority's proposal regarding capital cost:[5]

For pre-2019 benefit-based investments, we propose to determine the capital cost and cost of capital recovered in each year so they are the same as Transpower's annual recovery of those capital components under Transpower's individual price-quality path determined by the Commerce Commission under Part 4 of the Commerce Act ('the Commerce Commission method'). This then determines the recovery profile of the covered cost over time. The Commerce Commission's method currently values assets at their depreciated historical cost (DHC)….. If the Commerce Commission adjusted the Commerce Commission method, the annual charges for pre-2019 benefit-based investment would be adjusted accordingly.

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5 Refer to: https://www.ea.govt.nz/documents/1905/25466TPM-Issues-Paper-30-July-2019-full-document.pdf page 126

2.7. In the *Transmission pricing methodology 2020 Guidelines and process for development of a proposed TPM Decision paper,* the Authority decided that DHC would apply for both pre 2019 BBIs and post 2019 BBIs.[6] One of the key reasons being:

the Authority's approach is consistent with the cost recovery profile used by the Commerce Commission in its decisions on Transpower's Input Methodologies, which could promote certainty for investment and reduce administration costs

2.8. Due to the Commission's introduction of RAB indexation, in the absence of an amendment the TPM would no longer align with its original policy intent, which was to have consistency with the cost recovery profile used by the Commission in its decisions on Transpower's Input Methodology.

2.9. In addition, if the Authority did not make this consequential change, there would be a workability issue where inflation is double counted. The nominal Weighted Average Cost of Capital (WACC), which is used in calculating charges under the TPM, already includes an inflation allowance. The asset revaluation for indexation will introduce a second, overlapping inflation allowance, resulting in a double counting of inflation. This could lead to inefficient decisions made by transmission customers relating to investment and use of the grid.

Proposed amendment to address issue

2.10. The Authority is proposing to amend the TPM to incorporate indexation, with the intention that the costs recovered through the TPM remain broadly aligned with the way costs are calculated under Part 4 of the Commerce Act.

2.11. To address the consequential effect of the RAB being indexed and restore consistency, it is necessary to introduce a negative revaluation adjustment in TPM formulae. This adjustment offsets the inflation already embedded in the nominal WACC and aligns the TPM with the Commission's approach to indexation under Part 4 of the Commerce Act. This amendment improves the workability and consistency of the TPM, ensuring that inflation is accounted for only once across all charge types.

2.12. Aligning with the way costs are calculated under Part 4 of the Commerce Act aims to ensure that the TPM remains efficient, functional, and durable as a framework for the allocation of transmission costs.

2.13. Additionally, we have made an amendment to the drafting for connection charges to change the abbreviation used (CC) to CONC to avoid confusion with the abbreviation used in the covered cost calculations which also uses CC. We also removed a typo spotted in clause 27(2)(d) where it referred to "cand" instead of "and".

2.14. The proposed drafting for the RAB indexation implementation is detailed in Appendix A of this document.

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6 Refer to: https://www.ea.govt.nz/documents/1887/26851TPM-Decision-paper-10-June-2020.pdf page 56

Why the Authority is addressing this now

2.15. Under the TPM, asset value inputs to BBCs and connection charges are reflected with a two-year delay. This is because the TPM requires audited asset values for applying to RAB Indexation. The audited value of a new asset only becomes known the year after it is installed, meaning the earliest it can be included in TPM pricing is the start of the next financial year.

2.16. Accordingly, the first pricing year when BBCs and connection charges would reflect revaluations consistent with the Commerce Commission's indexation decision would be the pricing year starting 1 April 2027.

2.17. Addressing this issue now will allow Transpower enough time to implement the changes in its systems for the first pricing year it will take effect (beginning in April 2027).

2.18. Further, the problems created by an inconsistency with the cost recovery profile used by the Commission will grow over time with the sums involved. Accordingly, it is better to address the issue as soon as possible after the Commission's decision.

Q1. Do you agree the issues identified by the Authority are worthy of attention, and that the proposed changes effectively address those issues?

3. Clarification to the simple method BBC cap

The existing arrangements

3.1. On 27 February 2024, the Authority decided to adopt Code amendments to correct an issue with the simple method adjustment provision that sets transmission charges for new customers.[7] As outlined in the January 2024 consultation paper, this dealt with an issue where new generators could be subject to very high charges that are not proportionate to the benefits they receive from the relevant investments, risking discouraging efficient new entry and investment in the electricity industry.[8]

3.2. The amendments addressed the issue by applying a dollar per MWh cap (the SMBC), which was to be based on charges payable by an identified comparator customer (or customers). The method involves:

(a) applying the adjustment allocation;

(b) comparing the allocation (in dollars per MWh) to that of the comparator(s) that is electrically closest to the new connection location; and

(c) adopting the lower of the standard or the comparator allocation.

3.3. The purpose of the cap is to ensure a new customer does not incur disproportionately high BBCs for existing low-value benefit-based investments (BBIs).

Issues with existing arrangements

3.4. Transpower has identified that the calculation of the SMBC is overly sensitive to the timing and order of recognition of adjustment events, due to the differences in inputs between the simple method BBI adjustment calculation for the new customer and the SMBC formula. In particular:

(a) later arriving new customers (or customers who are impacted when analogous adjustment events are processed) will tend to have a lower cap than earlier arriving ones; and

(b) differences in when other adjustment events are recognised and reflected in simple method allocations and BBCs affect the outcome of the SMBC calculation.

3.5. This timing sensitivity arises from the way the variable BBCj total is defined in the SMBC formula.[9] Transpower uses BBCj total as at the date of the relevant adjustment event, which it refers to as the BBCj total Calculation Date. The date of the 'relevant adjustment event' may occur at different times e.g. for some events at the start of the pricing year, rather than the actual exit date (as is noted in 3.6(b).

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7 Refer to: TPM amendment to correct adjustment for entry of a new customer

8 Refer to: Amendment to correct simple method adjustment issue | Our consultations | Our projects | Electricity Authority

9 *BBCj total is customer j's total annual benefit-based charges for BBIs under the simple method, for the current pricing year and regional customer group in which customer j's connection location is located*

3.6. Two key issues arise from this:

(a) When a regional customer group is growing, later entrants connecting similar plant may face a lower SMBC than earlier ones.

(b) Other adjustment events affecting a customer's BBC may occur before the BBCj total Calculation Date but not yet be reflected due to inconsistency in timing rules for adjustment events. For example, after a customer exit, Transpower is not required to increase the remaining customers' BBCs until the next pricing year.

3.7. This issue could result in two customers connecting similar plants in the same region receiving different SMBCs due to differences in timing of the connection. The difference would be accentuated if their connections occur on either side of a new pricing year. This may lead to one of two or more otherwise similar customers incurring significantly higher BBCs. The differences in charges resulting from the different timing could be substantial, particularly if in the meantime there were connections (or disconnections) of substantial load (eg, data centres).

