XRB | Te Kāwai Ārahi Pūrongo Mōwaho
EXTERNAL REPORTING BOARD

Greenhouse Gas Protocol public consultations

XRB response

16 Dec 2025

Contents

Summary of consultation

In 2025, the Greenhouse Gas Protocol (GHG Protocol) launched its first public consultations related to updating its suite of corporate standards and guidance. There are two parts to the consultation:

- Updates to Scope 2 Guidance (2015) which addresses inventory accounting.
- Consequential accounting methods for estimating avoided emissions from electricity-sector actions.

There was originally a 60-day public consultation period – running from 20 October to 19 December 2025. The deadline was subsequently extended to 31 January 2026.

Sustainability Reporting Board consultation

The External Reporting Board (XRB) is an independent Crown Entity under the Crown Entities Act 2004. It develops and issues financial reporting, auditing and assurance, and climate standards for for-profit, not-for-profit and public sector entities. The XRB has established a subsidiary board committee, the Sustainability Reporting Board (SRB) which has delegated authority to prepare and issue climate standards, authoritative notices and non-binding guidance on non-financial reporting, as well as the power to liaise with international organisations performing similar functions.

The SRB response to this consultation was developed through targeted outreach with key stakeholders, individual feedback sessions, and a roundtable discussion, ensuring that the perspectives of New Zealand stakeholders are reflected in the SRB's submission.

Scope 2 consultation overview

The Scope 2 consultation holds particular significance for New Zealand, as the Aotearoa New Zealand Climate Standards (NZ CS) require entities to disclose their Scope 2 greenhouse gas (GHG) emissions. While NZ CS do not mandate a specific GHG emissions measurement standard, it is important to note that, on 9 September 2025, the International Organization for Standardization (ISO) and the Greenhouse Gas Protocol (GHG Protocol) announced a strategic partnership to deliver unified global standards for GHG emissions accounting. [1] Given this development, any changes resulting from the GHG Protocol consultation will likely need to be adopted by all climate reporting entities in New Zealand.

The proposed changes to the Scope 2 guidance introduce substantially different criteria for accounting for electricity-related emissions. These revisions are intended to enhance transparency and consistency but represent a marked shift from current New Zealand practices.

Electricity-sector consequential methods consultation overview

New Zealand has a somewhat unique situation internationally, with 85% renewable generation in an average year, which is projected to rise to 95%. However, in a dry year, New Zealand no longer has enough domestic gas to fully operate existing thermal generation and meet industrial gas demand. There are no projects in the generation pipeline that would provide backup energy to cover dry years.[2] Few entities in New Zealand are claiming avoided emissions as a result of grid-connected electricity projects. We have therefore only provided high level feedback.

[1] https://ghgprotocol.org/blog/release-iso-and-ghg-protocol-announce-strategic-partnership-deliver-unified-global-standards
[2] https://www.mbie.govt.nz/dmsdocument/31240-factsheet-challenges-facing-the-electricity-system

Summary of XRB responses on consultation topics

The following sections summarise the XRB response to the consultations which was informed by the stakeholder outreach. The specific responses to the GHG Protocol are in the following sections.

New Zealand specific Scope 2 considerations for GHG Protocol

Current GHG Protocol guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
Definitions and purpose updates		
"GHG emissions from the generation of purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company."	**Scope 2 definition:** Proposed changes clarify that Scope 2 should only include emissions from electricity generation processes physically connected to the reporter's value chain, excluding unrelated emissions.	No concerns
"Based on average energy generation emission factors for defined geographic locations, including local, subnational, or national boundaries."	**Location-based method (LBM):** Emissions should reflect generation physically delivered at the times and locations of consumption, including imported electricity.	See below for specific concerns
"Based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with contractual instruments, or contractual instruments on their own."	**Market-based method (MBM):** Retains contractual instruments as the basis for allocation, but adds requirements for matching electricity use with supply in time and location.	See below for specific concerns

Current GHG Protocol guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
Location-based method updates		
"Use source and supplier specific emission factors. Only use statistics such as local or national grid emission factors if other information not available." [Note: In New Zealand annual national emissions factors are generally used.]	**Emission factor hierarchy:** Introduces a new hierarchy prioritising the most granular spatial boundary (local first), then temporal granularity (hourly preferred), and consumption-based factors over production-based. In countries that are made up of multiple synchronous grids, national emission factors should not be used.	**Correct the New Zealand grid classification** ***Commentary:*** The consultation lists New Zealand among countries with multiple synchronous grids;[3] this is incorrect. New Zealand operates one synchronous grid (HVDC connects islands; nodal pricing does not imply multiple grids). ***Proposed solution/amendment:*** The GHG Protocol will need to update tables and examples accordingly. **Location-based method (LBM) spatial boundary for New Zealand** ***Proposed solution/amendment:*** Specify national consumption-based factors as the spatial boundary for New Zealand and explain that there is no intention to introduce sub-national factors in New Zealand.
	Definition of "accessible": Emission factors must be publicly available, free to use, and from credible sources.	No concerns for GHG Protocol. Concerns around clarity of application in New Zealand (see below).
	Precision requirement: Organisations must use the most precise emission factor accessible, matched to the precision of their activity data. Load profiles may be used to estimate hourly data when only annual or monthly data is available.	**Concern about decision-usefulness of detailed temporal accounting** ***Commentary:*** While hourly matching may enhance theoretical precision, its practical utility is constrained by the annual nature of reporting. Emissions data disclosed months after consumption cannot influence operational decisions, which in New Zealand are primarily driven by real-time price signals. Imposing granular temporal requirements risks introducing complexity and cost without delivering meaningful behavioural change or emissions reductions. ***Proposed solution/amendment:*** The requirement should be to "use the most granular boundaries for which accurate data is accessible".

[3] A synchronous grid is a massive, interconnected power system covering large regions (like continents) where all connected generators operate at the exact same, synchronized frequency (e.g., 50Hz or 60Hz) and phase, acting as one giant "electrical ocean" for stability and efficient energy trading. (Chrome AI-generated summary)

Current GHG Protocol guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
		The hierarchy shown in the table should be guidance only
	Feasibility measures: Proposes phased implementation and use of load profiles to support organisations lacking granular data.	**Phased adoption and assurance safe-harbours** ***Proposed solution/amendment:*** Request a phased timeline aligned to registry/data readiness and assurance guidance for load-profile use (especially flat average), to avoid inconsistent audits during transition. In addition, provide guidance on how to apply load profiles in situations where load profiles are not accessible. Permit use of standardised load profiles with clear disclosure.
Market-based method updates		
QC 4: "Be issued and redeemed as close as possible to the period of energy consumption to which the instrument is applied." This has generally been assumed to be annual matching.	**Quality criteria 4:** requires contractual instruments to be matched to electricity consumption hourly, with exemptions for smaller organisations.	**Implications of hourly matching for PPAs and REC market design** ***Commentary:*** Power Purchase Agreements (PPAs) and Renewable Energy Certificates (RECs) fulfil distinct roles within renewable procurement frameworks. PPAs provide long-term contractual certainty, which is critical for securing project finance and enabling new generation capacity. In contrast, RECs typically operate on shorter time horizons and are designed to support market-based claims rather than underpin capital investment. Introducing mandatory hourly matching requirements could materially disrupt this dynamic. Generation assets are subject to operational constraints such as maintenance outages or curtailment, creating unavoidable mismatches between contracted supply and consumption. This would necessitate the development of secondary markets for REC risk management instruments to hedge hourly compliance exposure. While such markets may emerge, they would introduce additional cost, complexity, and administrative burden without demonstrable improvements in environmental integrity. The XRB questions whether this outcome aligns with the intended objectives of the proposed revisions. ***Proposed solution/amendment:*** Implement proposed feasibility safeguards including the use of a transition period of three to five years to allow registries and data providers to implement solutions; permitting use of standardised load profiles with clear disclosure; provide explicit

Current GHG Protocol guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
		guidance that using approved profiles or monthly matching will not trigger audit non-conformance. Introduce greater flexibility into the hourly matching requirement to take account of the intermittent nature of renewable electricity generation and avoid the creation of a secondary trading market with all the associated costs. Provide an exemption for hourly matching in highly renewable grids where there is no (or very limited) real world benefit for the increased administrative burden. Do not impose an hourly matching requirement for PPAs with a contract period of over [7] years. **Conformance with exemptions** ***Proposed solution/amendment:*** Confirm that exercising the hourly matching exemption maintains full conformance with Scope 2, with mandatory transparent disclosure of thresholds used.
QC 5: "Be sourced from the same market in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied."	**Quality criteria 5:** Instruments must be sourced from the same market boundary as the consuming operations or meet deliverability criteria.	No concerns
QC 8: "An adjusted, residual mix characterizing the GHG intensity of unclaimed or publicly shared electricity shall be made available for consumer scope 2 calculations, or its absence shall be disclosed by the reporting entity."	**Standard supply service (SSS):** Formalises rules for accounting electricity from publicly funded or shared resources, ensuring fair allocation and preventing double counting.	**Standard Supply Service (SSS) applicability** ***Proposed solution/amendment:*** Clarify that historical government ownership alone does not create SSS in New Zealand's competitive market; SSS should require regulated cost recovery/default service characteristics, which do not apply to New Zealand gentailers' hydro assets.
	Residual mix emission factors: Updated to exclude SSS and voluntary claims,	**Implications for New Zealand** There are two registries operating in New Zealand who both produce residual emission factors, and no single overseeing body. There is no

Current GHG Protocol guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
	reflecting only unclaimed electricity within the relevant market boundary.	requirement for either of these registries to produce a residual emission factors, and they may not be able to comply with these requirements. ***Proposed solution/amendment:*** Recommend that the requirement for "accessible" is also applied to residual mix emission factors and that there is an alternate approach where accessible residual mix emission factors are not available.
	Fossil-based emission factors: Where no residual mix is available, organisations must use fossil-based factors, not grid average	**Default residual mix** ***Proposed solution/amendment:*** Allow use of national location-based averages where there is no accessible residual mix available. Alternatively, allow use of a conservative weighted proxy for highly renewable electricity systems where no accessible residual mix is available (and define a process for calculating this).
	Feasibility measures: Includes phased implementation, exemption thresholds, load profiles, and a legacy clause for existing contracts.	No concerns
Exemptions and legacy clause		
	Hourly matching exemption: Organisations below certain thresholds (by consumption or company size) may use monthly or annual intervals instead of hourly matching.	***Proposed solution/amendment:*** That a threshold of 10 GWh per deliverable market is implemented, aligned with the SBTi consultation.
	Legacy clause: Under consideration to allow existing contracts to continue under current rules for a transition period, balancing continuity and comparability	**Legacy treatment for market-based methods** ***Proposed solution/amendment:*** It is important that any long-term contracts entered under the existing market-based methods are honoured. Any legacy clause should recognise the commitments already made, and which may already be in effect. Consider the difference between PPAs (long term) and RECs (short term) when it comes to hourly matching.

New Zealand specific considerations for GHG Protocol in relation to consequential accounting methods

Current guidance	XRB summary of proposed update	XRB response (where we heard specific concerns)
	Because it communicates emissions impacts of discrete actions on the electricity grid, consequential accounting can offer a different set of decision tools for organisations interested in reducing emissions from electricity. Consequential accounting methods can be used alongside attributional accounting methods to help ensure that actions taken to reduce reported emissions also have positive impacts on system-wide emissions as well. Proposal includes: • Formulas for quantifying emissions impacts • Treatment of additionality • Marginal emission rates • Build and operating margin weighting	***Commentary:*** Developing consequential accounting for electricity-sector actions could improve decision-making by showing the real emissions impact of actions. However, it poses challenges around data availability, modelling complexity, and comparability, particularly given dry-year risks that affect marginal emissions estimates. Implementation would require robust datasets and clear standards to avoid confusion and ensure credible claims. While beneficial for strategic planning, costs and technical demands may limit feasibility for smaller organisations.

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EXTERNAL REPORTING BOARD

Feedback letter on standards revision process

16 December 2025

Professor Alexander Bassen

Chair, Independent Standards Board

Greenhouse Gas Protocol (via form):

Dear Professor Bassen,

Feedback on the standards revision process

Thank you for the opportunity to contribute to the GHG Protocol's current public consultations on Scope 2, and related electricity-sector topics. We acknowledge and appreciate, the thoroughness of the process to date, including the extensive materials, the active involvement of the Scope 2 Technical Working Group (TWG), and the oversight provided by the Independent Standards Board (ISB).

New Zealand operates a single national electricity grid, with a very high proportion of renewable generation (97% in October and November 2025, 85% on average) – primarily hydro, wind and geothermal. This positions New Zealand as a leading example of the electricity-led energy transition that many other jurisdictions are aiming for. While our examples draw on New Zealand's single-grid, high-renewables context, we expect similar feasibility patterns in other markets with high renewable penetration and unified grid operations. It is therefore essential that the revised Scope 2 Standard is applicable and relevant to markets like ours.

We support the greater clarity achieved by separating location-based methods (LBM), market-based methods (MBM), and Actions and Market Instruments (AMI). This distinction is helpful for users and preparers, and aligns with our commitment to high-quality, transparent reporting. However, we have reservations about the additional cost and complexity that increased inventory calculation granularity may introduce. In New Zealand and similar markets, the benefits of such granularity for LBM are likely to be limited. We also note that hourly matching in MBM may be a barrier to additional investment, causing a slower energy transition than may otherwise be achieved. There is also a risk of unintended consequences, such as increased administrative burden without corresponding improvements in decision-useful information.

We would also like to make some observations about the consultation process, including the structure and accessibility of the survey, and the importance of publishing an exposure draft before finalising the Scope 2 Standard. These points are intended as constructive feedback to strengthen the process and ensure the final standard is robust and widely applicable.

1. Recommendation to publish an exposure draft before finalising the Scope 2 Standard

From the consultation materials, our understanding is that feedback must be submitted via the online survey and that, after TWG revisions and ISB review, the revised standard will be published. We did not see a step indicating that a full exposure draft (i.e., proposed final wording) will be released for public consultation prior to issue. In standard setting, the devil is in the detail; presenting multiple options is valuable at this current stage, but a public comment period on the proposed final text is, in our view, essential to due process and transparency.

