# Greenhouse Gas Protocol
# Scope 2 Public Consultation Survey

## General Demographics

General Demographics Data and privacy acknowledgement

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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? *

- ( ) Yes
- (●) No

## Respondent information

4. Name *

   Chris Adams

5. Organizational Affiliation *

Green Web Foundation

6. Country *

Netherlands

7. E-mail

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

chris@greenweb.org

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

- ○ Yes
- ◉ No

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

- ○ Individual
- ◉ Organization

10. Does your organization have a greenhouse gas inventory? *

- ◉ Yes
- ○ No
- ○ Other or N/A (please specify below)

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

Please enter at most 4000 characters

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)

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

Please enter at most 4000 characters

14. What is your organization type? *

Non-profit organization/NGO/civil society

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

Please enter at most 4000 characters

16. What is your organization's sector? *Note that GCIS codes are included where applicable.* *

Information and communication technolo...

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

Please enter at most 4000 characters

## Section 3

### Proposed revisions to definitions and purpose of the location-based method and market-based method

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.*

(<300 words)

We support the update to the scope 2 definition, and the clarity about the kinds of emissions they refer to for scope 2 specifically.

Attributional emissions within a value chain are fundamentally different things to emissions outside a value chain, and they should be kept separate to keep scope 2 disclosures credible and accurate.

19. Please provide any feedback on the proposed clarification to 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.*

(<300 words)

We support the increased granularity. The current guidelines can result in LBM figures that diverge significantly from the reality on the grid, which can be misleading.

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.*

(<300 words)

We support the update of the MBM to more closely match how electricity is actually purchased, as opposed to being a transaction that often has a weaker link to original one to buy power.

We appreciate that large buyers of electricity can make a meaningful contribution to increasing the deployment of clean power in an more equitable fashion than we see now, and tying it to geographic and time based matching is necessary to incentivise meaningful decarbonisation.

The exemptions for smaller operators are welcome, and appropriate, but it is critical that they do not lead to larger, better resourced organisations gaming them.

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.*

(<300 words)

Please enter at most 4000 characters

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.*

(<300 words)

Please enter at most 4000 characters

## Section 4

### 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)?*

***Please note this question only relates to the structure of the***

***hierarchy, subsequent questions will address its intended use.***

1 - No Support, 2 - Little Support, 3 - Neutral, 4 - General Support, 5 - Full Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

24. Please provide your reasons for support, if any.

**Select all options that apply**

- [x] Agree that guidance on selecting location-based emission factors should be presented as a hierarchy
- [x] Enhances the accuracy and relevance of the location-based method
- [x] Enables use of emission factors that support abatement planning and target-setting.
- [x] Improves use of location-based method to provide risk and opportunity assessment related to consumption of grid electricity.
- [x] Aligns with emission factors used by your organization for location-based emissions reporting
- [x] Aligns with emission factors used for mandatory or voluntary reporting in your region
- [x] Prioritizes consumption-based factors that include imports/exports over production-based factors.
- [x] Clarifies application of the EF hierarchy (spatial > temporal > consumption-based > production-based)
- [ ] Agree with listing the most precise temporal granularity as "hourly"
- [ ] Agree with listing the most precise spatial boundary as "local boundary"
- [x] Agree that the proposed spatial boundaries reflect electricity deliverability in your region
- [ ] Other (please provide)

25. Please provide comments regarding your reasons for support.

"We support the proposed hierarchy. Under this, places where there are significant differences in the carbon intensity of the grid within the same country would be better reflected.

Examples would include the difference between Quebec and Alberta in Canada. You see the same in different regions in Great Britain, which have different carbon intensities based on the amount of clean generation producing in that geographic region.

26. Please provide your concerns or reasons for why you are not supporting, if any.

***Select all options that apply***

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

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

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

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*

Please enter at most 4000 characters

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*

Please enter at most 4000 characters

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?

- ○ Yes, I support local boundary as the most precise spatial boundary
- ○ No, a more precise spatial boundary should be added
- ○ No, a less precise spatial boundary should be used. Use Operational grid boundary
- ○ No, a less precise spatial boundary should be used. Use Grid-wide or national boundary

- ○ Other (describe)

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

Please enter at most 4000 characters

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?

- ○ No, different spatial boundaries are appropriate for the location-based and market-based methods
- ◉ Yes, include the MBM deliverability market boundaries in addition to the proposed LBM hierarchy *(explain why they should be added)*
- ○ Yes, include the MBM deliverability market boundaries as a replacement for the proposed LBM hierarchy *(explain why they should replace the current hierarchy)*
- ○ Other (explain)
- ○ 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)*

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

Please enter at most 4000 characters

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?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

36. Please provide your reasons for support, if any

***Select all options that apply***

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

37. Please provide comments regarding your reasons for support.

We support the accessible definition.