3.8. The resulting differences in charges could affect customers' decisions to enter, in a way that would have the potential to lead to inefficiencies. Investment decisions should ideally be influenced by efficient price signals, not by unexpected outcomes resulting from the calculation method. It would be difficult to quantify the magnitude of the inefficiency resulting from this issue; however, it has the potential to be material, given the frequency of adjustment events.

3.9. For more information regarding the issue identified please refer to Transpower's proposal form attached alongside this consultation paper.

Proposed amendment to address issue

3.10. To address these issues, the Authority proposes to amend the SMBC calculation by standardising the reference point for customer allocations used in determining BBCj total (consistent with Transpower's proposal). Instead of assessing the calculation by reference to the timing of individual adjustment events, customer allocations would be pegged to the values that applied at the start of the relevant simple method period (or 1 April 2023 for the first simple method period which started on 24 July 2019).

3.11. The group of comparator customers would be limited to those that existed at the start of the simple method period, using their intra-regional allocator values from that time.

3.12. This approach would ensure consistency in how BBC adjustments are incorporated into the SMBC calculation, mitigating the impact of timing variations. It would correct an unintended result and help to ensure that investment decisions are based on efficient price signals and system requirements, rather than being overly influenced by features of the calculation method.

3.13. Additionally, we propose to clarify that the SMBC calculation should use current covered cost rather than historic costs to calculate BBCj total. Using historic covered cost values in the BBCj total calculation would be inconsistent with the SMBC condition in clause 83(5A), as it would mix old and current cost figures.

3.14. This refinement aligns with existing principles applied to benefit factors for adjustments affecting Appendix A BBIs and will reduce administrative complexity while improving predictability in cost allocations.

3.15. This amendment would take effect immediately if a decision to progress it is made (expected decision by December 2025).

3.16. 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 amendments.

Q2. Do you agree the issues with the SMBC are worthy of attention, and that the proposed changes effectively address those issues?

4. Regulatory statement for the proposed amendment

4.1. In this section we provide a regulatory statement for the two proposed technical amendments in this consultation paper:

(a) Implementation of indexation

(b) Clarification of simple method BBC cap.

Implementation of Indexation

Objectives of the proposed amendment

4.2. The changes we propose to make are intended to ensure that costs in the TPM remain broadly aligned with the way costs are calculated under Part 4 of the Commerce Act 1986 and the original policy intent of the TPM. This alignment is intended to ensure, as far as reasonably possible, that these costs, when applied together with the TPM's allocation approaches, will produce allocations and charges that better reflect our main statutory objective to promote competition in, reliable supply by, and the efficient operation of, the New Zealand electricity industry for the long-term benefit of consumers.

Q3. Do you agree with the objectives of the proposed amendment? If not, why not?

The proposed amendment

4.3. The Authority proposes amending the TPM to incorporate new provisions and revisions to existing clauses for consistency with the Commerce Commission's changes to Part 4 of the Commerce Act. This will index the RAB, and address double-counting concerns within the relevant charges in the TPM.

4.4. The drafting of the proposed amendment is contained in Appendix A.

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

4.5. The Authority has assessed the benefits and costs of the proposed Code amendments and expects them to deliver a net benefit.

4.6. Relative to the status quo, the main expected benefit of the proposed amendment is to maintain workability and the efficiency and durability of the TPM by avoiding distortions in transmission charges that would arise if the determination of cost in the TPM is no longer aligned with the way asset values and allowable revenues are calculated and set under Part 4 of the Commerce Act.

4.7. The proposed amendment would also help reduce Transpower's ongoing administrative costs, relative to the status quo, by aligning recovery profiles with those used by the Commerce Commission in its decisions on Transpower's Input Methodologies.

4.8. The expected incremental costs of the proposed amendments are the one-off administrative costs for Transpower to change its transmission pricing system to implement the change. We do not expect these costs to be significant in the context of the RAB indexation decision.

Q4. Do you agree the benefits of the proposed amendment outweigh its costs?

The Authority has not identified other workable means for addressing the objectives

4.9. As outlined throughout this consultation, maintaining the current approach could compromise the long-term durability of the TPM through diverging from the original policy intent. Without implementing indexation in the TPM there will be workability issues related to double counting of inflation. Consequently, maintaining the status quo in the TPM is not considered to be a viable option and no other options have been identified.

The proposed amendment is preferred to no change

4.10. The Authority's view is that the proposed amendment is the preferred option, for the reasons listed above. It would maintain consistency with the policy intent and avoid the double counting of allowances for inflation that would result without the proposed amendments, which the Authority considers would significantly distort TPM charges, and so lead to inefficient investment and grid use.

Q5. 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 objectives in section 15 of the Electricity Industry Act 2010.

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

4.11. 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. 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 and is not relevant to the proposed amendment.

4.12. 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).

4.13. The Authority considers the proposed amendment falls within section 32(1)(a) in that it is necessary or desirable to promote competition and efficient operation of the electricity industry through aligning the way costs are calculated under Part 4 of the Commerce Act. This alignment aims to ensure that these costs, when applied together with the TPM's allocation approaches, will produce allocations and charges that better reflect the policy intent of the TPM.

4.14. For completeness, the amendment is permitted by section 32(4)(b) of the Act as it relates to the setting of a pricing methodology for Transpower, which section 32(4)(b) provides may be contained in the Code.

Q6. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?

The Authority has given regard to the Code amendment principles

4.15. When considering amendments to the Code, the Authority is required by its Consultation Charter to have regard to the Code amendment principles, to the extent that the Authority considers that they are applicable. The amendment provides a clear case for regulation and the costs and benefits have been summarised above.

Table 1: Regard for Code amendment principles

Principle	Consideration
1. Clear case for regulation: The Authority will only consider amending the Code when there is a clear case to do so	The case for this regulation is discussed in section 2 above. The current TPM no longer aligns with its original policy intent, when designing the TPM which was to have consistency with the cost recovery profile used by the Commission in its decisions on Transpower's Input Methodology. This does not allow for RAB indexation. In addition to this, if the Authority does not address this misalignment, there is a workability issue that occurs where inflation is double counted resulting in disproportionate charges.
2. Costs and benefits are summarised	The costs and benefits of the Code amendment proposal are set out in the evaluation of the costs and benefits in this section 4. The Authority considers key benefits of the Code amendment proposal include: • maintaining workability • maintaining efficiency and durability of the TPM by avoiding distortions in transmission charges The costs associated with the change • administrative cost for Transpower to update system

Simple method BBC cap

Objectives of the proposed amendment

4.16. The purpose of the proposed amendment to the SMBC is to standardise the calculation of the SMBC within the TPM, to avoid affecting customer entry decisions in a way that would have the potential to lead to inefficiencies.

4.17. The current methodology is overly sensitive to the timing and order of recognition of adjustment events, which has the potential to lead to unintended differences in the cap based on timing and order of entry by new customers.

Q7. Do you agree with the objectives of the proposed amendment? If not, why not?