We strongly recommend that the ISB and Secretariat add an exposure draft stage with:

- A red-line version of proposed text, supported by implementation examples and basis for conclusions;
- A defined consultation window (for example, 60 days) aligned with the GHG Protocol's Standard Development and Revision Procedure;
- Clear disclosure of effective dates, transition provisions (including any legacy clause design), and interoperability with other programmes.

This would preserve the rigour of the process, enhance comparability, and reduce interpretive uncertainty at adoption, particularly for assurance providers and preparers operating across markets.

2. Clarifying the relationship between consultation topics and broader GHG Protocol developments

As the GHG Protocol undertakes consultations on multiple standards and phases, it is important for stakeholders to understand how the subjects currently under review fit within the wider programme of work. The ability to provide informed, high-quality feedback depends on having visibility of how current consultation topics relate to previous decisions and future areas of focus.

We recommend that future consultations include clear mapping of:

- How the topics being consulted on now connect to other standards and initiatives under development;
- Which elements are in scope for the current phase, and which are planned for subsequent phases;
- How changes in one area may influence or depend upon outcomes in others.

Providing a comprehensive roadmap and explicit dependency matrix would enable stakeholders to better plan for implementation and offer feedback that is both relevant and forward-looking.

3. Enhancing accessibility and effectiveness of consultation feedback

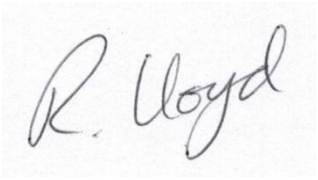
Given the complexity and technical depth of the subject matter, we recognise the challenge in designing a consultation process that is both thorough and accessible. To support broader and more effective engagement, we encourage the Secretariat and ISB to consider alternative approaches for future consultations, such as:

- Establishing a streamlined "process feedback" channel outside the survey for cross-cutting comments on methodology, feasibility and process;
- Allow respondents to submit consolidated feedback on key themes (for example, deliverability, hourly matching, residual mixes) rather than question-by-question responses;
- Introducing a shorter "core" set of questions for general respondents, complimented by an extended annex for those wishing to provide more detailed technical input.

These measures would help maintain inclusiveness and accessibility while still ensuring the collection of decision-useful feedback.

We appreciate the scale and ambition of the Scope 2 revision and the effort invested to date. Please consider these process suggestions as supportive contributions intended to strengthen the final Scope 2 Standard and its uptake globally. We would welcome the opportunity to discuss any of the above and to participate in any workshops focused on public consultation refinements.

Kind regards



Becky Lloyd

Chair, Sustainability Reporting Board

sustainability@xrb.govt.nz

Survey response - Scope 2 public consultation

General demographics

1. DISCLAIMER AND NOTICE OF RIGHTS FOR VOLUNTARY FEEDBACK SUBMISSION
Liability Limitation: The content of the proposed revised draft standards is subject to change and is provided for solicitation of feedback purposes only and should not be construed as final and should not be relied upon as advice. GHG Protocol is not responsible for any actions taken by or reliance thereof by respondents based on this proposed revised draft standards and the contents therein.
Consideration of feedback: While GHG Protocol values and will consider all feedback received, submission of comments or suggestions does not guarantee implementation of any specific recommendations. The final content of the standard will be determined via due process as described in the GHG Protocol's Standard Development and Revision Procedure.
Anonymity and Public Disclosure: Unless otherwise specified, all feedback submitted will be made publicly available. Respondents who wish to remain anonymous in published feedback must explicitly opt-in to anonymity by checking the appropriate box in the feedback form. It is the responsibility of the respondent to ensure that their feedback does not contain any identifiable or confidential information. GHG Protocol will not redact or modify feedback outside of specifically identified fields designated for anonymity when making feedback publicly available.
Legal Compliance: GHG Protocol will comply with all lawful compelled disclosure for information, including those made through proper judicial notice or other legal processes. GHG Protocol will endeavor to provide written notice to the impacted party or parties about its intent to comply with a lawful order to produce information or documents.
Intellectual Property: By submitting any comments, suggestions, or other content ("Submissions") to the GHG Protocol, you grant GHG Protocol a non-exclusive, royalty-free, perpetual, irrevocable, and fully sublicensable right and license to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute, and display such Submissions throughout the world in any media. You waive any moral rights you may have in your Submissions. You represent and warrant that you own or have the necessary rights and permissions to grant this license to the GHG Protocol.
By submitting feedback, you acknowledge that you are doing so voluntarily and have read, understood, and agreed to this disclaimer and notice of rights. Please tick "Agree" to proceed with the survey.

Agree

2. Please check "yes" below to confirm that you have read the Scope 2 Public Consultation document associated with this survey before proceeding with your response. This document may be found on the main Scope 2 Public Consultation webpage where you accessed this survey.

Yes

3. As part of the Greenhouse Gas Protocol's standard procedures, all responses will be made publicly available. However, respondents have the option to have their name, organizational affiliation, and country redacted from any public record of their response. Your e-mail will be automatically redacted from any public record, whether you opt-in here or not.
Would you like to request the redaction of this information for your responses?

No

4. Name

Becky Lloyd (Chair)

5. Organizational Affiliation

Sustainability Reporting Board of the New Zealand External Reporting Board (XRB)

6. Country

New Zealand

7 Email
E-mail addresses will not be shared as part of public records of responses and will be kept confidential by default

sustainability@xrb.govt.nz

8. Would you like to receive email updates from GHG Protocol by being added to our newsletter list?

Yes

9. Are you responding as an individual or on behalf of your organization?

Organisation

10. Does your organization have a greenhouse gas inventory? Yes, No, Other or N/A (please specify below)

Yes

11. If you selected "Other," please specify.

BLANK

12. Are you involved in developing your organization's greenhouse gas inventory?
Yes (Including completing this survey on behalf of my organization, drawing on inputs from relevant teams)
No
Not applicable
Other (please specify below)

Other

13. If you selected "Other," please specify. [4,000 character limit]

To inform XRB's response to the GHG Protocol Scope 2 public consultation, we undertook a targeted engagement process with key stakeholders across the New Zealand energy and reporting ecosystem. This included bilateral meetings with the New Zealand Ministry of Business, Innovation and Employment ((the government's principal policy advisor for the energy sector. Its core objective is to ensure the energy system is safe, efficient, reliable, affordable and environmentally sustainable), Transpower (the national grid operator), energy retailers, generators, and sustainability leaders to understand technical feasibility, market implications, and assurance considerations. We complemented these with a multi-stakeholder roundtable session and follow-up discussions to capture diverse perspectives from corporates, service providers, and industry platforms. Feedback was synthesised into common themes – such as grid deliverability, hourly matching practicality, residual mix publication, and implications for PPAs and RECs – which shaped our positions and recommendations in the submission.

New Zealand operates a single national electricity grid, with a very high proportion of renewable generation (97% in October and November 2025, 85% on average) – primarily hydro, wind and geothermal. This positions New Zealand as a leading example of the electricity-led energy transition that many other jurisdictions are aiming for. While our examples draw on New Zealand's single-grid, high-renewables context, we expect similar feasibility patterns in other markets with high renewable penetration and unified grid operations. It is therefore essential that the revised Scope 2 Standard is applicable and relevant to markets like ours.

We have provided a response to this consultation below, and are happy to provide any further information directly to the GHG Protocol. We have also submitted a letter separately via the Complaints and Concerns form regarding some overarching commentary on the GHG Protocol's due process.

14. What is your organization type? (select your answer)
GHG account/reporting programe or initiative
Government institution
Other (please specify below)

Other

15. If you selected "Other," please specify. [4,000 character limit]

The External Reporting Board (XRB) is an independent Crown entity operating in New Zealand.

We develop and issue financial reporting, auditing and assurance, and climate standards for for-profit, not-for-profit and public sector entities. The standards we issue are secondary legislation and must comply with the Legislation Act 2019.

The XRB is not a regulator; monitoring or enforcement functions are carried out by the New Zealand Financial Markets Authority (FMA).

The XRB is required under the Financial Reporting Act 2013 to consult affected parties before issuing standards and to act independently.

These requirements help ensure that standards are credible, high quality and not unduly influenced. Independent standard setting has long been accepted as best practice for international and national standard setters.

Our purpose is to promote trust and confidence, transparency and accountability through high-quality external reporting and assurance. We do this by establishing and maintaining robust frameworks and standards that are internationally credible and relevant to New Zealand.

Our ultimate objective is an external reporting and assurance system in New Zealand that enables sustainable economic growth, transparency, accountability and informed decision making through the provision of trusted, integrated information that meets users' needs.

16. What is your organization's sector? *Note that GCIS codes are included where applicable.*
Professional, scientific, and technical services (2020)
Services
Other (please specify below)

Other

17. If you selected "Other," please specify.

Government. Our role in government is as an independent external reporting and assurance standards setter.

Proposed changes to scope 2 definitions

18. Please provide any feedback on the proposal to refine the definition of scope 2, to emphasize its role within an attributional value chain GHG inventory and clarify that scope 2 must only include emissions from electricity generation processes that are physically connected to the reporter's value chain, excluding any emissions from unrelated sources?
Please note that feedback on specific changes to the location- and market-based method can be provided in sections 4 and 5.

We support clarifying the scope 2 definition to stress its role as attributional inventory accounting linked to electricity generation within a reporter's value chain. This distinction separates inventory totals from broader impact claims, which are covered under Actions and Market Instruments. No further changes are needed. This approach aligns with New Zealand practice, where scope 2 is treated as inventory accounting (location and market based) and consequential claims are reported separately if they are reported at all.

19. Please provide any feedback on the proposal to clarify the LBM definition to reflect scope 2 emissions from generation physically delivered at the times and locations of consumption, with imports included in LBM emission factor calculations where applicable?
Please note that feedback on specific changes to the location-based method can be provided in section 4

We support the proposed emphasis that LBM should reflect generation physically delivered at the times and locations of consumption, and that imports are included in consumption-based factors. Please correct the country list: New Zealand is a single synchronous grid connected across islands by HVDC and operated at 50 Hz; nodal pricing does not imply multiple synchronous grids. Use national consumption-based factors as the spatial boundary for New Zealand.

20. Please provide any feedback on the proposal to clarify the MBM definition to retain its existing basis, quantifying scope 2 from contractually purchased electricity via contractual instruments, while specifying temporal correlation and deliverability when matching instruments to consumption?
Please note that feedback on specific changes to the market-based method can be provided in section 5.

Conditional support. Retaining contractual instruments as the basis is appropriate. However, the requirement for hourly temporal correlation and deliverability should be reviewed, and if it will be implemented then it should be done with feasibility safeguards and clear exemptions to avoid unintended impacts on purchase of RECS and PPAs that currently enable new renewable build in New Zealand

Recommendations:

- Review proposed requirement for hourly matching for MBM, to confirm whether it will deliver benefits that outweigh the cost and complexity of administration.

If hourly matching will be required then:

- Implement proposed feasibility safeguards including the use of a transition period of three to five years to allow registries and data providers to implement solutions; permitting use of standardised load profiles with clear disclosure; provide explicit guidance that using approved profiles or monthly matching will not trigger audit non-conformance; introduce accessible requirement to residual mix factors.
- Implement clear exemptions for hourly matching based on consumption; legacy contracts, technology limitations and long-term PPAs.

Proposed changes to scope 2 purposes

21. Please provide any feedback on the proposed purposes of the location-based method.
Please note that feedback on specific changes to the location-based method can be provided in section 4.

We agree with the stated purposes. In New Zealand, price signals already drive behaviour (nodal pricing and peak periods), so inventory granularity must be balanced with cost, feasibility and ensuring consistent approaches are taken across different assurance practitioners.

22. Please provide any feedback on the proposed purposes of the market-based method.
Please note that feedback on specific changes to the market-based method can be provided in section 5.

We somewhat agree with the stated purposes. We consider the MBM a reflection of procurement choice. In New Zealand, price signals already drive behaviour (nodal pricing and peak periods) in real time, and increased granularity in market-based calculation is unlikely to drive any behaviour change due to the highly renewable nature of our electricity (around 85% renewable on average, and over 97% for October and November 2025).

Location-based method

23. On a scale of 1-5, do you support the update to the location-based emission factor hierarchy to identify the most precise location-based emission factor accessible according to spatial boundaries, temporal granularity, and emission factor type (consumption or production)? Scale of 1 (no support) – 5 (full support)
Pleased note this question only relates to the structure of the hierarchy, subsequent questions will address its intended use.

3 – moderate support

24. Please provide your reasons for support, if any (select all options that apply)
    a. Agree that guidance on selecting location-based emission factors should be presented as a hierarchy
    b. Enhances the accuracy and relevance of the location-based method
    c. Enables use of emission factors that support abatement planning and target-setting
    d. Improves use of location-based method to provide risk and opportunity assessment related to consumption of grid electricity
    e. Aligns with emission factors used by your organization for location-based emissions reporting
    f. Aligns with emission factors used for mandatory or voluntary reporting in your region
    g. Prioritizes consumption-based factors that include imports/exports over production-based factors
    h. Clarifies application of the EF hierarchy (spatial > temporal > consumption-based > production-based)
    i. Agree with listing the most precise temporal granularity as “hourly”
    j. Agree with listing the most precise spatial boundary as “local boundary”
    k. Agree that the proposed spatial boundaries reflect electricity deliverability in your region
    l. Other (please provide)

(a) Agree that guidance on selecting location-based emission factors should be presented as a hierarchy

(b) Enhances the accuracy and relevance of the location-based method

(d) Improves use of location-based method to provide risk and opportunity assessment related to consumption of grid electricity

(h) Clarifies application of the EF hierarchy (spatial > temporal > consumption-based > production-based)

(i) Agree with listing the most precise temporal granularity as “hourly”

25. Please provide comments regarding your reasons for support.

We support a hierarchy that prioritises spatial boundary first, then temporal granularity, then consumption over production. It improves consistency. However, making “local boundary” the top rung is less relevant in New Zealand, where the operational reality is one synchronous grid and the practical, decision-useful baseline is national consumption-based.