We think it it helps set a norm of there being publicly available information that can be used to independently verify some of the claims being made about the carbon intensity of electricity being consumed by consumers.

It also  helps organisations who may not be able to purchase data that is only available under commercial terms.

It also helps set the expectation that this data *should* be available for people to use. As providers of this data ourselves In our software, we welcome this clearer a definition.

38. Please provide your concerns or reasons for why you are not supporting (if any).

*Select all options that apply*

- [ ] Definition needs further clarification about what is recognized as a credible source
- [ ] Definition should not exclude emission factors that are publicly available and credible even if they have a reasonable associated cost (i.e. not free)
- [ ] 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.
- [ ] Definition should also consider level of administrative effort in addition to external costs for emission factor data.
- [ ] Another criteria should be added to the definition
- [ ] Other (please explain)

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

Please enter at most 4000 characters

40. 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.

Which entities should qualify as credible sources:

*Select all options that apply*

- [x] Government agency
- [x] System operator
- [x] Recognized registry
- [x] Accredited statistics body
- [x] Independent methodology meeting minimum criteria (outlined in question 42)

- [ ] Other (please specify and explain)

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.

Please enter at most 4000 characters

42. If you selected independent methodologies in question 40, please describe what documentation or assurance (if any) is needed for it to be recognized as a credible source?

*Select all that apply, then add brief detail:*

- [x] Publicly documented methods and system boundaries
- [x] Update cadence (e.g., annual) and version control
- [x] QA/QC procedures and uncertainty disclosure
- [x] Governance/independence and conflict-of-interest safeguards
- [x] Geographic/system boundary and temporal coverage fit for use
- [ ] Other (please explain)

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

Please enter at most 4000 characters

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?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

1 2 3 4 5

45. Please provide your reasons for support, if any.

***Select all that apply***

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

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

Please enter at most 4000 characters

47. Please provide your concerns or reasons for why you are not supporting.

***Select all that apply***

- [ ] Concern about negative impact on comparability, relevance and/or usefulness of LBM inventories
- [ ] Concern that administrative, data management, and audit challenges posed by this approach would place an undue burden and costs on reporters
- [ ] Concern that the most precise spatial boundary in the LBM emission factor hierarchy, 'local boundary', is too narrow to require even when accessible
- [ ] Accessible factors may be less accurate than non-accessible options and primary users of emission reporting data may expect the most representative factors
- [ ] Material differences to inventory accuracy are too small to justify cost
- [ ] Concern about the update cadence or representativeness of datasets (hourly/monthly)
- [ ] Other (please provide)

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

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

52. 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.
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?

- ○ No meaningful improvement (unlikely to change decisions/interpretations)
- ○ Minor improvement (noticeable but unlikely to change decisions)
- ○ Moderate improvement (could change some decisions/assessments)
- ○ Substantial improvement (likely to change decisions benchmarks)
- ○ Not sure / no basis to assess

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

Please enter at most 4000 characters

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?

- ○ No meaningful improvement (unlikely to change decisions/interpretations)

- Minor improvement (noticeable but unlikely to change decisions)
- Moderate improvement (could change some decisions/assessments)
- Substantial improvement (likely to change decisions benchmarks)
- Not sure / no basis to assess

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

Please enter at most 4000 characters

56. For question 52-55, please provide the basis for your assessment.

- Direct empirical analysis (e.g., back-testing with hourly factors)
- Operational experience (e.g. applying hourly LBM emission factors)
- Professional judgment informed by literature/briefings
- General awareness (no direct analysis)
- Prefer not to say

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

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

- 0%
- 1–25%
- 26–50%
- 51–75%

- ◯ 76–100%
- ◯ Unsure
- ◯ Not applicable

58. Please provide additional context for your answer to question 57

Please enter at most 4000 characters

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

- ◯ 0%
- ◯ 1–25%
- ◯ 26–50%
- ◯ 51–75%
- ◯ 76–100%
- ◯ Unsure
- ◯ Not applicable

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.

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

62. 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).

    On a scale of 1-5, please indicate the incremental preparer cost/effort to implement the proposed revisions to the location-based method.