The proposed amendment

4.18. The drafting of the proposed amendment is contained in Transpower's proposal form alongside this consultation paper.

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

4.19. The proposed amendment is expected to improve the workability of the SMBC calculation, addressing inconsistencies that could otherwise result in unintended outcomes for customers. By refining the methodology, Transpower considers that the amendment contributes to the efficiency limb of the Authority's statutory objective, ensuring the TPM operates as intended.

4.20. The Authority agrees with Transpower's assessment that the proposed amendment reinforces the efficiency limb of the Authority's statutory objective by addressing issues in the TPM's drafting. The amendment is a clarification to ensure that the TPM reflects the policy decisions implemented in February 2024 and deemed necessary to promote the efficient operation of the electricity industry. Further, the Authority considers that improving clarity in the TPM supports its successful implementation, reducing uncertainty and administrative burden.

4.21. The net benefit of the proposal is positive. The expected improvements are not offset by any material costs for Transpower. The administrative and technical costs associated with implementing the changes to the Code are minimal.

Q8. Do you agree the benefits of the proposed amendment outweigh its costs?

The Authority has identified other means for addressing the objectives

4.22. The Authority has considered the option of keeping the status quo, which would mean that the SMBC calculated for later arriving customers would be lower than for earlier arrival customers. However, we did not see this option as workable, as the intent of the SMBC was that it was an absolute for the pricing period (which the current formula does not achieve).

Q9. 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 objectives in section 15 of the Electricity Industry Act 2010.

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

4.23. 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. 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, and is not relevant to the proposed amendment.

4.24. 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).

4.25. The Authority considers that the proposed amendment falls within section 32(1)(c) in that it is necessary or desirable to promote the efficient operation of the electricity industry for the reasons set out above.

4.26. For completeness, the amendment is permitted by section 32(4)(b) of the Act as it relates to the setting of a pricing methodology for Transpower, which section 32(4)(b) provides may be contained in the Code.

Q10. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?

The Authority has given regard to the Code amendment principles

4.27. When considering amendments to the Code, the Authority is required by its Consultation Charter to have regard to the Code amendment principles, to the extent that the Authority considers that they are applicable. The amendment provides a clear case for regulation and the costs and benefits have been summarised above.

Table 1: Regard for Code amendment principles

Principle	Consideration
3. Clear case for regulation: The Authority will only consider amending the Code when there is a clear case to do so	The case for this regulation is discussed in section 3 above. The current formula in the TPM for the simple method BBC cap is overly sensitive to when and in what order adjustment events are processed. This can result in lower caps for later-arriving customers and inconsistencies depending on when other adjustment events are processed. This may create arbitrary outcomes.
4. Costs and benefits are summarised	The costs and benefits of the Code amendment proposal are set out in the evaluation of the costs and benefits in this section 4. The Authority considers key benefits of the Code amendment proposal include: • reinforces the efficiency limb of the Authority's statutory objective by addressing issues in the TPM's drafting. The cost includes: • administrative charge for Transpower to update system. This is not expected to be material.

Appendix A Proposed amendment: implementation of indexation

revaluation means—

(a) for a **connection asset** or **anticipatory connection asset** and **financial year**, the amount calculated under clause 27A for the asset and **financial year**; and

(b) for an asset comprised in a **BBI** (other than an **anticipatory BBI**) and a **financial year**, the amount calculated under subclause 39(2A) for the asset and **financial year**

Part C Connection Charges

24 Calculation of Connection Charges

(1) Only **customers** connected to **connection assets** pay **connection charges**.

(2) A **customer's annual connection charge** for a **connection asset**, **connection location** and **pricing year** (CONC) is calculated as follows:

$$CONC = \big((A + FA + M + O) \times CA\big) - RBT$$

where

A is the asset component for the **connection asset** and **pricing year** calculated under clause 26

FA is the **customer's funded asset** component for the **connection asset** and **pricing year** calculated under clause 28

M is the maintenance component for the **connection asset** and **pricing year** calculated under clause 30

O is the operating component for the **connection asset** and **pricing year** calculated under clause 31

CA is the **customer's connection customer allocation** for the **connection asset**, **connection location** and **pricing year**

RBT is the **customer's funded asset** rebate for the **connection asset**, **connection location** and **pricing year** calculated under clause 29.

(3) A **customer's annual connection charge** for a **connection location** and **pricing year** (ACC) is calculated as follows:

$$ACC = \sum_{a} CC_a$$

where CC_a is the **customer's annual connection charge** for **connection asset** a for the **connection location** and **pricing year**.

(4) A **customer's annual connection charge** for a **connection transmission alternative** and **pricing year** (TACC) is calculated as follows:

$$TACC = TAC \times \frac{\sum_l ACC_l}{\sum_l ACC_{l\ total}}$$

where

TAC — is the **TA opex** for the **connection transmission alternative** and preceding **financial year**, less any contribution to the **TA opex** under **investment agreements**

ACC_l — is the **customer's annual connection charge** for **connection location** l and the previous **pricing year**, where **connection location** l is a **connection location** that would be connected by a **connection asset** for which the **connection transmission alternative** is an alternative

$ACC_{l\ total}$ — is the total of all **customers' annual connection charges** for **connection location** l and the previous **pricing year**.

(5) A **customer's monthly connection charge** for a **pricing year** (MCC) is calculated—

(a) for a **connection location**, as follows:

$$MCC = \frac{ACC}{12}$$

where ACC is the **customer's annual connection charge** for the **connection location** and **pricing year**; and

(b) for a **connection transmission alternative**, as follows:

$$MCC = \frac{TACC}{12}$$

where TACC is the **customer's annual connection charge** for the **connection transmission alternative** and **pricing year**.

(6) **Connection charges** are calculated for each **pricing year** before the start of the **pricing year**.

(7) A **connection charge** may be adjusted, including during a **pricing year**, under clauses 76 to 80 if there is a **connection charge adjustment event**.

25 Start of Connection Charges

Except as otherwise required under any relevant **transmission agreement**, **Transpower** must start the **connection charges** for a **connection investment** from the **connection investment's start pricing year**. To avoid doubt, this clause does not apply to charges under an **investment agreement**.

Clause 25: amended, on 31 July 2023, by clause 6 of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

26 Asset Component

(1) Subject to subclause (2), **Transpower** may designate a **connection asset**, or an actual or notional part of a **connection asset**, as anticipatory for a **pricing year** if—
   (a) the **connection asset** or part of the **connection asset** was **commissioned** at or after the start of the **first pricing year**; and
   (b) **Transpower** determines that the **connection asset** or part of the **connection asset** is not likely to be required during the **pricing year** by the **customers** connected to the **connection asset**.

(2) Once **Transpower** has designated a notional part of a **connection asset** as anticipatory for a **pricing year** under subclause (1), **Transpower** must not designate a greater notional part of the **connection asset** or the whole **connection asset** as anticipatory for any subsequent **pricing year**.