Recommendations:

- The requirement should be to “use the most granular boundaries for which accurate data is accessible”
- The hierarchy shown in the table should be guidance only

26. Please provide your concerns or reasons for why you are not supporting, if any (select all options that apply)

a. Prefer guidance on selecting location-based emission factors to be identified as a single globally applicable option to increase comparability
b. Concern about increased administrative burden and complexity from identifying the most precise emission factors accessible
c. Concern that the most precise temporal granularity “hourly“ is too detailed
d. Concern that the most precise spatial boundary, “local boundary”, is too narrow
e. Concern that the proposed spatial boundaries do not reflect electricity deliverability in your region
f. Concern hierarchy does not align with emission factors used by your organization for location-based emissions reporting
g. Concern hierarchy does not align with emission factors used for mandatory or voluntary reporting in your region
h. Prefer a different order (e.g., consumption-based first, then spatial boundary, then temporal granularity)
i. Unclear how the changes will affect your GHG emissions reporting
j. Other (please provide)

(b) Concern about increased administrative burden and complexity from identifying the most precise emission factors accessible

(c) Concern that the most precise temporal granularity “hourly” is too detailed

(d) Concern that the most precise spatial boundary, “local boundary”, is too narrow “

(j) Other

27. Please provide comments regarding your reasons for why you are not supporting (if any).

Concern: treating New Zealand as multiple synchronous grids is incorrect; please amend tables/examples to reflect that New Zealand has one grid.

Concern: local boundary is very narrow and risks inconsistent assurance outcomes with differing parties taking differing opinions on what is and is not appropriate as a local boundary. This will reduce comparability between reporters.

Application: Our stakeholders believed that the use of hourly emission factors in calculation of LBM scope 2 would provide marginal additional benefits for users of reporting and would impose significant administrative burden and assurance costs on reporters. Scope 2 LBM is reported as an annual total regardless of the calculation method.

Application in New Zealand: National consumption-based factors are the most appropriate spatial boundary; sub-national factors are not envisaged. Monthly emission factors could be made readily available (three months after the time period) but the provision of hourly accessible data would require significant investment by the Ministry of Business, Innovation and Employment (the government agency responsible for accessible emission factors). In a time of budget pressures due to cost of living, provision of funding to make this data available is not certain. Hourly factors exist in New Zealand but as a commercial product which would not meet the definition of accessible. This will potentially result in reduced comparability between reporters.

Recommendations:

- Amend tables/examples to reflect that New Zealand has one electricity grid – it does not have multiple synchronous grids
- Tables/examples should be guidance only, the requirement should be "use the most granular boundaries for which accurate data is accessible"
- Ensure it is clear that 'accessible' is a key determinant, and that if emission factors are not accessible then there is no requirement to use them

28. For different views on the order the hierarchy should be applied (e.g. preference for consumption-based emission factors, then spatial boundary, then temporal granularity) please explain the preferred order.

BLANK

29. Regarding regions that you operate in or have experience in, please provide comments on whether the LBM emission factor hierarchy allows you to identify an accessible emission factor that appropriately reflects how electricity is delivered in that region (please clearly identify the region you are referring to in your answer).

For New Zealand, the hierarchy should list "grid-wide/national (single synchronous grid)" as the most appropriate spatial boundary. Transpower, our national grid operator, advises "Local" boundaries (e.g., nodal) are operational pricing constructs and do not reflect distinct deliverable markets for the LBM.

In New Zealand, emission factors produced by Ministry of Business, Innovation and Employment (MBIE) meet the definition of accessible and appropriately represent how electricity is delivered in New Zealand. This data is available quarterly at present and monthly could be provided with limited investment. Significant investment by MBIE would be required to move to hourly emission factors.

Recommendation:

- Any GHG Protocol guidance referring to New Zealand should note MBIE as the accessible source of emission factors

30. Regarding regions that you operate in or have experience in, please provide comments on whether the LBM emission factor hierarchy is likely to cause any region-specific challenges in its application (provide specific examples, and clearly identify the region you are referring to in your answer).

Our stakeholders are concerned that attempting to use artificial local grid boundary factors instead of national factors would misrepresent the reality of New Zealand's electricity market and could unfairly reward facilities near renewable generation while penalising those near backup fossil fuel sites. This could create perverse incentives for organisations to relocate or establish facilities closer to renewable generation, which for the large part are in rural areas, and even in a World Heritage site in one instance, rather than optimising for overall system efficiency. Therefore, the most appropriate boundary for use in New Zealand is "grid-wide/national".

Recommendation:

- Any GHG Protocol guidance referring to New Zealand should refer to the most appropriate boundary for use in New Zealand as grid-wide/national

31. Do you agree that "local boundary" should be listed as the most precise spatial boundary for LBM emission factors? If not, select which should be listed as the most precise spatial boundary.
a. Yes, I support local boundary as the most precise spatial boundary
b. No, a more precise spatial boundary should be added
c. No, a less precise spatial boundary should be used. Use Operational grid boundary
d. No, a less precise spatial boundary should be used. Use Grid-wide or national boundary
e. Other (describe)

(c) No, a less precise spatial boundary should be used. Use Operational grid boundary.

32. If you selected "Other" in question 31, please describe.

BLANK

33. Should the LBM emission factor hierarchy be adjusted to include the deliverable market boundaries outlined in the proposed MBM Methodologies for demonstrating deliverability where they do not already overlap? If so, should they be included in addition to, or as a replacement for, the spatial boundaries currently proposed in the hierarchy?

a. No, different spatial boundaries are appropriate for the location-based and market-based methods
b. Yes, include the MBM deliverability market boundaries in addition to the proposed LBM hierarchy (explain why they should be added)
c. Yes, include the MBM deliverability market boundaries as a replacement for the proposed LBM hierarchy (explain why they should replace the current hierarchy)
d. Other (explain)
e. Do not support boundaries as proposed in either method (explain alternative boundaries for the location-based emission factor hierarchy and how they support integrity, impact, and feasibility for a value chain inventory)

(a) No, different spatial boundaries are appropriate for the location-based and market-based methods

34. Please provide additional explanations or further details regarding your answer to question 33

Our stakeholders advise that the same spatial boundaries will apply in New Zealand for both LBM and MBM. The GHG Protocol must correct the consultation's list that currently tags New Zealand as "made up of multiple synchronous grids." New Zealand is a single synchronous grid with HVDC inter-island link; any LBM/MBM deliverability rule should reflect that. However, while the same spatial boundaries will apply in the New Zealand market, our stakeholders do not believe that the deliverability requirement should be introduced into the LBM.

Recommendations:

- Correct the mislabelling of New Zealand's grid
- Keep location-based spatial boundaries separate from the MBM deliverability requirements

Addition of definition for "accessible"

35. On a scale of 1-5 do you support the new definition of accessible: publicly available, free to use, and from a credible source? Scale of 1 (no support) – 5 (fully support)

4 – strong support

36. Please provide your reasons for support, if any. Select all options that apply.

a. Definition supports feasibility and lower-cost reporting
b. Supports transparency and public verifiability of emission factors
c. Implements a common comparability baseline across reporters
d. Creates data equity for smaller reporters and underserved regions
e. Encourages open publication of emission factors
f. High quality accessible emission factors already exist for most markets globally today
g. Ensures reporters can immediately apply the updated LBM hierarchy
h. Clarifies reporting requirements
i. Other (please explain)

(a) Definition supports feasibility and lower-cost reporting

(b) Supports transparency and public verifiability of emission factors

(c) implements a common comparability baseline across reporters

(h) clarifies reporting requirements

37. Please provide comments regarding your reasons for support.

Publicly available, free, credible sources are appropriate. In New Zealand, the credible source for electricity emission factors is the Ministry of Business, Innovation and Employment (MBIE), the government agency responsible for preparing this data. At present this data is available on a quarterly basis (with a three-month lag). MBIE have advised that providing monthly emission factors would be possible with limited investment. However, providing hourly emission factors would require significant investment. In a time of budget pressures due to cost of living, provision of funding to make this data available is not certain.

Recommendation:

- That the proposal for emission factors to be accessible is adopted

38. Please provide your concerns or reasons for why you are not supporting (if any). Select all options that apply

a. Definition needs further clarification about what is recognized as a credible source
b. Definition should not exclude emission factors that are publicly available and credible even if they have a reasonable associated cost (i.e. not free)
c. A list of suitable location-based emission factors should be published for each region, rather than requiring reporters to individually determine what is accessible in their region
d. Definition should also consider level of administrative effort in addition to external costs for emission factor data
e. Another criterion should be added to the definition
f. Other (please explain)

BLANK

39. Please provide comments regarding your reasons for concern (if any).

BLANK

The following questions (40-43) concern which entities should qualify as credible sources for accessible LBM emission factors to ensure transparency, faithful representation, and comparability.

40. Which entities should qualify as credible sources (select all options that apply)

a. Government agency

b. System operator

c. Recognized registry

d. Accredited statistics body

e. Independent methodology meeting minimum criteria (outlined in question 42)

f. Other (please specify and explain)

(a) Government agency

41. Please provide additional comments concerning your selected credible sources, including at least one example per region you operate in or have experience with, if possible.

In the New Zealand market, the Ministry of Business, Innovation and Employment, which is a government agency, would be the credible source for accessible LBM emission factors. We can't comment on what would be appropriate in other markets.

Recommendation:

- Any GHG Protocol guidance referring to New Zealand should note MBIE as the accessible source of emission factors

42. If you selected independent methodologies in question 40, please describe what documentation or assurance (if any) is needed for it to be recognised as a credible source? (select all that apply, then add brief detail):

a. Publicly documented methods and system boundaries

b. Update cadence (e.g., annual) and version control

c. QA/QC procedures and uncertainty disclosure

d. Governance/independence and conflict-of-interest safeguards

e. Geographic/system boundary and temporal coverage fit for use

f. Other (please explain)

BLANK

43. Please provide any additional comments concerning your selected minimum criteria in question 42

BLANK

Requirement to use the most precise location-based emission factor accessible

44. On a scale of 1-5 do you support the update to the requirement to use the most precise location-based emission factor accessible for which activity data is also available?

Scale of 1 (no support) – 5 (fully support)

3 – moderate support

45. Please provide your reasons for support, if any (select all that apply).

a. Improves accuracy and scientific integrity of LBM results
b. Strengthens transparency and public verifiability
c. Enhances comparability across reporters and frameworks
d. Better reflects grid operation in time and space, reduces misallocation
e. Enables emission changes from storage and demand-flexibility to be reflected more accurately
f. Prioritizes consumption-based factors that include imports/exports
g. Aligns emission factor precision with available activity data
h. Aligns positively with mandatory or voluntary reporting requirements in your region
i. Enables use of load profiles when hourly activity data are unavailable
j. Provides a common, accessible baseline for inventories
k. Supports phased improvement as data availability expands
l. Improves decision-usefulness for external disclosures
m. Other (please provide)

(a) Improves accuracy and scientific integrity of LBM results

(d) Better reflects grid operation in time and space, reduces misallocation

(f) Prioritizes consumption-based factors that include imports/exports

(g) Aligns emission factor precision with available activity data

(i) Enables use of load profiles when hourly activity data are unavailable

(j) Provides a common, accessible baseline for inventories

(k) Supports phased improvement as data availability expands

46. Please provide any additional comments regarding your reasons for support.

We support "most precise accessible emission factor matched to activity data". However, we heard from stakeholders during our outreach process that report users in New Zealand gain limited decision-usefulness from hourly precision because reporting is retrospective and operational decisions are driven by real-time price signals, not after-the-fact emissions factor granularity. We also heard that phase-in and assurance safe-harbours are needed.

In New Zealand, accessible hourly LBM will not be available in the short term. The most precise accessible emission factor currently available is quarterly (with a three-month lag), with the ability to move to monthly with limited investment.

47. Please provide your concerns or reasons for why you are not supporting (select all that apply).

a. Concern about negative impact on comparability, relevance and/or usefulness of LBM inventories

b. Concern that administrative, data management, and audit challenges posed by this approach would place an undue burden and costs on reporters

c. Concern that the most precise spatial boundary in the LBM emission factor hierarchy, "local boundary', is too narrow to require even when accessible

d. Accessible factors may be less accurate than non-accessible options and primary users of emission reporting data may expect the most representative factors

e. Material differences to inventory accuracy are too small to justify cost

f. Concern about the update cadence or representativeness of datasets (hourly/monthly)

g. Other (please provide)

(b) Concern that administrative, data management, and audit challenges posted by this approach would place an undue burden and costs on reporters.

(c) Concern that the most precise spatial boundary in the LBM emission factor hierarchy "local boundary" is too narrow to require even when accessible.

(e) Material differences to inventory accuracy are too small to justify cost

(f) Concern about the update cadence or representativeness of datasets (hourly/monthly)

48. Please provide any additional comments regarding your concerns or reasons why you are not supporting (if any).

We heard from stakeholders during our outreach process that report users in New Zealand gain limited decision-usefulness from hourly precision because reporting is retrospective and operational decisions are driven by real-time price signals, not after-the-fact emissions factor granularity.

In New Zealand accessible hourly LBM will not be available in the short term. The most precise accessible emission factor currently available is quarterly (with a three-month lag), with the ability to move to monthly with limited investment.

49. For concerns or support for alignment with mandatory or voluntary reporting requirements in your region, please provide an example of the programmatic requirements and the impacts of these changes on alignment.

Aotearoa New Zealand Climate Standards (NZ CS) are mandatory for climate-reporting entities in New Zealand. As part of these disclosures, entities are required to report their scope 1, scope 2 (location based) and scope 3 GHG emissions. Additionally, an entity may report their scope 2 (market based) GHG emissions if this is considered material for their primary users. Limited assurance over these GHG emissions disclosures is mandatory. NZ CS do not specify which standard entities are required to use - there is a split between ISO and GHG Protocol at present, although anecdotal evidence suggests that more are shifting towards the GHG Protocol.

50. For concerns that the most precise spatial boundary (local boundary) is too granular to be required even if emission factors are accessible, please outline why and identify whether reporting at this level of granularity should be a "may", "should" or "shall not" requirement?