(3) A **connection asset** or part of a **connection asset** designated as anticipatory for a **pricing year** under subclause (1) is an **anticipatory connection asset** for the **pricing year**. If the **anticipatory connection asset** is part of a larger **connection asset** then, for the purposes of this clause 26 and clause 27, the larger **connection asset** is treated as two separate **connection assets** for the **pricing year**, being the **anticipatory connection asset** and the part of the larger **connection asset** that is not anticipatory for the **pricing year**.

(4) Whether or not a **connection asset** or part of **a connection asset** is an **anticipatory connection asset** for a **pricing year** must be determined by **Transpower** having regard to the extent to which—
   (a) the **customers** connected to the **connection asset** have agreed to fund the **connection asset** under **investment agreements**; and
   (b) the **connection asset** is likely to be required to meet the requirements of the **customers** connected to the **connection asset** and cover reasonable **grid** contingencies during the **pricing year**.

(5) Half of the capital cost of an **anticipatory connection asset** is recovered through the asset component of **connection charges**. The other half of the capital cost of the **anticipatory connection asset** is recovered through **benefit-based charges** for the relevant **anticipatory BBI** (see clause 27).

(6) The asset component of the **connection charge** for a **connection asset** and **pricing year** (A) allocates a portion of the capital cost of all **connection assets** to the **connection asset**, and is calculated as follows:

$$A = (ARR \times RC) + (DARR \times RC')$$

where

ARR is the **connection asset** return rate for the **pricing year** calculated under subclause (7)

RC is—
   (a) 0 if the **connection asset** is an **investment agreement asset** or **anticipatory connection asset**; or
   (b) otherwise, the **replacement cost** of the **connection asset** at the end of the preceding **financial year**

DARR is the discounted **connection asset** return rate for the **pricing year** calculated under subclause 0

RC′ is—
   (a) 0 if the **connection asset** is an **anticipatory connection asset**; or
   (b) otherwise, the **replacement cost** of the **connection asset** at the end of the preceding **financial year** (even if the **connection asset** is an **investment agreement asset**).

(7) The **connection asset** return rate for a **pricing year** (ARR) is calculated as follows:

$$ARR = \frac{\left(r \times \left(V_{total} - V_{total\ anticipatory}\right)\right) + \left(D_{total} - D_{total\ anticipatory}\right) - \left(RV_{total} - RV_{total\ anticipatory}\right)}{RC_{total}}$$

where

r	is **Transpower's PQ WACC** (pre-tax) for the **pricing year**
V_{total}	is the total **closing RAB value** of all **connection assets** for the preceding **financial year**
$V_{total\ anticipatory}$	is the part of V_{total} attributable to **anticipatory connection assets**, as determined by **Transpower**
D_{total}	is total **depreciation** of all **connection assets** other than **investment agreement assets** during the preceding **financial year**, excluding **accelerated depreciation**
$D_{total\ anticipatory}$	is the part of D_{total} attributable to **anticipatory connection assets**, as determined by **Transpower**
RV_{total}	is total **revaluation** for all **connection assets** and the preceding **financial year**
$RV_{total\ anticipatory}$	is the part of RV_{total} attributable to **anticipatory connection assets**, as determined by **Transpower**
RC_{total}	is the total **replacement cost** of all **connection assets** other than **investment agreement assets** and **anticipatory connection assets** at the end of the preceding **financial year**.

(8) The discounted **connection asset** return rate for a **pricing year** (DARR) is calculated as follows:

$$DARR = \frac{\left(r \times V_{total\ anticipatory}\right) + D_{total\ anticipatory} - RV_{total\ anticipatory}}{RC'_{total}} \times 0.5$$

where

r	is **Transpower's PQ WACC** (pre-tax) for the **pricing year**
$V_{total\ anticipatory}$	is the part of the total **closing RAB value** of all **connection assets** for the preceding **financial year** attributable to **anticipatory connection assets**, as determined by **Transpower**
$D_{total\ anticipatory}$	is the part of total **depreciation** of all **connection assets** other than **investment agreement assets** during the preceding **financial year**, excluding **accelerated depreciation**, attributable to **anticipatory connection assets**, as determined by **Transpower**

$RV_{total\ anticipatory}$ is total **revaluation** for all **anticipatory connection assets** and the preceding **financial year**

RC'_{total} is the total **replacement cost** of all **connection assets** (including **connection assets** that are **investment agreement assets**) other than **anticipatory connection assets** at the end of the preceding **financial year**.

Clause 26(4)(a) and (b): amended, on 31 July 2023, by clause 7 of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

27 Anticipatory BBIs

(1) The **benefit-based charges** for **anticipatory BBIs** recover the part of the capital cost of **anticipatory connection assets** that is not recovered through the asset component of **connection charges**, specifically half of that capital cost.

(2) For each **anticipatory connection asset** for a **pricing year** there is deemed to be a **commissioned BBI** (an **anticipatory BBI**) for the **pricing year** (only for the purpose of recovering half of the capital cost of the **anticipatory connection asset**)—

(a) that comprises the **anticipatory connection asset**; and

(b) that has a **covered cost** for the **pricing year** (CVC) calculated as follows:

$$CVC = \left(\left(r \times V_{anticipatory}\right) + \mathrm{D}_{anticipatory} - RV_{anticipatory}\right) \times 0.5$$

where

r is **Transpower's PQ WACC** (pre-tax) for the **pricing year**

$V_{anticipatory}$ is the part of the total **closing RAB value** for the preceding **financial year** attributable to the **anticipatory connection asset**, as determined by **Transpower**

$D_{anticipatory}$ is the part of total **depreciation** during the preceding **financial year,** excluding **accelerated depreciation**, attributable to the **anticipatory connection asset**, as determined by **Transpower**

$RV_{anticipatory}$ is **revaluation** for the **anticipatory connection asset** and preceding **financial year**; and

(c) for which the **start pricing year** is the **pricing year**; and

(d) for which a **customer's individual NPB** is calculated under the **simple method**, subject to the modifications in subclause (3) and even if the **anticipatory BBI's** deemed **covered cost** for the **pricing year** under paragraph (b)is more than the base capex threshold as defined in the **Transpower Capex IM**.

(3) The modifications referred to in paragraph 2(d) are as follows:

(a) If **Transpower** determines the **anticipatory BBI** is primarily to allow for a future increase in **offtake**, the **anticipatory BBI's regional customer groups** are limited to **regional supply groups**:

(b) If **Transpower** determines the **anticipatory BBI** is primarily to allow for a future increase in **injection**, the **anticipatory BBI's regional customer groups** are limited to **regional demand groups**.

27A Revaluation for Connection Assets and Anticipatory Connection Assets

Revaluation for a **connection asset** or **anticipatory connection asset** and **financial year** (RV) is calculated as follows:

$$RV = RV_{IM} \times \frac{FRR}{RR \times (1 - r)}$$

where

RV_{IM} is revaluation for the asset and **financial year** calculated under the **Transpower IMs**, as determined by **Transpower**

FRR is the forecast revaluation rate used to calculate the forecast revaluation component of **maximum revenue** for the **pricing year** starting immediately before the start of the **financial year**

RR is the revaluation rate for the **financial year** calculated under the **Transpower IMs**

r is the corporate tax rate, as defined in the **Transpower IMs**, at the start of the **financial year**.