BLANK

51. For concerns that choosing an accessible factor over a more accurate "non-accessible" one can reduce accuracy and decision-usefulness please describe the conditions when a non-accessible factor should be required to be used over an accessible one (e.g., material difference threshold, investor relevance), and what transparency/assurance is needed (public methods, QA/QC, independent assurance). Please note any cost/effort implications.

Stakeholders have expressed the opinion that reporters shouldn't be motivated to pursue more precise "non-accessible" emission factors. Doing so could affect business models and lead assurance

providers to push for using these detailed factors. This might increase costs for reporters, who would need extra systems and more comprehensive assurance reviews. As a result, resources could end up being spent on reporting instead of taking meaningful action.

Recommendation:

- Require the use of accessible emission factors only

External programs that use GHG Protocol generally support improving the accuracy and comparability of LBM results while balancing feasibility considerations. To help assess benefits relative to cost and effort in practice, please answer for your primary reporting/oversight context.

52. Considering investor and assurance needs, how do the proposed location-based method revisions change the extent to which information is decision-useful to users relative to incremental cost and complexity for preparers?

a. No meaningful improvement (unlikely to change decisions/interpretations)
b. Minor improvement (noticeable but unlikely to change decisions)
c. Moderate improvement (could change some decisions/assessments)
d. Substantial improvement (likely to change decisions benchmarks)
e. Not sure / no basis to assess

(a) No meaningful improvement (unlikely to change decisions/interpretations

53. Please provide additional context for your answer to question 52

Although there are differences between peak and off-peak emission factors, the benefits of these distinctions for inventory decision-making are relatively modest compared to the challenges of data integration, auditing, and tooling faced by most New Zealand reporters today. Delays in providing decision-useful information – such as accounting for scope 2 emissions months after they occur – are unlikely to influence decision-making processes. Additional complexity also brings increased costs and time requirements for organisations, resources that could be better directed toward mitigation or adaptation efforts. During our outreach, stakeholders also questioned the actual real-world impact on emissions reduction that this added complexity, especially from hourly emission factors, would deliver. They noted that the proposal is not to report the hourly emissions, so the investor would still only have an annual scope 2 LBM total.

54. Considering investor and assurance needs, how do the proposed location-based revisions change the comparability of information relative to incremental cost and complexity for users?

a. No meaningful improvement (unlikely to change comparability/interpretations)
b. Minor improvement (noticeable but unlikely to change comparability)
c. Moderate improvement (could change some comparability/assessments)
d. Substantial improvement (likely to change comparability benchmarks)
e. Not sure / no basis to assess

(a) No meaningful improvement (unlikely to change comparability/interpretations)

55. Please provide additional context for your answer to question 54.

Switching from one set of rules to another is not likely to impact the comparability of information.

56. For questions 52-55, please provide the basis for your assessment.
a. Direct empirical analysis (e.g., back-testing with hourly factors)
b. Operational experience (e.g. applying hourly LBM emission factors)
c. Professional judgment informed by literature/briefings
d. General awareness (no direct analysis)
e. Prefer not to say

(c) professional judgement

The following questions refer to the availability of hourly data for LBM reporting.

57. At the Operational Grid Boundary level (of the proposed location-based emission factor hierarchy), what share of your load has hourly emission factors accessible: (select one)

a. 0%
b. 1–25%
c. 26–50%
d. 51–75%
e. 76–100%
f. Unsure
g. Not applicable

(a) 0%

58. Please provide additional context for the data sources included in your answer to question 57.

accessible hourly emission factors are not available in New Zealand

59. Please indicate the share of your load with hourly activity data available: (select one)

a. 0%
b. 1–25%
c. 26–50%
d. 51–75%
e. 76–100%
f. Unsure
g. Not applicable

BLANK

60. If your answer to questions 57 & 59 includes significant geographical differences (some regions with hourly emission factor and higher volumes of hourly activity data, other regions with minimal hourly activity data and/or no hourly emission factors), please include additional context.

BLANK

61. When actual hourly activity data are unavailable, and solely to enable use of more precise LBM emission factors, the proposed revisions allow a reporter to use load profiles to approximate hourly data from monthly or annual load data. How would the use of load profiles affect the comparability, relevance, and usefulness of LBM inventories relative to your current practice? Please describe potential advantages, limitations, and any conditions under which impacts may differ.

Availability of hourly activity data in New Zealand depends on the metering criteria set by distribution networks so the thresholds vary and are usually based on installation capacity or connection configuration not annual consumption. Using load profiles (if available) may be acceptable as a practical bridge; please provide audit guidance for profile selection (flat, TOU, customer-class) to avoid inconsistent assurance outcomes. It should be noted that load profiles are not currently ‘accessible’ in the New Zealand market.

Recommendation:

- Provide guidance on how to apply load profiles in situations where load profiles are not accessible

To help assess feasibility across geographies and company sizes, please answer from the same perspective you indicated in the Demographics section (e.g., your role and whether you're responding for a small/medium/large organization and your primary country). If you represent a multinational, answer from the primary country/entity you reported in Demographics (or note the specific business unit/country in comments).

62. On a scale of 1-5, please indicate the incremental preparer cost/effort to implement the proposed revisions to the location-based method.
a. Scale of 1 (minimal) – 5 (high)
b. Not applicable (not a preparer)

4 – moderately high

63. Please select the main drivers of cost/effort (select all that apply).

a. Data access/rights to granular emission factors
b. Hourly activity data availability/metering rollout
c. Tooling/IT integration or data pipelines
d. Assurance/internal controls readiness
e. Staffing/capacity/training
f. Contracting/procurement or budget cycle constraints
g. Third-party publication cadence (emission factors)
h. Multi-jurisdiction complexity (many grids/regions)
i. Policy/regulatory or commercial terms
j. Other (specify)

(b) Hourly activity data availability/metering rollout

(c) Tooling/IT integration or data pipelines

(d) Assurance/internal controls readiness

(e) Staffing/capacity/training

(f) Contracting/procurement or budget cycle constraints

(g) Third-party publication cadence (emission factors)

64. Please provide additional context on the main drivers of cost/effort.

Expect moderate to significant effort increases tied to data access, tooling, and assurance. Readiness depends on the Ministry of Business, Innovation and Employment publishing monthly/hourly consumption-based factors; otherwise entities may feel pushed to rely on paid datasets with the resulting audit friction. Phase-in aligned to registry/data readiness is essential.

Is the GHG Protocol intending to push governments or system operators worldwide to invest time and resources into providing hourly emission factor and load profile data? This seems like it could be an outcome of the current proposals. New Zealand stakeholders' views are that it is difficult to justify adding this level of complexity to emissions calculations given the limited value in outcomes in a highly renewable grid like New Zealand's, which averages over 85% renewable energy and has reached 97% renewables in the past three months.

65. Which two measures would most reduce burden in your context? (select up to 2)

a. Standardized publication of consumption-based emission factors by grid/system operators
b. Load profile hierarchy/templates to approximate hourly activity data when meters are unavailable
c. Phased implementation (staged effective dates)
d. API/automated access to emission factor datasets
e. Example calculations and disclosure templates
f. Assurance safe-harbors for estimates
g. Other (specify)

(a) Standardized publication of consumption-based emission factors by grid/system operators

(d) API/automated access to emission factor datasets

66. Please provide additional context on the measures that would most reduce burden in your context.

BLANK

67. For which reporting year would your organization be ready to apply the revised Scope 2 Standard based on these proposed changes in its GHG inventory? For example, if the Standard is published in 2027, the reporting year 2027 inventory is typically prepared and reported in 2028:

a. Earlier than reporting year 2027 (already aligned)
b. Reporting year 2027 (inventory prepared in 2028)
c. Reporting year 2028 (inventory prepared in 2029)
d. Reporting year 2029 (inventory prepared in 2030)
e. Reporting year 2030 (inventory prepared in 2031) or later
f. Later than Reporting year 2030
g. Not applicable

BLANK

68. Please provide additional context regarding how this timeline could be shortened and note any region or sector-specific context.

BLANK

Market-based method

To answer some of the questions throughout section 5 about changes to the market-based method, respondents need to know what is specifically meant by an 'exemption to hourly matching'.

As the criteria for an exemption is being developed through this consultation process, please use the **default exemption conditions** when responding to questions that reference an exemption.

Default exemption conditions: Companies with annual consumption up to [X] GWh/year in a deliverable market boundary may use a monthly or annual accounting interval for Criteria 4 for all operations within that market boundary.

To apply this default please identify the:

- **Deliverable market boundary** for your region of operation
    - For all regions outside of the US please use the deliverable market boundary defined in the table Proposed methodologies for demonstrating deliverability
    - For the US, where a deliverable market boundary has not yet been defined in the table Proposed methodologies for demonstrating deliverability, please select your preferred market boundary from the list in question 69

- **Exemption threshold in GWh** For all respondents, please select your preferred exemption threshold from the list in question 70

69. If you have operations or experience in the US, please select your preferred deliverable market boundary for the US. (Please see the table Proposed methodologies for demonstrating deliverability above for references to these options): a. The US Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID) b. DOE Needs Study Regions (45V) c. Wholesale market/balancing authority d. Don't have operations or experience in the US

BLANK

70. All respondents, please select your preferred exemption threshold per deliverable market boundary. a. 5 GWhs b. 10 GWhs c. 50 GWhs

b. 10GWhs

Subsequent sections will ask specific questions about deliverable market boundaries and exemption thresholds, so you may submit detailed feedback in those sections.

71. On a scale of 1-5 do you support an update to Quality Criteria 4 to require that all contractual instruments used in the market-based method be issued and redeemed for the same hour as the energy consumption to which the instrument is applied, except in certain cases of exemption. a. Scale of 1 (no support) – 5 (fully support)

2 – limited support

72. Please provide reasons for support, if any (select all that apply) a. Improves accuracy and scientific integrity of MBM results b. Strengthens transparency and supports public verification c. Enhances comparability across reporters and frameworks using GHG Protocol data

d. Better reflects grid operation, reduces misallocation of generation (e.g., “solar at night”)
e. Reduces risk of greenwashing/time-shifting claims by aligning claims to time of use
f. Improves decision-usefulness for external disclosures
g. Helps create price signals for times and places where renewables are not already abundant
h. Helps accelerate the development of technologies that will be needed at scale for fully decarbonized grids
i. Enables emission changes from storage and demand-flexibility to be reflected more accurately
j. Improves risk and opportunity assessment related to contractual relationships
k. Other (please explain)

(a) Improves accuracy and scientific integrity of MBM results

(b) Strengthens transparency and supports public verification

(d) Better reflects grid operation, reduces misallocation of generation (e.g., “solar at night”)

(e) Reduces risk of greenwashing/time-shifting claims by aligning claims to time of use

(g) Helps create price signals for times and places where renewables are not already abundant

(h) Helps accelerate the development of technologies that will be needed at scale for fully decarbonized grids

73. Please provide comments regarding your reasons for support.

While we acknowledge these theoretical benefits in general, in New Zealand’s highly renewable single-grid context we do not observe decision-useful improvements that justify cost, and therefore we do not support a mandatory hourly requirement. Theoretical benefits include perceived improved accuracy, fewer misleading claims about "solar at night," and better alignment with evolving registry features are key goals. However, hourly EACs/PPAs in New Zealand still face an immature market and will require carefully designed assurance for flat or hourly load profiling. Stakeholders noted the administrative burden and expressed concern that hourly matching might become a stand-in for complexity instead of delivering real impact in New Zealand. Under our climate-related disclosures regime approximately 38% of climate reporting entities disclose market-based scope 2 emissions of those, 70% incorporated market-based into their GHG emissions targets.

74. Please provide concerns or reasons for why you are not supporting, if any (select all that apply)
a. More information is necessary to understand how investments not matched on an hourly basis will be accounted for and reported via the framework under development by the Actions & Market Instrument TWG
b. Hourly matching should follow an optional ‘may’ rather than a required ‘shall’ approach
c. Hourly matching should follow a recommended ‘should’ rather than a require ‘shall’ approach
d. Concern about negative impact on comparability, relevance and/or usefulness of MBM inventories
e. Concern that a phased implementation would be insufficient for development of the infrastructure necessary (e.g., registries, trading exchanges, etc.) to support hourly contractual instruments
f. Concern that administrative, data management, and audit challenges posed by this approach would place an undue burden and costs on reporters
g. Concern that requiring hourly matching does not create meaningful improvements to inventory accuracy
h. Concern that a requirement for hourly contractual instruments could discourage global participation in voluntary clean energy procurement markets
i. Other (please explain)

(b) Hourly matching should follow an optional ‘may’ rather than a required ‘shall’ approach

(d) Concern about negative impact on comparability, relevance and/or usefulness of MBM inventories

(f) Concern that administrative, data management, and audit challenges posed by this approach would place an undue burden and costs on reporters

(g) Concern that requiring hourly matching does not create meaningful improvements to inventory accuracy

(h) Concern that a requirement for hourly contractual instruments could discourage global participation in voluntary clean energy procurement markets

75. Please provide comments regarding your concerns or reasons for why you are not supportive.

In New Zealand, Power Purchase Agreements (PPAs) and Renewable Energy Certificates (RECs) often fulfil distinct roles within renewable procurement frameworks. PPAs typically provide long-term contractual certainty, which is critical for securing project finance and enabling new generation capacity. In contrast, RECs support market-based claims and demand signals rather than underpinning capital investment. Introducing rigid mandatory hourly matching requirements could materially disrupt this dynamic, increasing costs and reducing participation in New Zealand's context.

Generation assets are typically subject to operational constraints such as maintenance outages or curtailment, creating unavoidable mismatches between contracted supply and consumption. In addition, renewable generation is by its very nature, intermittent. This would necessitate the development of secondary markets for risk management instruments to hedge hourly compliance exposure. While such markets may emerge, they would introduce additional cost, complexity, and administrative burden without demonstrable improvements in environmental integrity.

This increased complexity would contribute unnecessary costs without delivering tangible real-world benefits, and may ultimately discourage the procurement of these instruments. The XRB questions whether this outcome aligns with the intended objectives of the proposed revisions.

Additionally, for highly renewable grids like that of New Zealand, organisations may have a greater impact by purchasing RECs associated with generation during peak periods rather than aligning purchases exclusively with their hourly use. This is because non-renewable energy usage is typically highest during peak periods on the New Zealand grid; therefore, sourcing all RECs from these times can maximise an organisation's contribution to reducing non-renewable consumption.

Recommendations:

- Do not introduce an hourly matching requirement for MBM

If an hourly matching requirement is introduced then:

- Introduce greater flexibility into the hourly matching requirement to take account of the intermittent nature of renewable electricity generation and avoid the creation of a secondary trading market with all the associated costs
- Provide an exemption for hourly matching in highly renewable grids where there is no (or very limited) real world benefit for the increased administrative burden
- Do not impose an hourly matching requirement for PPAs with a contract period of over [7] years

76. Load profiles enable organizations without access to hourly activity data or hourly contractual instruments to approximate hourly data from monthly or annual data. How would the use of load profiles affect the comparability, relevance, and usefulness of MBM inventories relative to your current practice? Please describe potential advantages, limitations, and any conditions under which impacts may differ.

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The following set of questions (77-82) applies to sites or business units above the exemption threshold, assume the default exemption conditions selected in Section 5.3.1.

Who should answer: This item is optional and intended primarily for reporters (or service providers responding on behalf of a reporter/client) with direct knowledge of implementation effort and spend. They seek to understand how hourly matching would change your workload and implementation costs relative to current MBM practice after applying feasibility measures (load profiles, phased implementation, legacy clause). If you are not preparing or overseeing a scope 2 inventory for a specific organization, you may skip this item or answer only where relevant.

Note: This section is about administrative implementation (internal effort and external service costs). Please do not include procurement price differences for hourly EACs/PPAs; those are covered in the "combined questions for updates to MBM" section 5.4.

77. What is the approximate share of your organization's total load that would be subject to hourly matching, excluding any exemptions:
a. 0%
b. 1–25%
c. 26–50%
d. 51–75%
e. 76–100%
f. Unsure

BLANK

78. Please indicate your best estimate of the internal administrative effort (people/process/controls) of the proposed hourly matching requirement relative to your current MBM process using annual matching. Assume 3 is your current level of effort.
a. Scale of 1 (much less) – 5 (much more)

BLANK

79. Please indicate your best estimate of the external service cost (cash outlays to vendors, data, assurance) of the proposed hourly matching requirement relative to your current MBM process using annual matching. Assume 3 is your current external cost.
a. Scale of 1 (much less) – 5 (much more)

BLANK

80. What are the feasibility measures you would anticipate relying on (select all that apply):
a. Load profiles for activity data (facility-specific)
b. Load profiles for activity data (utility/customer-class or regulator-approved)
c. Load profiles for activity data (time-of-use averages)
d. Load profiles for activity data (flat average across hours)
e. Load profiles for contractual instruments (same production asset)
f. Load profiles for contractual instruments (facility-specific)
g. Load profiles for contractual instruments (regional publicly available)
h. Phased implementation
i. Legacy clause

BLANK

81. What are the assumed main drivers affecting internal workload and external service costs after applying feasibility measures (select all that apply):
a. Registry/market access for hourly EACs
b. Vendor/platform upgrades or new tools
c. Data integration (profiles, APIs), system configuration
d. Assurance/internal controls and evidence trails
e. Staff capacity/training

f. Contracting/sourcing changes for hourly instruments
g. Metering/interval data access arrangements
h. Other (specify)

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82. Please provide any additional comments regarding your response to questions 77-81.

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Updated to scope 2 quality criteria 5

83. On a scale of 1-5 do you support an update to Scope 2 Quality Criteria 5, to require that all contractual instruments used in the market-based method be sourced from the same deliverable market boundary in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied, or otherwise meet criteria deemed to demonstrate deliverability to the reporting entity's electricity-consuming operations?
Scale of 1 (no support) – 5 (fully support)

3 – moderate support

84. Please provide reasons of support, if any (select all that apply).
a. Improves accuracy and scientific integrity of MBM results
b. Strengthens transparency and public verifiability
c. Enhances comparability across reporters and frameworks using GHG Protocol data
d. Improves decision-usefulness for external disclosures
e. Better reflects grid operation, reduces misallocation
f. Provides sufficiently flexible options for organizations to demonstrate deliverability outside of the defined deliverable market boundaries
g. Defined market boundaries reflect a boundary your organization already uses for procuring contractual instruments
h. Agree that the proposed market boundary for my region(s) accurately reflects deliverability
i. Agree that the defined market boundaries align with mandatory or voluntary reporting requirements in your region
j. Improves risk and opportunity assessment related to contractual relationships
k. Helps create price signals for times and places where renewables are not already abundant
l. Other (please explain)

(e) Better reflects grid operation, reduces misallocation

(f) Provides sufficiently flexible options for organizations to demonstrate deliverability outside of the defined deliverable market boundaries

(g) Defined market boundaries reflect a boundary your organization already uses for procuring contractual instruments

(h) Agree that the proposed market boundary for my region(s) accurately reflects deliverability

(k) Helps create price signals for times and places where renewables are not already abundant

Other (please explain)

85.Please provide comments regarding your selected reasons for support.

We request that New Zealand's boundary is clearly defined as a "single synchronous grid." Deliverability should be established on a national level for New Zealand, recognising that there is one interconnected grid, with HVDC inter-island connections and nodal pricing not constituting separate grids. Any mention of "multiple synchronous grids" in the context of New Zealand is not correct and as such should be excluded. We support the general principle of deliverability, and believe that, specifically for New Zealand, a national boundary provides the most accurate representation. While alternative methodologies based on nodal price differentials may be technically feasible, they would

complicate assurance processes and risk inconsistent application with no added value, given MBM is reflective of procurement decisions

Recommendation:

- The deliverable boundary for New Zealand is at the national level

86. Please provide reasons of concern or why you are not supporting, if any (select all that apply)
a. Proposed deliverability requirements do not improve alignment with GHG Protocol Principles
b. Concern that narrower market boundaries restrict companies' abilities to invest in areas where renewable energy development could yield the greatest decarbonization impact
c. Concern that narrower market boundaries could prompt a shift away from long-term agreements (i.e., PPAs) to spot purchases (unbundled certificates)
d. Sourcing contractual instruments within deliverable market boundaries should follow an optional "may" rather than a required "shall" approach
e. Sourcing contractual instruments within deliverable market boundaries should follow a recommended "should" rather than a required "shall" approach
f. Concern that the defined market boundaries do not align with mandatory or voluntary reporting requirements in your region
g. Support deliverability in principle, but the proposed market boundary for my region does not reflect deliverability
h. Market boundaries should be defined as the geographic boundaries of electricity sectors, which align with national, and under certain circumstances, multinational boundaries
i. Exemptions to matching within deliverable market boundaries should be allowed for markets lacking sourcing options
j. Other (please explain)

(g) Support deliverability in principle, but the proposed market boundary for my region does not reflect deliverability

(h) Market boundaries should be defined as the geographic boundaries of electricity sectors, which align with national, and under certain circumstances, multinational boundaries

87. Please provide comments regarding your selected reasons for why you are not supporting

We request that New Zealand's boundary is clearly defined as a "single synchronous grid." Deliverability should be established on a national level for New Zealand, recognising that there is one interconnected grid, with HVDC inter-island connections and nodal pricing not constituting separate grids. Any mention of "multiple synchronous grids" in the context of New Zealand is not correct and as such should be excluded.

Please answer the following questions 88-91 in regard to regions that you operate in or have experience in.

88. For the United States, which of the following market boundaries would best uphold the principle of deliverability and align with the decision-making criteria? (Please see the table Proposed methodologies for demonstrating deliverability above for references to these options):
a. The US Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID)
b. DOE Needs Study Regions (45V)
c. Wholesale Market/Balancing Authority
d. Unsure
e. Other

BLANK

89. If you selected options (a), (b) or (c) for question 88 please explain why this option best upholds the principle of deliverability and balances integrity, impact, and feasibility of the MBM. Please also provide comments on the relative feasibility challenges of applying the other options.

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90. For deliverable market boundaries (outside of the United States) identified in the table Proposed methodologies for demonstrating deliverability: Deliverable Market Boundaries, please provide comments on whether these market boundaries:

- appropriately reflect the deliverability of electricity in that region
- align with mandatory or voluntary reporting requirements in that region, please provide an example of the programmatic requirements and the impacts of these proposed changes on alignment
- are likely to cause any region-specific feasibility challenges (provide specific examples)
- If you prefer a different deliverable market boundary than identified in the table Proposed methodologies for demonstrating deliverability: Deliverable Market Boundaries, please describe this boundary

Please clearly identify the region you are referring to in your comments.

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91. For regions not specified in the table Proposed methodologies for demonstrating deliverability: Deliverable Market Boundaries, please provide examples of market boundaries that uphold the principle of deliverability and balance integrity, impact, and feasibility of the MBM.

We request that New Zealand's boundary is clearly defined as a "single synchronous grid." Deliverability should be established on a national level for New Zealand, recognising that there is one interconnected grid, with HVDC inter-island connections and nodal pricing not constituting separate grids. Any mention of "multiple synchronous grids" in the context of New Zealand is not correct and as such should be excluded.

The following questions concern how a requirement to use deliverable market boundaries would change your workload and implementation costs relative to current MBM practice after applying feasibility measures (e.g., phased timing and legacy clause)? Please answer with respect to the deliverable boundary requirement only, the combined impact of market-based method changes on feasibility will be evaluated in the "combined questions for updates to MBM" section. Please also assume the default exemption conditions selected in Section 5.3.1.

Note: This section is about administrative implementation (internal effort and external service costs). Do not include procurement price differences for EACs/PPAs; those are covered in the "combined MBM questions" section 5.4.

Who should answer: This item is optional and intended primarily for reporters (or service providers responding on behalf of a specific reporter/client) with direct knowledge of implementation effort and spend. If you are not preparing or overseeing a scope 2 inventory for a specific organization, you may skip this item or answer only where you have direct experience.

92. Please estimate the anticipated internal administrative effort (people/process/controls) of the proposed deliverability requirement relative to your current MBM process using broad market boundaries. Assume 3 is your current level of effort.
Scale of 1 (much less) – 5 (much more)

4 – more than current level of effort

93. Please estimate the anticipated external service cost (cash outlays to vendors, data, assurance) of the proposed deliverability requirement relative to your current MBM process using broad market boundaries. Assume 3 is your current external cost.
Scale of 1 (much less) – 5 (much more)

5 – much more

94. What are the feasibility measures you would anticipate relying on to report using deliverable market boundaries (select all that apply):
a. Phased implementation
b. Legacy clause

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95. What are the assumed main drivers affecting internal workload and external service costs after applying feasibility measures (select all that apply):
a. Data access/rights for EACs/registries aligned to deliverable market boundaries
b. Vendor/platform upgrades or new tools
c. Data integration (profiles, APIs), system configuration
d. Assurance/internal controls and evidence trails
e. Staff capacity/training
f. Contracting/sourcing changes for contractual instruments within deliverable market boundaries
g. Metering/activity data reporting configured to match deliverable market boundaries
h. Other (specify)

(b) Vendor/platform upgrades or new tools

(c) Data integration (profiles, APIs), system configuration

(d) Assurance/internal controls and evidence trails

(e) Staff capacity/training

(f) Contracting/sourcing changes for contractual instruments within deliverable market boundaries

(g) Metering/activity data reporting configured to match deliverable market boundaries

96. Please provide any additional comments regarding your response to questions 92-95.

The primary factors include assurance and evidence trails, as well as changes in contracting and sourcing for certificates that meet the New Zealand boundary requirements. Feasibility will be assessed through phased implementation and consideration of legacy clauses.

New guidance for Standard Supply Service (SSS)

97. On a scale of 1-5 do you support the new guidance for Standard Supply Service (SSS) and requirement that a reporting entity shall not claim more than its pro-rata share of SSS.
Scale of 1 (no support) – 5 (fully support)

3 – moderate support

98. Please provide reasons of support, if any (select all that apply).
a. Helps ensure that SSS resources are fairly allocated to all consumers and prevents procurement by specific organizations
b. Clarifies the order of operations so that organizations may claim SSS first and then make voluntary procurements
c. Supports consistent treatment of shared supply across different market structures
d. Protects the integrity of market-based accounting by avoiding double counting of attributes from SSS
e. Other (please explain)

(a) Helps ensure that SSS resources are fairly allocated to all consumers and prevents procurement by specific organizations

(c) Supports consistent treatment of shared supply across different market structures

99. Please provide comments regarding your selected reasons for support.

Allocation: We support registry-based allocation and retirement to avoid double claiming; for now, it is better that some reporters do not claim SSS than risk misallocation.

100. Please provide concerns or why you are not supporting, if any (select all that apply).
a. Markets should self-determine how resources that fall under SSS are allocated to customers
b. Concern of regionally applicable challenges to implementation
c. Unclear how partial subsidies affect SSS classification
d. Unclear rules/definition of SSS
e. All contractual instruments should be eligible for voluntary procurement.
f. Other (please explain)

(a) Markets should self-determine how resources that fall under SSS are allocated to customers

(b) Concern of regionally applicable challenges to implementation

(c) Unclear how partial subsidies affect SSS classification

101. Please provide comments regarding your selected reasons for why you are not supportive.

It is the New Zealand stakeholder view that SSS does not apply in the New Zealand context. New Zealand's retail market is competitive with no monopoly default service with regulated cost recovery.

However, stakeholders also highlighted significant concerns regarding the proposed wording for SSS.

In the context of New Zealand, the criterion "publicly owned facilities where the majority owner is a government entity" may potentially inadvertently categorise legacy hydro assets under SSS, despite the current competitive market framework and the lack of regulated cost recovery mechanisms typical of monopoly default service providers. Stakeholders have recommended removing references to "government-owned" facilities, as this could potentially inaccurately classify New Zealand hydro and introduce distortions into both residual mix and voluntary markets. New Zealand legacy hydro should not be included in SSS solely due to current majority government ownership. There was historical public investment, under the Electricity Corporation of New Zealand (ECNZ). Facilities built by ECNZ were ultimately distributed to four generating companies who are listed on the New Zealand Stock Exchange and operate as private companies. Three of the four retain the New Zealand Government as a 51% shareholder, this ownership does not provide any public money for investment. None of the facilities are subject to regulated cost recovery from a monopoly supplier.