28 Funded Asset Component

(1) The **funded asset** component of the **connection charge** ensures that **non-contributing customers** pay part of the capital cost of **funded assets** through their **connection charges**.

(2) A **customer's funded asset** component for a **connection asset** is 0 unless—

(a) the **connection asset** is a **funded asset**; and

(b) the **customer** is, but for the **funded asset** component, a **non-contributing customer** for the **funded asset**.

(3) Subject to subclauses (4) and (5), a **non-contributing customer's funded asset** component for a **funded asset** and **pricing year** (FA) is calculated as follows:

$$FA = TF \times \frac{EL_{remain}}{EL_{total}} \times \frac{1}{10}$$

where

TF is the total amount paid, or expected to be paid, towards the capital cost of the **funded asset** under all **investment agreements**

EL_{remain} is the remaining **economic life** of the **funded asset** at the end of the **pricing year** during which the **non-contributing customer** connected to the **funded asset**

EL_{total} is the total **economic life** of the **funded asset**, including any part of it that has elapsed.

(4) The **non-contributing customer's funded asset** component for the **funded asset** applies for 10 consecutive **pricing years** only, starting with the **pricing year** after the **pricing year** during which the **non-contributing customer** connected to the **funded asset**.

(5) If the **non-contributing customer** agrees with 1 or more **prior contributing customers** to contribute towards the capital cost of a **funded asset**—

(a) subclause (3) applies to the **funded asset** subject to that agreement; and

(b) the agreement is deemed to be an **investment agreement** for the **funded asset** (even if **Transpower** is not a party to it).

29 Funded Asset Rebate

(1) A **non-contributing customer's funded asset** component for a **funded asset** and **pricing year** is rebated to each **prior contributing customer** for the **funded asset** in respect of the **non-contributing customer**.

(2) A **customer's funded asset** rebate for a **connection asset** and **pricing year** is 0 unless—

(a) the **connection asset** is a **funded asset**; and

(b) a **non-contributing customer** pays a **funded asset** component for the **funded asset** and **pricing year**; and

(c) the **customer** is a **prior contributing customer** for the **funded asset** in respect of the **non-contributing customer**.

(3) Subject to subclause (4), **prior contributing customer** c's **funded asset** rebate of **non-contributing customer** i's **funded asset** component for a **connection location** and **pricing year** (RBT_c) is calculated as follows:

$$RBT_c = FA_i \times CA_i \times \frac{CA_c}{CA_{prior\ total}}$$

where

FA_i is **non-contributing customer** i's **funded asset** component for the **funded asset** and **pricing year**

CA_i is **non-contributing customer** i's **connection customer allocation** for the **funded asset**, **connection location** and **pricing year**

CA_c is **prior contributing customer** c's **connection customer allocation** for the **funded asset**, **connection location** and **pricing year**

$CA_{prior\ total}$ is the total of all **prior contributing customers'** (including **prior contributing customer** c's) **connection customer allocations** for the **funded asset**, **connection location** and **pricing year**.

(4) Subclause (3) applies subject to any agreement of the type referred to in subclause 28(5).

30 Maintenance Component

(1) The maintenance component of the **connection charge** for a **connection asset** and **pricing year** (M) allocates to the **connection asset** a portion of **Transpower's** total maintenance costs for all **connection assets**, and is calculated as follows:

$$M = MC \times (1 - ICR_{maint})$$

where

MC is the maintenance cost component for the **connection asset** and **pricing year** calculated under subclause (2)

ICR_{maint} is the percentage of the maintenance cost for the **connection asset** and **pricing year** expected to be recovered by **Transpower** under **investment agreements**, expressed as a decimal and no more than 1.

(2) The maintenance cost component for the **connection asset** and **pricing year** (MC) is—
  (a) if the **connection asset** is located at a **station**, the **station** maintenance cost component for the **pricing year** calculated under subclause (3); or
  (b) if the **connection asset** is a **line**, the **line** maintenance cost component for the **pricing year** calculated under subclause (5).

(3) The **station** maintenance cost component for the **connection asset** and **pricing year** ($MC_{station}$) is calculated as follows:

$$MC_{station} = MRR_{station} \times RC$$

where

$MRR_{station}$ is the **station** maintenance recovery rate for the **pricing year** calculated under subclause (4)

RC is the **replacement cost** of the **connection asset** at the end of the preceding **financial year**.

(4) The **station** maintenance recovery rate for a **pricing year** ($MRR_{station}$) is calculated as follows:

$$MRR_{station} = \frac{AMC_{station\ total}}{RC_{station\ total}}$$

where

$AMC_{station\ total}$ is the average over the preceding 4 **financial years** of **Transpower's** maintenance costs for all **connection assets** located at **stations**

$RC_{station\ total}$ is the total **replacement cost** of all **connection assets** located at **stations** at the end of the preceding **financial year**.

(5) The **line** maintenance cost component is calculated using a **line** maintenance recovery rate that depends on the **line** type. The different **line** types (all AC) used are—
  (a) 220kV or higher voltage tower **lines**; and
  (b) other tower **lines**; and
  (c) pole **lines**; and
  (d) underground cable **lines**.

(6) The **line** maintenance cost component for the **connection asset** and **pricing year** (MC_{line}) is calculated as follows:

$$MC_{line} = MRR_{line\ t} \times L$$

where

$MRR_{line\ t}$ is the **line** maintenance recovery rate for the **connection asset's line** type t and the **pricing year** calculated under subclause (7)

L is the **line** length (in km) of the **connection asset** at the end of the preceding **financial year**.

(7) Subject to subclause (8), the **line** maintenance recovery rate for **lines** of type t and a **pricing year** ($MRR_{line\ t}$) is calculated as follows:

$$MRR_{line\ t} = \frac{AMC_{line\ t\ total}}{L_{t\ total}}$$

where

$AMC_{line\ t\ total}$	is the average over the preceding 4 **financial years** of **Transpower's** maintenance costs for all **connection assets** that are **lines** of type t
$L_{t\ total}$	is the total **line** length (in km) of all **connection assets** that are **lines** of type t at the end of the preceding **financial year**.

(8) **Transpower** may estimate the **line** maintenance recovery rate for underground cable **lines** if **Transpower** determines it has insufficient data to carry out the calculation in subclause (7) for underground cable **lines**.

31 Operating Component

(1) The operating component of the **connection charge** for a **connection asset** and **pricing year** (O) allocates to the **connection asset** a portion of **Transpower's** total operating costs for all **AC assets**, and is calculated as follows:

$$O = OC \times \left(1 - ICR_{op}\right)$$

where

OC	is the operating cost component for the **connection asset** and **pricing year** calculated under subclause (2)
ICR_{op}	is the percentage of the operating cost for the **connection asset** and **pricing year** expected to be recovered by **Transpower** under **investment agreements**, expressed as a decimal and no more than 1.