Recommendation:

- Remove reference to majority owned government facilities, or alternatively, ensure that the mandatory financial relationship is emphasised, and that it is clear this does not apply to New Zealand

102. Are there resources in your region that do not fit clearly within the outlined examples of SSS but should be allocated to all customers under this framework? If so, please provide examples and explanations for each.

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103. Are there resources in your region that fit within the outlined examples of SSS but should not be allocated to all customers under this framework? If so, please provide examples and explanations for each.

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104. Proposed examples of SSS include 'facilities and/or supply that are subject to regulated cost recovery from a monopoly supplier as part of default service in a particular service area and are not part of a resource-specific supplier product (e.g. a green tariff)'. In this context, should a monopoly supplier include: (select all that apply)
a. Vertically integrated investor-owned utility
b. Government entity operating in a service area without supplier choice
c. Distribution utility in a restructured market where certain electricity supply and/or contractual instrument purchases are subject to non-by passable, regulated cost recovery

d. Other (please explain)
e. Unsure

BLANK

105. Please provide any additional comments regarding your response to question 104.

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106. Allocation of SSS requires either suppliers allocating their SSS resources to customers or the development of a credible centralized registry or third-party registries that track SSS in order for organizations to claim their share. Is it acceptable that some reporters may be unable to claim SSS prior to a credible centralized registry or third-party registries being established? If not, how else might SSS be allocated in the absence of a registry?

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107. Would you support a default option in cases where SSS data is not supplied by electricity providers, and no third-party registry is available, to designate certain resources as automatically qualifying as SSS?
a. Yes
b. No
c. Unsure

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108. If you answered "No" to question 107, please provide any additional comments on why you would not support a default option.

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109. If you answered "yes" to question 107, which of the following criteria, if any, would you support as a method of designating resources as SSS. (select all that apply)
a. Project age
b. Technology or fuel type
c. Project ownership (e.g. government owned projects)
d. Projects tracked in compliance registries
e. Combination of above criteria
f. Other (please specify)

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110. If you answered 'Other' please provide additional feedback.

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111. If SSS is not uniformly available across regions, how would this affect comparability of scope 2 MBM reporting? What interim solutions or disclosures would reduce inconsistency?

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112. Please provide any additional feedback on SSS.

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Updated definition of residual mix emission factors

113. On a scale of 1-5 do you support the updated definition of residual mix emission factors to reflect the GHG intensity of electricity, within the relevant market boundary and time interval, that is not claimed through contractual instruments, including voluntary purchases or Standard Supply Service allocations?
Scale of 1 (no support) – 5 (fully support)

4 – strong support

114. Please provide reasons of support, if any (select all that apply).
a. Establishes clear definition for residual mix emission factors

b. Improves accuracy and relevance of market-based reporting
c. Protects the integrity of market-based accounting by avoiding double counting of attributes within the MBM
d. Clarifies the market boundary a residual mix emission factor should be calculated for
e. Improves comparability and transparency across organizations and regions
f. Helps incentivize voluntary sourcing of contractual instruments
g. Provides an option for reporters without access to an hourly residual mix emission factor
h. Other (please explain)

(a) Establishes clear definition for residual mix emission factors

(c) Protects the integrity of market-based accounting by avoiding double counting of attributes within the MBM

(d) Clarifies the market boundary a residual mix emission factor should be calculated for

(g) Provides an option for reporters without access to an hourly residual mix emission factor

115. Please provide comments regarding your selected reasons for support.

In theory, the residual calculation should exclude SSS and voluntary claims, be determined at the New Zealand deliverable boundary, and strive for monthly temporal accuracy wherever possible. However, there is no single source for a residual emission factor in New Zealand at present, which does present a risk of double counting or the inadvertent requirement for an entity to calculate its own based on multiple data sources. New Zealand stakeholders would like a requirement for an accessible residual mix emissions factor (EF) to be introduced. This would enhance assurance preparedness and reduce costs and the potential compliance burden. The anticipated lead time for a government agency to generate an official residual mix emission factor is well over 24 months, depending on required investment and coordination and the ability to require data from the operating registries (two currently). This assessment is based on professional judgement and agency commitments.

Recommendation:

- Include the requirement for “accessible” residual mix emission factors

116. Please provide reasons of concern or why you are not supporting, if any (select all that apply).
a. Requiring a residual mix emission factor to be calculated per market boundary will further reduce availability of residual mix emission factors
b. Allowing reporters to use different temporal precision of residual mix emission factors within a deliverable market boundary will negatively impact comparability
c. Market boundaries used for calculating a residual mix emission factor should be defined as the geographic boundaries of electricity sectors, which align with national, and under certain circumstances, multinational boundaries
d. Markets should self-determine if Standard Supply Service is included in a residual mix emission factor
e. Increases administrative complexity of calculating a residual mix emission factor
f. Other (please explain)

(d) Markets should self-determine if Standard Supply Service is included in residual mix emission factor

(e) increases administrative complexity of calculating a residual mix emission factor

117. Please provide comments regarding your selected reasons for why you are not supporting

New Zealand considers the calculation of a residual emissions factor to be highly complex. Currently, two registries for renewable energy certificates (RECs) exist, but their operation is not regulated. Additionally, there is no requirement to report off-market sourced power purchase agreements (PPAs) to any government agency. At this time, we have been informed by Ministry of Business, Innovation and

Employment that this is not a priority and would potentially require regulation to require reporting as well as significant administrative investment.

Recommendation:

- Include the requirement for “accessible” residual mix emission factors and an alternate approach when these are not available

The following questions refer to the availability of residual mix emission factor data in global markets.

Who should answer: Respondents with direct operational knowledge (users, operators, vendors, auditors): Please answer for up to three registries/markets you know well.

118. In the regions/markets you follow, how close are certificate systems/registries/data providers to being able to publish residual mix emission factors within deliverable market boundaries? (For the US, please answer in regard to your preferred deliverable market boundary as outlined in Section 5.3.1 question 69.)
a. Scale of 1 (Far from ready) – 5 (largely ready)
b. Insufficient basis to assess

3 – somewhat ready

119. Short comment (optional, ≤100 words): Name regions where this already works vs. does not, in your view.

New Zealand currently has two registries which both publish residual emission factors. There is double counting at present between these registries, they are not subject to regulation, and they would have to work between themselves to reach an agreement on if and how to share data. This is likely to add cost to all participants through administrative burdens and assurance complexity.

120. Please indicate your expected lead-time to reach “ready” (score 4–5), based on your current trajectory:
a. <12 months
b. 12–24 months
c. 24–36 months
d. >36 months
e. Unknown

(e) unknown

121. Please indicate your expected lead-time to reach “ready” (score 4-5), if investment/coordination accelerate:
a. <12 months
b. 12–24 months
c. 24–36 months
d. >36 months
e. Unknown

BLANK

122. Please describe the basis for your assessment:
a. Public roadmap/docs
b. Operator/vendor commitments
c. Pilot/production use
d. Professional judgment
e. Other (specify)

(d) professional judgment

123. Please provide any additional feedback on residual mix emission factors.

Stakeholders in New Zealand consider the calculation of a residual emissions factor to be highly complex. Currently, two registries for renewable energy certificates (RECs) exist, but their operation is not regulated. Additionally, there is no requirement to report off-market sourced power purchase agreements (PPAs) to any government agency. At this time, we have been informed by Ministry of Business, Innovation and Employment that this is not a priority and would potentially require regulation to require reporting as well as significant administrative investment.

Provide new requirement for use of fossil-based emission factors

124. On a scale of 1-5, do you support the requirement that for any portion of electricity consumption not covered by a valid contractual instrument and where no residual mix emission factor is available, a reporter shall apply a fossil-based emission factor?
a. Scale of 1 (no support) – 5 (fully support)

2 – not supportive

125. Please provide reasons for support, if any (select all that apply).
a. Helps improve accuracy and scientific integrity of MBM by reducing the risk of double counting of carbon free electricity
b. Provides an option for reporters without access to a residual mix emission factor
c. Incentivises development and publication of residual mix emission factors by requiring use of a more conservative emission factor as a fallback option
d. Other (please specify)

(d) Other (please specify

126. Please provide comments regarding your selected reasons for support.

BLANK

127. Please provide reasons for concern or why you are not supporting, if any (select all that apply).
a. Defaulting to fossil-based emission factors is overly conservative and may overstate actual emissions
b. Organizations that lack access to residual mix data due to systemic or regional limitations may be disproportionately impacted
c. Undermines comparability between organizations that can access residual mix data and those that cannot
d. Misaligned with the definition and/or purpose of the MBM
e. Other (please specify)

(a) Defaulting to fossil-based emission factors is overly conservative and may overstate actual emissions

(b) Organizations that lack access to residual mix data due to systemic or regional limitations may be disproportionately impacted

128. Please provide comments regarding your selected reasons for why you are not supporting.

Mandating the use of a fossil-fuel-based residual mix emission factor could encourage the development and dissemination of residual mix factors. However, our stakeholders had two concerns:

1) given the focus on accuracy in reporting elsewhere in the proposed standard, this would be a move in potentially the opposite direction

2) this might be seen as applying pressure on governments to provide a residual mix emission factor, which could impose regulatory and administrative burdens.

In the context of New Zealand, relying solely on fossil-based emission factors exaggerates the country's actual emissions and makes comparison difficult when residual mixes are missing due to the system's development stage rather than by reporter choice. A better approach would be to permit

the use of the national location-based method (LBM) average where there is no accessible residual mix is available, provided there is clear disclosure. If the fossil default must remain, it should be applied fairly worldwide – allowing for renewables-weighted, conservative proxies in countries like New Zealand, where electricity grids are mostly renewable and residual mix data is not yet published.

Recommendations:

- Allow use of national location-based averages where there is no accessible residual mix available
- Alternatively, allow use of a conservative weighted proxy for highly renewable electricity systems where no accessible residual mix is available (and define a process for calculating this)

129. Please provide feedback regarding whether the requirement to apply a fossil-based emission factor, where no residual mix emission factor is available, should incorporate global equity considerations given the different levels of residual mix emission factor data available globally? And if so, how?

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Combined questions on updates to the market-based method

The following questions refer to the complete set of proposed market-based revisions and feasibility measures, inclusive of:

- Hourly matching requirement
- Deliverability requirement
- Standard supply service
- Updated guidance on residual mix factors
- Fossil-based emission factor default
- Threshold exemptions
- Legacy clause
- Phased implementation

Responses to questions should focus on the impact of these combined revisions

130. Are the proposed feasibility measures (e.g., use of load profiles for matching, exemptions to hourly matching, legacy clause, and phased implementation) sufficient to support implementation of the proposed market-based revisions at scale?
a. Scale of 1 (insufficient) – 5 (highly sufficient)
b. No basis to assess

2 – somewhat insufficient

131. Please provide any additional comments regarding **load profiles** that need adjustment to support implementation of the proposed market-based revisions at scale. Explain how changes would make implementation feasible without undermining accuracy and integrity of the MBM.

Sufficient only if broad exemptions (≥10 GWh), legacy clauses and phased implementation are adopted; otherwise feasibility is insufficient in New Zealand. Load-profile hierarchy needs assurance guidance; phased implementation should align with registry/data availability.

132. Please provide any additional comments regarding **phased implementation** that need adjustment to support implementation of the proposed market-based revisions at scale. Explain how changes would make implementation feasible without undermining accuracy and integrity of the MBM.

BLANK

133. Please provide any additional comments on other feasibility measures (not outlined in questions 131-132) that need adjustment to support implementation of the proposed market-based revisions at scale. Note, any comments on exemptions to hourly matching and the legacy clause should be provided in sections 6 and 7.

In New Zealand, Power Purchase Agreements (PPAs) and Renewable Energy Certificates (RECs) fulfil distinct roles within renewable procurement frameworks. PPAs typically provide long-term contractual certainty, which is critical for securing project finance and enabling new generation capacity. In contrast, RECs support market-based claims and demand signals rather than underpinning capital investment. Introducing mandatory hourly matching requirements could materially disrupt this dynamic, increasing costs and reducing participation in New Zealand's context.

Generation assets are typically subject to operational constraints such as maintenance outages or curtailment, creating unavoidable mismatches between contracted supply and consumption. In addition, renewable generation is by its very nature, intermittent. This would necessitate the development of secondary markets for risk management instruments to hedge hourly compliance exposure. While such markets may emerge, they would introduce additional cost, complexity, and administrative burden without demonstrable improvements in environmental integrity. This increased complexity would contribute unnecessary costs without delivering tangible real-world benefits, and may ultimately discourage the procurement of these instruments.

Additionally, for highly renewable grids like that of New Zealand, organisations may have a greater impact by purchasing RECs associated with generation during peak periods rather than aligning purchases exclusively with their hourly use. This is due to the fact that non-renewable energy usage is typically highest during peak periods on the New Zealand grid; therefore, sourcing all RECs from these times can maximize an organization's contribution to reducing non-renewable consumption.

Recommendations:

- Do not introduce an hourly matching requirement for MBM

If an hourly matching requirement is introduced then:

- Introduce greater flexibility into the hourly matching requirement to take account of the intermittent nature of renewable electricity generation and avoid the creation of a secondary trading market with all the associated costs
- Provide an exemption for hourly matching in highly renewable grids where there is no (or very limited) real world benefit for the increased administrative burden
- Do not impose an hourly matching requirement for PPAs with a contract period of over [7] years

Feedback from programs that are based on or use GHGP data has been to pursue improvements in accuracy and comparability of the market-based method, while balancing feasibility considerations. To help assess benefits relative to cost and effort in practice, please answer for your primary reporting/oversight context.

134. Considering investor and assurance needs, how do the proposed market-based method revisions change the extent to which information is decision-useful to users relative to incremental cost and complexity for preparers?
a. No meaningful improvement (unlikely to change decisions/interpretations)
b. Minor improvement (noticeable but unlikely to change decisions)
c. Moderate improvement (could change some decisions/assessments)
d. Substantial improvement (likely to change decisions benchmarks)
e. Not sure / no basis to assess

(b) Minor improvement

135. Please provide additional context for your answer to question 134.

The reason for rating assurance needs alongside investor needs is unclear.

Assurance needs: In our market, experience indicates that adding more detail and complexity tends to raise assurance costs.

Investor needs: It is questionable whether the increase in estimated accuracy of the disclosed MBM total leads to better decision-useful information for investors, especially in a highly renewable market such as New Zealand. The investor will not get any insight into when and how these contracts are constructed.

136. Considering investor and assurance needs, how do the proposed market-based revisions change the comparability of information relative to incremental cost and complexity for users?
a. No meaningful improvement (unlikely to change comparability/interpretations)
b. Minor improvement (noticeable but unlikely to change comparability)
c. Moderate improvement (could change some comparability/assessments)
d. Substantial improvement (likely to change comparability benchmarks)
e. Not sure / no basis to assess

(a) no meaningful improvement

137. Please provide additional context for your answer to question 136.

The proposals change one set of rules for another, so there is no improved comparability

138. For questions 134-137, please provide the basis for your assessment (select all that apply).
a. Direct empirical analysis (e.g., back-testing with hourly factors)
b. Operational experience applying hourly MBM
c. Professional judgment informed by literature/briefings
d. General awareness (no direct analysis)
e. Prefer not to say

(c) professional judgment informed by literature/briefings

139. Please estimate the anticipated change in procurement cost (i.e., price paid) for hourly-matched, deliverable EACs and/or PPAs relative to your current sourcing strategy. Assume 3 is your current external cost.
a. Scale of 1 (much less) – 5 (much more)

BLANK

140. What are the assumed main drivers affecting procurement price differences for hourly/deliverable EACs/PPAs relative to your current sourcing strategy (select all that apply):
a. Hourly matching and deliverability requirements may change prices due to supply available at specific times and locations of demand
a. Shaping/firming or storage products required to align hourly supply with load
b. Contract tenor or credit/collateral requirements that increase all-in price
c. Need to structure multiple smaller PPAs instead of one large, aggregated contract, reducing economies of scale and increasing fixed transaction and development costs
d. If an entity elects to self-supply hourly matched, deliverable EACs exclusively via PPAs (and not use secondary/spot EAC markets), over-procurement may be needed to ensure full hourly coverage across deliverable sites and periods
e. Procurement costs to purchase EACs in secondary/spot markets to cover residual hours
f. Other (please explain)
g. None

BLANK

141. Please provide any additional comments on the anticipated change in costs for hourly-matched, deliverable EACs, PPAs, etc. relative to current practices. If applicable, please include comments if and how this would impact your procurement strategy for carbon free electricity?

BLANK

These questions seek input on potential financial-reporting implications, beyond scope 2 reporting, arising from the proposed MBM criteria. Please only respond to this section if these issues are relevant to your organization, or you have direct expertise or experience with financial reporting under IFRS or GAAP.

142. Beyond scope 2 reporting, do the proposed MBM criteria (hourly matching, deliverability, inclusive of feasibility & transition design) pose material IFRS/GAAP financial-reporting impacts for PPAs or similar instruments (e.g., IFRS 9 own-use/hedge accounting, IAS 37 onerous contracts)?
a. Scale of 1 (No impacts) – 5 (Significant impacts)

BLANK

143. Please briefly explain your rating: identify which accounting areas could be affected and why (for example, IFRS 9 own-use eligibility, hedge accounting, IAS 37 onerous-contract risk), and note the main factors driving the impact (for example, hourly matching, deliverability, contract terms such as tenor, penalties, or close-out provisions).

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144. If mid–high impacts: select affected areas (select all that apply):
a. Own-use
b. Hedge accounting
c. IAS 37
d. Other (please explain)

BLANK

145. For each area selected in question 144, briefly note key drivers (e.g., main contract or accounting features driving the impact).

BLANK

The following section of questions focuses on principle-based considerations for the reporting of emissions associated with electricity within and outside of the scope 2 inventory.

146. Considering the full set of proposed revisions to the market-based method as discussed previously in this consultation, would the existence of a separate metric outside of scope 2 to quantify the emissions impact of electricity-related actions change your perspective on the proposed revisions?
a. Yes
b. Somewhat
c. No
d. I do not support the development of impact metrics outside the scope 2 inventory.

(a) Yes

147. If you answer “yes” or “somewhat” to question 146, which of the following rationale captures your views (select all that apply).
a. Allows for continued investment in electricity projects outside of my deliverable market boundary
b. Provides a complementary metric to quantify actions such as energy storage or demand response
c. Causes less disruption of existing electricity procurement practices
d. Provides additional relevant information for users of GHG data
e. Provides additional approaches for target setting
f. Other (please specify)

(c) causes less disruption of existing electricity procurement practices

(d) provide additional relevant information for users of GHG data

(e) provides additional approaches for target setting

148. Please provide comments regarding your selected choices in question 147.

New Zealand stakeholders stressed that pricing already sends the right signals; inventory granularity adds cost with limited behavioural change. Hourly matching may affect PPA economics and accounting (own-use/hedge design), particularly if shaping/storage becomes required. A complementary Actions and Market Instruments metric for consequential impacts might preserve investment signals without over-burdening inventory accounting but this is not clear.

149. If you answered "no" to question 146, please explain why a separate impact metric for electricity projects does not change your view of the proposed market-based inventory revisions.

BLANK

150. If you answered "I do not support the development of impact metrics outside the scope 2 inventory" to question 146, which of the following rationale captures your views (select all that apply).
a. There is no agreed-on methodology for calculating these impact metrics
b. The existence of impact metrics would divert investment from time-matched and deliverable electricity procurement
c. These metrics are not currently required in mandatory disclosure frameworks
d. These metrics are not currently part of target setting programs
e. These metrics may not be appropriately auditable
f. These metrics could result in greenwashing
g. Other (please specify)

BLANK

151. Please provide comments regarding your selected choices in question 150.

BLANK

152. In your view, balancing scientific integrity, climate impact, and feasibility, what scope 2 revisions or combination of revisions are most appropriate? Please address each of the three core decision-making criteria: integrity, impact, and feasibility in your answer, and describe how the approach satisfies each criterion.

Integrity: Use national consumption-based LBM for New Zealand; ensure single residual mix; correct grid classification.

Impact: Recognise PPAs' role in financing new renewables; avoid rules that unintentionally discourage investment in New Zealand renewable energy build.

Feasibility: Phase-in, exemptions, assurance guidance, and public datasets from credible sources are essential.

Exemptions – hourly matching exemption threshold

Option 1. Companies with annual consumption up to [X] GWh/year in a deliverable market boundary may use a monthly or annual accounting interval for Criteria 4 for all operations within that market boundary in accordance with the contractual instruments temporal data hierarchy.

Option 2. Companies that meet the small and medium company categorization may use a monthly or annual accounting interval for Criteria 4 for all operations within that market boundary in accordance with the contractual instruments temporal data hierarchy.

Option 3. Companies with annual consumption up to [X] GWh/year in a deliverable market boundary or meet the small and medium company categorization may use a monthly or annual accounting

interval for Criteria 4 for all operations within that market boundary in accordance with the contractual instruments temporal data hierarchy.

Option 4. Companies with annual consumption up to [X] GWh/year in a deliverable boundary and meet the small and medium company categorization may use a monthly or annual accounting interval for Criteria 4 for all operations within that market boundary in accordance with the contractual instruments temporal data hierarchy.

153. On a scale of 1-5 do you support allowing for exemptions to hourly matching using one of the options (1-4) described above?
Scale of 1 (no support) – 5 (fully support)

4 – strongly support

154. Please provide your reasons for support, if any (select all that apply).
a. Reflects a reasonable balance of integrity, impact and feasibility as organizations under a threshold collectively contribute to fewer scope 2 emissions than the largest consumers
b. Encourages organizations under a threshold to continue to engage in voluntary procurement using an annual procurement approach
c. Provides a more equitable approach for reporting as hourly matching could be more challenging for organizations under a threshold
d. Reduces transition strain on the electricity market and hourly matching infrastructure.
e. Other (please provide)

(a) Reflects a reasonable balance of integrity, impact and feasibility as organizations under a threshold collectively contribute to fewer scope 2 emissions than the largest consumers

(b) Encourages organizations under a threshold to continue to engage in voluntary procurement using an annual procurement approach

(c) Provides a more equitable approach for reporting as hourly matching could be more challenging for organizations under a threshold

155. Please provide any additional comments regarding your reasons for support.

Stakeholders in New Zealand, including generators, retailers, and large users, have indicated that the hourly reporting requirements present a substantial administrative burden and would achieve limited (if any) beneficial outcome. Exempting smaller loads helps maintain regulatory integrity and feasibility, while ensuring that the majority of grid consumption remains subject to hourly rules. These exemptions are essential for supporting both feasibility and equity in New Zealand's energy sector, as they prevent undue burden on SMEs and moderate users, while continuing to apply hourly matching to the largest loads where appropriate.

156. Please provide your concerns or reasons for why you are not supporting, if any (select all that apply).
a. Reduces accuracy and relevance of MBM reporting
b. Introduces inconsistencies across companies, reducing transparency and comparability for users
c. Creates reputational risk and increases skepticism about MBM claims.
d. Fragments the voluntary market and may slow the transition to wider availability/use of hourly data
e. Feasibility is better addressed via temporary measures (e.g., phase-ins/legacy) rather than ongoing exemptions
f. Tools and infrastructure are improving rapidly, making broad exemptions increasingly unnecessary
g. Support an exemption, but a different criterion should be used for defining eligibility.
h. Other (please provide)

BLANK

157. Please provide any additional comments regarding your concerns or reasons for why you are not supporting.

BLANK

158. What evidence and/or reasoned rationale supports the need for exemptions (e.g., data access, costs, feasibility)?

BLANK

Load-based exemption threshold

159. Options 1, 3, and 4 introduce a GWh load threshold applied within a defined boundary. In section 5.3.1 question 70 you selected an exemption threshold of either of 5, 10, or 50 GWh per deliverable market boundary. If you prefer a GWh load threshold based on a different amount, propose a single threshold amount in GWh per boundary and explain why.
a. Threshold [enter number] GWh per [deliverable market boundary/site/other]
b. Preferred option selected in section 5.3.1, question 70

(b) Preferred option selected in section 5.3.1, question 70

160. If you provided a different threshold amount in (a), how does your proposed threshold better fit the intent of the exemption (reducing reporting burden while maintaining MBM integrity and impact)? How would this exemption threshold impact the administrative and cost burden of the proposed MBM requirements compared to an exemption threshold of 5, 10, or 50 GWh per deliverable market boundary?
a. Rationale (<300 words)

BLANK

161. Exemption options 2, 3, and 4 introduce a criterion based on a reporter meeting the small and medium company categorization. This categorization framework is being developed by the Corporate Standard Technical Working Group. What specific criteria should be considered to define Small and Medium Companies? (select all that apply)
a. Number of employees
b. Net annual turnover
c. Balance sheet
d. Emissions (scope 1 + LBM scope 2)
e. Company location (high and upper-middle income countries and low- and lower-middle income countries)
f. Other (please explain)

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162. Please provide any additional comments regarding the criteria to define Small and Medium Companies.

BLANK

163. Which of the four draft eligibility options for an exemption to hourly matching reflect the most reasonable balance of integrity, impact and feasibility of the MBM? Apply the exemption threshold selected in question 159.
a. Option 1
b. Option 2
c. Option 3
d. Option 4
e. None of the above (please explain)

Option 1: annual consumption up to [X} GWh/year

164. If you selected “None of the above” in question 163, please describe your preferred eligibility conditions to apply an exemption to hourly matching and outline how this reflects a reasonable balance of integrity, impact and feasibility of the MBM.

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165. Please provide additional comments regarding your answer to question 164, including the main reasons why it is the most appropriate and any geographic or industry specific considerations that influenced your response. (≤300 words).

Note that we do not support adding hourly matching requirements for MBM. However, if these are introduced we recommend establishing a threshold of at least 10 GWh per deliverable market boundary. Rationale: This approach is consistent with references from the SBTi consultation cited by stakeholders, effectively encompasses major electricity users while minimizing obligations for small and medium-sized enterprises. As this criterion pertains specifically to electricity emissions, it should be proportionate to the scale of electricity consumption.

166. Should exemptions be time-limited (i.e. phased-out over time) or ongoing?
a. Time-limited (i.e. phased out over time)
b. Ongoing
c. Unsure
d. Do not support exemptions

(b) ongoing

167. If you selected that exemptions should be time-limited in question 166, please explain how this phase-out should be implemented and why this suggestion fits the intent of the exemption (i.e., reducing reporting burden while maintaining integrity and impact of the MBM).

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168. Aside from any suggestions provided in question 167, please describe any safeguards needed to ensure exemptions are not misused and that comparability across reporting organisations is maintained?

BLANK

169. In exercising the exemption, should the organization be considered in conformance with the Corporate Standard and Scope 2 Standard?
a. Yes, organizations using the hourly matching exemption should be considered in conformance
b. No, organizations using the hourly matching exemption should NOT be considered in conformance
c. A separate conformance level should be defined for companies exercising the exemption
d. Unsure
e. Other (please explain)

(a) Yes

170. Please provide any additional comments regarding your response to question 169

BLANK

Legacy clause considerations

171. On a scale of 1-5 do you support introduction of a Legacy Clause to exempt existing long-term contracts that comply with the current Scope 2 Quality Criteria from being required to meet updated Quality Criterion 4 (hourly matching) and Quality Criterion 5 (deliverability)?
Scale of 1 (no support) – 5 (fully support)

5 – fully support

172. Please provide your reasons for support, if any (select all that apply).
a. Reflects a reasonable balance of integrity, impact and feasibility as existing long-term contracts reflect significant financial and operational commitments to energy resources
b. Encourages organizations with legacy contracts to continue to engage in voluntary procurement using an annual procurement approach

c. Provides a more equitable approach by ensuring that early adopters of Scope 2 Guidance are not disadvantaged
d. Helps maintain trust and market confidence in long-term contracts
e. Provides a pragmatic pathway for organizations to transition to updated Quality Criteria
f. Other (please provide)

(a) Reflects a reasonable balance of integrity, impact and feasibility as existing long-term contracts reflect significant financial and operational commitments to energy resources

(b) Encourages organizations with legacy contracts to continue to engage in voluntary procurement using an annual procurement approach

(c) Provides a more equitable approach by ensuring that early adopters of Scope 2 Guidance are not disadvantaged

(d) Helps maintain trust and market confidence in long-term contracts

(e) Provides a pragmatic pathway for organizations to transition to updated Quality Criteria

173. Please provide any additional comments regarding your reasons for support.

Long-term Power Purchase Agreements (PPAs) and early adopters have played a critical role in enabling renewable energy development, as demonstrated by the New Zealand solar sector. In the absence of legacy provisions, changes to hourly or deliverability standards may compromise project financing and disadvantage initiatives with significant impact; accordingly, stakeholders have requested that existing contracts be grandfathered.