(2) The operating cost component for the **connection asset** and **pricing year** (OC) is calculated as follows:

$$OC = ORR \times \left(S - (0.1 \times S_{cust})\right)$$

where

ORR	is the operating recovery rate for the **pricing year** calculated under subclause (3)
S	is the number of switches that are part of the **connection asset** at the end of the preceding **financial year**
S_{cust}	is the number of switches that are part of the **connection asset** and operated by a **customer** at the end of the preceding **financial year**.

(3) The operating recovery rate for the **pricing year** (ORR) is calculated as follows:

$$ORR = \frac{OC_{switch\ total}}{\left(S_{total} - (0.1 \times S_{cust\ total})\right)}$$

where

$OC_{switch\ total}$ is **Transpower's** total operating costs for all **AC switches** over the preceding **financial year**

S_{total} is the total number of **AC switches** at the end of the preceding **financial year**

$S_{cust\ total}$ is the total number of **AC switches** that are operated by a **customer** at the end of the preceding **financial year**.

32 Connection Customer Allocations

(1) Subject to subclause (5) and clause 33, a **customer's connection customer allocation** for a **connection asset**, **connection location** and **pricing year** (CA_1) is calculated as follows if the **connection asset** is—

(a) for 1 **connection location** only; and

(b) not a **mixed connection asset**:

$$CA_1 = \frac{AMDIC}{AMDIC_{total}}$$

where

AMDIC is the total of the **customer's AMDC** and **AMIC** at the **connection location** for the **pricing year**

$AMDIC_{total}$ is the total of all **customers' AMDCs** and **AMICs** at the **connection location** for the **pricing year**.

(2) Subject to subclause (5) and clause 33, a **customer's connection customer allocation** for a **connection asset**, **connection location** and **pricing year** (CA_{2+}) is calculated as follows if the **connection asset** is—

(a) for 2 or more **connection locations**, being the set of **connection locations** L; and

(b) not a **mixed connection asset**:

$$CA_{2+} = \frac{AMDIC}{AMDIC_{L\ total}}$$

where

AMDIC is the total of the **customer's AMDC** and **AMIC** at the **connection location** for the **pricing year**

$AMDIC_{L\ total}$ is the total of all **customers' AMDCs** and **AMICs** at all **connection locations** in the set of **connection locations** L for the **pricing year**.

(3) Subject to subclauses (4) and (5) and clause 33, a **customer's connection customer allocation** for a **connection asset**, **connection location** and **pricing year** (CA_{mixed}) is calculated as follows if the **connection asset** is a **mixed connection asset**:

$$CA_{mixed} = \frac{AMDIC}{C}$$

where

AMDIC is the total of the **customer's AMDC** and **AMIC** at the **connection location** for the **pricing year**

C is the **capacity** of the **connection asset** at the end of **CMP A** for the **pricing year**.

(4) If the sum of all **customers' connection customer allocations** for a **mixed connection asset** and **pricing year** is greater than 1, **Transpower** must scale down all of the **connection customer allocations** on a pro rata basis so that they sum to 1.

(5) If a **connection asset** is—

(a) an **investment agreement asset** provided under an **investment agreement** with a **customer**; and

(b) for more than 1 **connection location**, or for 1 **connection location** at which there is more than 1 **customer**,

then the calculation of the **connection customer allocations** for the **connection asset** and **connection locations** is subject to any provisions in the **investment agreement** that alter the **customer's connection customer allocation** for the **connection asset** and **connection locations**.

(6) The following table shows the **connection customer allocations** for the **connection assets** that are part of the **connection links** in figure 10 above (based on the **AMDC** and **AMIC** quantities shown in figure 10):

link	connection location	customer	connection customer allocation
N1-N2	N1	A	$\frac{100}{140} = 0.7143$
		B	$\frac{40}{140} = 0.2857$
N2-N3 N3-N4 N2-N4	N1	A	$\frac{100}{220} = 0.4545$
		B	$\frac{40}{220} = 0.1818$
	N3	C	$\frac{80}{220} = 0.3636$
N4-N6	N1	A	$\frac{100}{280} = 0.3571$
		B	$\frac{40}{280} = 0.1429$
	N3	C	$\frac{80}{280} = 0.2857$
	N4	D (offtake)	$\frac{40}{280} = 0.1429$
		D (injection)	$\frac{20}{280} = 0.0714$

33 De-rating

(1) This clause 33 applies if both of the following conditions are satisfied:

(a) a **customer** (the notifying **customer**) has notified **Transpower** in writing that—

(i) the notifying **customer's assets** at a **connection location** have been **de-rated**; or

(ii) **embedded plant** connected to the notifying **customer's assets** at a **connection location** have been **de-rated** and the **de-rating** is **large**:

(b) **Transpower** is reasonably satisfied the notified **de-rating** or **large de-rating** has occurred.

(2) In this clause 33, a relevant **pricing year** is—

(a) the first **pricing year** that starts at least 6 months (or such shorter period as **Transpower** may determine is practicable) after the date the conditions in subclause (1) are first satisfied; and

(b) a subsequent **pricing year** if the date the conditions in subclause (1) are first satisfied is within **CMP A** for the **pricing year**.

(3) **Transpower** must, for each relevant **pricing year**, calculate **connection charges** for the **connection location** by—

(a) estimating the notifying **customer's** future **AMDC** and **AMIC** for the **connection location** taking into account—

(i) the reduced **capacity** of the connecting **customer's assets** or the **embedded plant** (as the case may be); and

(ii) any available historical information about the notifying **customer's offtake** and **injection** at the **connection location**; and

(b) capping the notifying **customer's AMDC** and **AMIC** for the **connection location** and relevant **pricing year** at the notifying **customer's** estimated future **AMDC** and **AMIC** for the **connection location**.

34 Replacement Costs

(1) **Transpower** must review, including update as appropriate, the **replacement costs** it uses to calculate **connection charges** no later than 5 years after the start of the **first pricing year** and, after that, at intervals of no more than 5 years.

(2) **Transpower's** first review of **replacement costs** under subclause (1) may occur before the start of the **first pricing year**.

(3) Subject to subclause (4), **Transpower** must consult with all **customers** who pay **connection charges** on any update to **replacement costs** under subclause (1) before updating the **replacement costs**.

(4) **Transpower** is not required to consult on an update to **replacement costs** under subclause (1) if **Transpower** determines—

(a) the update is technical and non-controversial; or

(b) there is widespread support for the update among **customers**; or

(c) there has been adequate prior consultation on the update so that all relevant views of **customers** have been considered.

(5) Before **Transpower's** first review of **replacement costs** under subclause (1) is completed, the **replacement cost** of a **connection asset commissioned** before 1 July 2006 is calculated by multiplying the **connection asset's** unadjusted **replacement cost** by the **replacement cost adjustment factor**.