Incorporating a legacy clause is vital to acknowledge long-term PPAs and pre-existing arrangements established under the prevailing regulatory framework, which have been instrumental in advancing renewable projects such as solar financing. Key design considerations include eligibility limited to PPAs and long-term supplier contracts executed prior to the publication of the updated standard.

174. Please provide your concerns or reasons for why you are not supporting, if any (select all that apply).
a. Reduces overall accuracy and relevance of MBM reporting
b. Introduces inconsistencies across companies, reducing transparency and comparability for users
c. Not aligned with MBM's purpose, weakens credible market signals and abatement planning, and may conflict with regulatory expectations
d. Creates reputational risk and increases skepticism about MBM claims
e. Fragments the voluntary market and may slow the transition to wider availability/use of hourly data
f. Other (please provide)

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175. Please provide any additional comments regarding your concerns or reasons for why you are not supporting.

BLANK

176. Which date should determine a contract's eligibility under a Legacy Clause?
a. Contract signed prior to implementation date of the Scope 2 Standard (post phase-in period)
b. Contract signed prior to publication date of the Scope 2 Standard
c. Other (please explain)
d. Do not support Legacy Clause

(b) contract signed prior to publication date of the revised Scope 2 Standard

177. Please provide any additional comments regarding your response to question 176.

Incorporating a legacy clause is vital to acknowledge long-term PPAs and pre-existing arrangements established under the prevailing regulatory framework, which have been instrumental in advancing renewable projects such as solar financing. Key design considerations include eligibility limited to PPAs and long-term supplier contracts executed prior to the publication of the updated standard.

178. If a Legacy Clause is included, please provide comments on the following design elements to balance integrity, impact, and feasibility of the MBM. Respond only to items relevant to your context.
a. Eligibility by instrument type and term: Define which instruments qualify (e.g., PPAs, utility green tariffs, supplier-specific contracts, unbundled certificates) and any minimum original term, including treatment or eligibility of perpetual or undefined-term contracts.
b. Duration of legacy treatment: Specify the time limit or maximum remaining term after which updated Scope 2 Quality Criteria apply to all contracts.
c. Allocation rules to prevent legacy contractual instruments being used to target the most challenging hours or locations.
d. Transfers and resale requirements when legacy instruments are sold or transferred to third parties.
e. Extensions and amendments: Define how contract extensions or material amendments after the cutoff affect eligibility (e.g., whether the extended or modified portion is treated as a new contract subject to updated Scope 2 Quality Criteria).
f. Disclosures: Scope and granularity of disclosures for any use of a Legacy Clause (for example separate presentation of MBM results with and without legacy-treated instruments, percentage of contracts covered, share of load covered, expected end date of legacy status).
g. Pre-effective-date guardrails: Approaches to discourage contracting intended solely to expand legacy eligibility before the cutoff (for example, disclosure of execution date and negotiation timeline).
h. Global equity: Approaches to address regional concentration of eligible contracts and related equity considerations.

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Questions 179-180 seek input on potential challenges for users of climate-related financial risk disclosure programs arising from a legacy clause. Please only respond to this section if these issues are relevant to your organization or you have direct expertise or experience with climate-related financial risk disclosure programs.

179. Does a legacy clause pose material implications for users of climate-related financial risk disclosure programs?
Scale of 1 (No material implications) – 5 (Significant implications)

BLANK

180. Please briefly explain your rating: identify what the potential impacts could be and the main factors driving the impact (for example, comparability, transparency etc).

BLANK

Some stakeholders have outlined a preference for transition tools other than a legacy clause as a way to balance continuity and comparability for the scope 2 MBM.

181. Which transition approach best balances continuity and comparability for the scope 2 MBM whilst maintaining integrity, impact, and feasibility?
a. Legacy clause: allow existing contracts that meet the current Scope 2 Quality Criteria to continue to be reported under the MBM as described in your response to Question 178.
b. Uniform effective date: rather than using a legacy clause, instead apply the updated quality criteria to all contractual instruments from a specific date following a defined lead time. The lead time would seek to facilitate companies having time to consider changes to existing contracts.

Contracts executed before the effective date could continue to be used during the lead time, with separate, clearly labelled disclosure identifying results affected by those contracts.
c. Other (please specify)

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182. If you selected “Other” in question 181 please provide details of an alternative transition approach that better balances continuity and comparability for the scope 2 MBM whilst maintaining integrity impact and feasibility.

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183. If a uniform effective date was applied rather than a legacy clause, what would be an appropriate date for organizations to be required to apply the updated quality criteria to all contractual instruments? (enter in 20XX).

2035

Contracts signed in New Zealand typically span 7 to 20 years. Those who have already committed to help finance the build of new renewable energy sources should not be penalised.

End of survey

Survey response - Consequential electricity-sector emissions impacts public consultation

General demographics

1. DISCLAIMER AND NOTICE OF RIGHTS FOR VOLUNTARY FEEDBACK SUBMISSION
Liability Limitation: The content of the proposed revised draft standards is subject to change and is provided for solicitation of feedback purposes only and should not be construed as final and should not be relied upon as advice. GHG Protocol is not responsible for any actions taken by or reliance thereof by respondents based on this proposed revised draft standards and the contents therein.
Consideration of feedback: While GHG Protocol values and will consider all feedback received, submission of comments or suggestions does not guarantee implementation of any specific recommendations. The final content of the standard will be determined via due process as described in the GHG Protocol's Standard Development and Revision Procedure.
Anonymity and Public Disclosure: Unless otherwise specified, all feedback submitted will be made publicly available. Respondents who wish to remain anonymous in published feedback must explicitly opt-in to anonymity by checking the appropriate box in the feedback form. It is the responsibility of the respondent to ensure that their feedback does not contain any identifiable or confidential information. GHG Protocol will not redact or modify feedback outside of specifically identified fields designated for anonymity when making feedback publicly available.
Legal Compliance: GHG Protocol will comply with all lawful compelled disclosure for information, including those made through proper judicial notice or other legal processes. GHG Protocol will endeavor to provide written notice to the impacted party or parties about its intent to comply with a lawful order to produce information or documents.
Intellectual Property: By submitting any comments, suggestions, or other content ("Submissions") to the GHG Protocol, you grant GHG Protocol a non-exclusive, royalty-free, perpetual, irrevocable, and fully sublicensable right and license to use, reproduce, modify, adapt, publish, translate, create derivative works from, distribute, and display such Submissions throughout the world in any media. You waive any moral rights you may have in your Submissions. You represent and warrant that you own or have the necessary rights and permissions to grant this license to the GHG Protocol.
By submitting feedback, you acknowledge that you are doing so voluntarily and have read, understood, and agreed to this disclaimer and notice of rights. Please tick "Agree" to proceed with the survey.

Agree

2. Please check "yes" below to confirm that you have read the Scope 2 Public Consultation document associated with this survey before proceeding with your response. This document may be found on the main Scope 2 Public Consultation webpage where you accessed this survey.

Yes

3. As part of the Greenhouse Gas Protocol's standard procedures, all responses will be made publicly available. However, respondents have the option to have their name, organizational affiliation, and country redacted from any public record of their response. Your e-mail will be automatically redacted from any public record, whether you opt-in here or not.
Would you like to request the redaction of this information for your responses?

No

4. Name

Becky Lloyd (Chair)

5. Organizational Affiliation

Sustainability Reporting Board of the New Zealand External Reporting Board (XRB)

6. Country

New Zealand

7 Email
E-mail addresses will not be shared as part of public records of responses and will be kept confidential by default

sustainability@xrb.govt.nz

8. Would you like to receive email updates from GHG Protocol by being added to our newsletter list?

Yes

9. Are you responding as an individual or on behalf of your organization?

Organisation

10. Does your organization have a greenhouse gas inventory? Yes, No, Other or N/A (please specify below)

Yes

11. If you selected "Other," please specify.

NA

12. Are you involved in developing your organization's greenhouse gas inventory?
Yes (Including completing this survey on behalf of my organization, drawing on inputs from relevant teams)
No
Not applicable
Other (please specify below)

Other

13. If you selected "Other," please specify.

To inform XRB's response to the GHG Protocol public consultation, we undertook a targeted engagement process with key stakeholders across the New Zealand energy and reporting ecosystem. This included bilateral meetings with the New Zealand Ministry of Business, Innovation and Employment (the government's principal policy advisor for the energy sector. Its core objective is to ensure the energy system is safe, efficient, reliable, affordable and environmentally sustainable), Transpower (the national grid operator), energy retailers, generators, and sustainability leaders to understand technical feasibility, market implications, and assurance considerations. We complemented these with a multi-stakeholder roundtable session and follow-up discussions to capture diverse perspectives from corporates, service providers, and industry platforms. Feedback was synthesised into common themes – such as grid deliverability, hourly matching practicality, residual mix publication, and implications for PPAs and RECs – which shaped our positions and recommendations in the submission.

We have provided a response to this consultation below and are happy to provide any further information directly to the GHG Protocol. We have also submitted a letter separately via the Complaints and Concerns form regarding some overarching commentary on the GHG Protocol's due process.

14. What is your organization type? (select your answer)
GHG account/reporting programe or initiative
Government institution
Other (please specify below)

Other

15. If you selected "Other," please specify. [4,000 character limit]

The External Reporting Board (XRB) is an independent Crown entity operating in New Zealand.

We develop and issue financial reporting, auditing and assurance, and climate standards for for-profit, not-for-profit and public sector entities. The standards we issue are secondary legislation and must comply with the Legislation Act 2019.

The XRB is not a regulator; monitoring or enforcement functions are carried out by the New Zealand Financial Markets Authority (FMA).

The XRB is required under the Financial Reporting Act 2013 to consult affected parties before issuing standards and to act independently.

These requirements help ensure that standards are credible, high quality and not unduly influenced. Independent standard setting has long been accepted as best practice for international and national standard setters.

Our purpose is to promote trust and confidence, transparency and accountability through high-quality external reporting and assurance. We do this by establishing and maintaining robust frameworks and standards that are internationally credible and relevant to New Zealand.

Our ultimate objective is an external reporting and assurance system in New Zealand that enables sustainable economic growth, transparency, accountability and informed decision making through the provision of trusted, integrated information that meets users' needs.

16. What is your organization's sector? *Note that GCIS codes are included where applicable.*
Professional, scientific, and technical services (2020)
Services
Other (please specify below)

Other

17. If you selected "Other," please specify.

Government. Our role in Government is as an independent, external reporting and assurance standards setter.

General feedback

18. What potential benefits, challenges, or unintended consequences do you foresee with developing and using consequential accounting methods for electricity-sector actions? Please include any practical considerations (e.g., feasibility, data needs, costs, comparability, clarity of claims) [limit 4,000 characters]

We welcome the opportunity to provide feedback on the GHG Protocol's public consultation on consequential electricity-sector emissions impacts. We support, in principle, the development of consequential accounting methods for electricity-sector actions, recognising their potential to improve how organisations quantify and report consequential GHG impacts from electricity actions. However, we have not reviewed or formed a position on the specific proposed calculations or methodologies in this consultation. Our feedback focuses on overarching principles, practical considerations, and implications for New Zealand, rather than technical details.

Potential benefits

1. **Better decision-making:** Consequential accounting focuses on the estimated change in emissions from actions, not allocation by consumption. This could help New Zealand organisations prioritise actions that deliver decarbonisation, such as investing in projects that are outside New Zealand, or investing in flexible capacity or storage.
2. **Alignment with New Zealand's renewable grid:** With ~80-85% renewable electricity, attributional methods can overstate the impact of buying renewable electricity. Consequential

methods may provide more accurate insights into marginal impacts, for example, reducing fossil fuel generation during dry years or peaks.

3. **Supports policy and investment:** Consequential accounting could inform government and corporate strategies, ensuring investments target emissions-intensive marginal generation rather than simply claiming renewable attributes.

Challenges

1. **Data availability and granularity:** Consequential methods require marginal emissions factors and scenario modelling. In New Zealand, hydro variability and seasonal dry-year risks complicate marginal emissions estimation. Hydro variability and dry-year risks complicate estimation, as fossil backup use fluctuates.
2. **Complexity and cost:** Developing and maintaining models for New Zealand's relatively unique hydro-dominated system would be resource-intensive for both regulators and companies. Smaller organisations may lack capacity to apply these methods.
3. **Comparability:** If organisations use different assumptions or datasets, claims may become non-comparable, undermining trust and complicating alignment with New Zealand's mandatory climate-related disclosures.

Unintended consequences

1. **Misinterpreting impacts:** Actions that appear beneficial under attributional accounting may show negligible or negative marginal impact in New Zealand's context. This could risk confusing stakeholders or discouraging activity if not communicated clearly.
2. **Potential for gaming or selective baselines:** Without standardised baselines and marginal factors, organisations might choose assumptions that maximise perceived impact.
3. **Perception issues:** Moving to consequential accounting could make some current claims (for example, "100% renewable electricity") appear less meaningful, creating reputational challenges for organisations that have invested heavily in market-based instruments.

Practical considerations

- **Feasibility**: Would require collaboration between the Ministry of Business, Innovation and Employment, generators, and data providers to develop credible marginal emissions datasets for New Zealand.
- **Costs**: Higher for modelling and verification than attributional methods; likely manageable for large corporates but challenging for SMEs.
- **Integration with New Zealand's disclosure regime**: Consequential metrics may complement, not replace, mandatory GHG emissions reporting under the Aotearoa New Zealand Climate Standards.