(6) If **Transpower** does not have a **replacement cost** for a **connection asset**, **Transpower** must use the **replacement cost** available to **Transpower** for the closest equivalent of the **connection asset**, as determined by **Transpower**, for the purposes of calculating **connection charges** for the **connection asset**.

Part D Benefit-based Charges

General

35 Calculation of Benefit-based Charges

(1) Subject to subclauses 84(7) and 85(6) and clause 88, only **beneficiaries** pay **benefit-based charges**, and only for the **BBIs** of which they are **beneficiaries**.

(2) A **beneficiary's annual benefit-based charge** for a **BBI** and **pricing year** (BBC) is calculated as follows:

$$BBC = CC \times CA$$

where

CC is the **BBI's covered cost** for the **pricing year**

CA is the **beneficiary's BBI customer allocation** for the **BBI**.

(3) A **beneficiary's monthly benefit-based charge** for a **BBI** and **pricing year** (MBBC) is calculated as follows:

$$MBBC = \frac{BBC}{12}$$

where BBC is the **beneficiary's annual benefit-based charge** for the **BBI** and **pricing year**.

(4) **Benefit-based charges** are calculated for each **pricing year** before the start of the **pricing year**.

(5) A **benefit-based charge** may be—
- (a) adjusted, including during a **pricing year**, under clauses 81 to 91 if there is a **benefit-based charge adjustment event**; and
- (b) adjusted under clause 96 if the relevant **BBI** is subject to **reassignment**.

36 Start of Benefit-based Charges

Transpower must start the **benefit-based charges** for a **BBI** from the **BBI's start pricing year**. To avoid doubt, this clause does not apply to charges under an **investment agreement**.

Clause 36: replaced, on 31 July 2023, by clause 8 of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

37 Expenditure on Existing BBIs

(1) Subject to subclause (4) and (5), **Transpower** must treat a **refurbishment investment** or **replacement investment** in respect of an existing **post-2019 BBI** as—
- (a) part of the existing **post-2019 BBI**, in which case the **refurbishment investment** or **replacement investment** will increase the **covered cost** of the **post-2019 BBI** but will not change its **BBI customer allocations**; or
- (b) a separate **post-2019 BBI**; or
- (c) part of an existing **post-2019 BBI** referred to in paragraph (b), in which case the **refurbishment investment** or **replacement investment** will increase the **covered cost** of the **post-2019 BBI** but will not change its **BBI customer allocations**.

(2) Subject to subclause (4) and (5), **Transpower** must treat a **refurbishment investment** or **replacement investment commissioned** after 23 July 2019 in respect of an **Appendix A BBI** as—
- (a) a separate **post-2019 BBI**; or
- (b) part of an existing **post-2019 BBI** referred to in paragraph (a), in which case the **refurbishment investment** or **replacement investment** will increase the **covered cost** of the **post-2019 BBI** but will not change its **BBI customer allocations**.

(3) Subject to subclause (5), **Transpower** must treat an **enhancement investment commissioned** after 23 July 2019 in respect of an existing **BBI** as a separate **post-2019 BBI**.

(4) **Transpower** must not treat a **refurbishment investment** or **replacement investment** as part of an existing **post-2019 BBI** under subclause (1) or (2) if **Transpower** determines the **refurbishment investment** or **replacement investment** is likely to have—
- (a) different **beneficiaries** than the existing **post-2019 BBI**; or
- (b) a materially different distribution of **NPB** than the existing **post-2019 BBI**.

(5) If a **refurbishment investment**, **replacement investment** or **enhancement investment** referred to in subclause(1), (2) or (3) is an **exempt post-2019 investment**—

(a) **Transpower** must not treat the **refurbishment investment**, **replacement investment** or **enhancement investment** as, or as part of, a **post-2019 BBI**; and

(b) if the **refurbishment investment**, **replacement investment** or **enhancement investment** is in respect of an **Appendix A BBI**, **Transpower** must treat the **refurbishment investment**, **replacement investment** or **enhancement investment** as part of the **Appendix A BBI**, in which case the **refurbishment investment**, **replacement investment** or **enhancement investment** will increase the **covered cost** of the **Appendix A BBI** but will not change its **BBI customer allocations**.

38 Assumptions Book

(1) **Transpower** must **publish**, and may from time to time **publish** updates to, an **assumptions book**.

(2) The **assumptions book** must not contain any assumptions or methodologies that are inconsistent with this Code.

(3) Subject to subclause (4), **Transpower** must consult with all **customers** on the **assumptions book** or any update to it before **publishing** the **assumptions book** or update.

(4) **Transpower** is not required to consult on an update to the **assumptions book** if **Transpower** determines—

(a) the update is technical and non-controversial; or

(b) there is widespread support for the update among **customers**; or

(c) there has been adequate prior consultation on the update so that all relevant views of **customers** have been considered.

(5) Except as otherwise stated in this **transmission pricing methodology**, the **assumptions book** is not binding on **Transpower** or any **independent expert**.

(6) **Transpower** must review the content of the **assumptions book** and consider whether any of the content is appropriate for incorporation in this **transmission pricing methodology** by way of a review under clause 12.85 of this Code no later than 7 years after its date of publication and, after that, at intervals of no more than 7 years.

(7) The **assumptions book** may be part of the same document in which the **reassignment practice manual** or **prudent discount practice manual** is contained.

Covered Cost

39 Covered Cost

(1) A **BBI's covered cost** for a **pricing year** (CC) is calculated as follows:

$$CC = \sum_{a} (D_a + C_a + T_a) + AO$$

where

D_a is **depreciation** of asset a for the preceding **financial year**, where asset a is an asset comprised in the **BBI**, excluding **accelerated depreciation**

C_a is the **capital charge** for asset a and the preceding **financial year** calculated under subclause (2)

T_a is the sum of—

(a) **Transpower's** depreciation tax loss (positive value) or gain (negative value) for asset a and the preceding **financial year** calculated under subclause (3); and

(b) income tax on the **capital charge** for asset a and the preceding **financial year** calculated under subclause (5)

AO is the attributed opex component for the **BBI** and **pricing year** calculated under subclause 40(1).

(2) The **capital charge** for an asset and **financial year** (C) is calculated—

(a) if the asset had an **opening RAB value** for the **financial year**, as follows:

$$C = (r \times V) - RV$$

where

r is **Transpower's PQ WACC** (vanilla) at the start of the **financial year**

V is, subject to subclause 7, the **opening RAB value** for the asset and **financial year**

RV is **revaluation** for the asset and **financial year**; or

(b) if the asset was **commissioned** during the **financial year**, as follows:

$$C = V \times \frac{r \times (12.5 - m)}{12}$$

where

V is, subject to subclause (7), the asset's **value of commissioned asset**

r is **Transpower's PQ WACC** (vanilla) at the start of the **financial year**

m is the month of the **financial year** during which the asset was **commissioned** (for example, m = 3 for September).

(2A) **Revaluation** for an asset comprised in a **BBI** and a **financial year** (RV) is calculated as follows:

$$RV = RV_{IM} \times \frac{FRR}{RR}$$

where

RV_{IM} is revaluation for the asset and **financial year** calculated under the **Transpower IMs**, as determined by **Transpower**

FRR is the forecast revaluation rate used to calculate the forecast revaluation component of **maximum revenue** for the **pricing year** starting immediately before the start of the **financial year**

RR is the revaluation rate for the **financial year** calculated under the **Transpower IMs**.

(3) **Transpower's** depreciation tax loss or gain for an asset and **financial year** (T_{dep}) is calculated as follow

$$T_{dep} = \frac{r \times (AD - TD - I)}{1 - r}$$

where

r is the corporate tax rate, as defined in the **Transpower IMs**, at the start of the **financial year**

AD is **depreciation** of the asset during the **financial year**, excluding **accelerated depreciation**

TD is tax depreciation of the asset during the **financial year**, excluding **accelerated depreciation**

I is notional interest for the asset and **financial year** calculated under subclause (4).

(4) Notional interest for an asset and **financial year** (I) is calculated as follows:

$$I = V \times L \times CD$$

where

V is, subject to subclause (7), the **opening RAB value** for the asset and **financial year**

L is leverage, as defined in the **Transpower IMs**, at the start of the **financial year**

CD is the estimated cost of debt used under the **Transpower IMs** to calculate **Transpower's PQ WACC** (vanilla) applicable at the start of the **financial year**.

(5) Income tax on the **capital charge** for an asset and **financial year** (T_{inc}) is calculated as follows:

$$T_{inc} = \frac{r \times C}{1 - r}$$

where

r is the corporate tax rate, as defined in the **Transpower IMs**, at the start of the **financial year**

C is the **capital charge** for the asset and **financial year** calculated under subclause (2).

(6) *[Revoked]*

(7) If the asset referred to in subclause (2) or (4)—
(a) has been **written-down**; and
(b) is comprised in a **BBI** that, as at the start of the relevant **financial year**, does not meet the requirements of subparagraph (b)(i), (b)(ii) or (b)(iii) of the definition of **eligible BBI** in clause 3; and
(c) the circumstances justifying the **write-down** of the asset would otherwise justify **reassignment** of the **BBI** (excluding subparagraph 104(2)(b)(ii)),
Transpower must carry out the calculation under subclause (2) or (4) for the asset as if the asset had not been **written-down**.

(8) This clause 39 is subject to clause 40A.

Clause 39(1) and (3): amended, on 31 July 2023, by clause 9(1) of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.
Clause 39(6): revoked, on 31 July 2023, by clause 9(2) of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.
Clause 39(8): inserted, on 31 July 2023, by clause 9(3) of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

40 Attributed Opex Component

(1) The attributed opex component for a **BBI** and **pricing year** (AO) is calculated as follows:

$$AO = \sum_{a} (D_a \times AOR) + HVDC + TA + MCP$$

where

D_a is **depreciation** of asset a for the preceding **financial year**, where asset a is an asset comprised in the **BBI**, excluding **accelerated depreciation**

AOR is the attributed opex ratio for the **pricing year** calculated under subclause (3)

HVDC is—
(a) if the **BBI** comprises 1 or more **transmission investments** in the **HVDC link**, an allocation of **HVDC opex** for the preceding **financial year** as determined by **Transpower** subject to subclause (2); or
(b) otherwise, 0

TA is—
(a) if the **BBI** comprises 1 or more **interconnection transmission alternatives**, **TA opex** for the **interconnection transmission alternatives** and preceding **financial year**, less any contribution to the **TA opex** under **investment agreements**; or
(b) otherwise, 0

MCP is **MCP opex** for the **BBI** and preceding **financial year**.

(2) **HVDC opex** for a **financial year** must be fully allocated to 1 or more **BBIs** that comprise a **transmission investment** in the **HVDC link**, unless there are no such **BBIs**.

(3) The attributed opex ratio for a **pricing year** during an **RCP** (AOR) is calculated as follows:

$$AOR = \frac{OC + PC + RC - HVDC - TA - MCP - FD}{D}$$

where

OC is the **allowance** for operating costs, as defined in the **Transpower IMs**, for the **RCP**

PC is the **allowance** for pass-through costs, as defined in the **Transpower IMs**, for the **RCP**

RC is the **allowance** for recoverable costs, as defined in the **Transpower IMs**, for the **RCP**

HVDC is forecast **HVDC opex** for the **RCP**

TA is the **allowance** for **TA opex** for the **RCP**, to the extent it is included in any of the above **allowances**

MCP is the **allowance** for **MCP opex** for the **RCP**, to the extent it is included in any of the above **allowances**

FD is an amount of operating costs attributable to **Transpower** assets that are fully depreciated at the start of the **RCP**, as determined by **Transpower**

D is the **allowance** for **depreciation** for the **RCP**.

(4) The value of AOR in subclause (3) is—
(a) calculated for the whole of the **RCP**; and
(b) only re-calculated if any of the relevant **allowances** are reset by the **Commission** during the **RCP**.

(5) This clause 40 is subject to clause 40A.
Clause 40(1): amended, on 31 July 2023, by clause 10(1) of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.
Clause 40(5): inserted, on 31 July 2023, by clause 10(2) of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

40A Commissioned Assets Not Asseted
An asset that—
(a) is comprised in a **BBI**; and
(b) was **commissioned** at or before the end of the **financial year** preceding the **pricing year** for which **Transpower** is calculating the **BBI's covered cost**; and
(c) is not **asseted** at the time of that calculation,
must be ignored for the purposes of calculating the **BBI's covered cost** for the **pricing year**.
Clause 40A: inserted, on 31 July 2023, by clause 11 of the Electricity Industry Participation Code Amendment (Transmission Pricing Methodology Amendments) 2023.

41 Covered Cost of Anticipatory BBI
To avoid doubt, clauses 39 and 40 do not apply to an **anticipatory BBI**, the deemed **covered cost** of which is calculated under paragraph 27(2)(b).

Q11. Do you have any comments on the drafting of the proposed amendment?

Appendix B Format for submissions

Submitter	

Questions	Comments
Q1. Do you agree the issues identified by the Authority are worthy of attention, and that the proposed changes effectively address those issues?	
Q2. Do you agree the issues with the SMBC are worthy of attention, and that the proposed changes effectively address those issues?	
Q3. Do you agree with the objectives of the proposed amendment? If not, why not?	
Q4. Do you agree the benefits of the proposed amendment outweigh its costs?	
Q5. 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.	
Q6. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	
Q7. Do you agree with the objectives of the proposed amendment? If not, why not?	
Q8. Do you agree the benefits of the proposed amendment outweigh its costs?	
Q9. 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.	
Q10. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	
Q11. Do you have any comments on the drafting of the proposed amendment?	