- ○ 1 - Minimal effort
- ○ 2 - Low effort
- ○ 3 - Neutral effort
- ○ 4 - Moderate effort
- ○ 5 - High effort
- ○ Not applicable (not a preparer)

63. Please select the main drivers of cost/effort.

    **Select all that apply**

- ☐ Data access/rights to granular emission factors
- ☐ Hourly activity data availability/metering rollout
- ☐ Tooling/IT integration or data pipelines
- ☐ Assurance/internal controls readiness

- [ ] Staffing/capacity/training
- [ ] Contracting/procurement or budget cycle constraints
- [ ] Third-party publication cadence (emission factors)
- [ ] Multi-jurisdiction complexity (many grids/regions)
- [ ] Policy/regulatory or commercial terms
- [ ] Other

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

Please enter at most 4000 characters

65. Which two measures would most reduce burden in your context?

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

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

Please enter at most 4000 characters

67. For which reporting year would your organization be ready to apply the revised LBM requirements 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:

- ○ Earlier than reporting year 2027 (already aligned)
- ○ Reporting year 2027 (inventory prepared in 2028)
- ○ Reporting year 2028 (inventory prepared in 2029)
- ○ Reporting year 2029 (inventory prepared in 2030)
- ○ Reporting year 2030 (inventory prepared in 2031) or later
- ○ Later than Reporting year 2030
- ○ Not applicable

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

Please enter at most 4000 characters

# Section 5

**Market-Based Method**

69. 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

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

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* for references to these options):

- ○ The US Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID)
- ◉ DOE Needs Study Regions (45V)
- ○ Wholesale market/balancing authority
- ○ Don't have operations or experience in the US

70. All respondents, please select your preferred exemption threshold per deliverable market boundary.

- ◉ 5 GWhs

- ○ 10 GWhs
- ○ 50 GWhs

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.

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

72. Please provide reasons for support, if any.

**Select all that apply**

- ☑ Improves accuracy and scientific integrity of MBM results
- ☑ Strengthens transparency and supports public verification
- ☑ Enhances comparability across reporters and frameworks using GHG Protocol data
- ☑ Better reflects grid operation, reduces misallocation of generation (e.g., "solar at night")
- ☑ Reduces risk of greenwashing/time-shifting claims by aligning claims to time of use
- ☑ Improves decision-usefulness for external disclosures
- ☑ Helps create price signals for times and places where renewables are not already abundant
- ☑ Helps accelerate the development of technologies that will be needed at scale for fully decarbonized grids.
- ☑ Enables emission changes from storage and demand-flexibility to be reflected more accurately.
- ☑ Improves risk and opportunity assessment related to contractual relationships.

- [ ] Other (please explain)

73. Please provide comments regarding your reasons for support.

We believe these changes provide the integrity, impact and feasibility needed for an effective update.

The integrity is improved because many of the bases for claims that to be running on clean energy that were not particularly credible are now being addressed. These updates would stop organisations claiming to use certificates from generation during the day (like output from solar panels) and using it to claim that energy consumed at night is now decarbonised, a claim that undermines the credibility of the whole system.

These changes are also in line with existing, established regulation, like the ""three pillars"" approach used for ensuring cleaner hydrogen production in Europe and in the USA.

These changes also represent an improvement from an impact point of view as well. They now provide an incentive to invest in the storage necessary to be able to make a claim that power demand at night was met with energy generated during the day - if you have no hourly requirement, there is little incentive to buy storage over buying more cheap solar certificates during the day.

NESO have described this in their own study into adopting more granular certificates in the UK.

https://www.neso.energy/document/365496/download

Other studies from other institutions make a similar argument with a similar evidence base, like the energy modelling from researchers at the Department of Digital Transformation in Energy Systems, Technical University Berlin:

https://www.sciencedirect.com/science/article/pii/S2211467X24001950?via%3Dihub

We believe these proposals are feasible as well. There are companies who are already selling energy using hourly tariffs making it easy to calculate this - Granular maintain a public list of suppliers all around the world, who are offering these tariffs.

https://www.granular-energy.com/24-7-suppliers

Elsewhere other companies like Flexidao have demonstrated that is possible to use hourly certificates even in places which have not fully transitioned away from an existing annual certificate regime. This is possible by following a standardised, scheme designed by EnergyTag, to create hourly certificates from existing annual certificates, based on real output data, and in some cases, the generation profiles of the underlying technology. These services are commercially available now, and in regions around the world.

74. Please provide concerns or reasons for why you are not supporting, if any.

*Select all the apply*

- [ ] 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
- [ ] Hourly matching should follow an optional 'may' rather than a required 'shall' approach
- [ ] Hourly matching should follow a recommended 'should' rather than a require 'shall' approach
- [ ] Concern about negative impact on comparability, relevance and/or usefulness of MBM inventories
- [ ] 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
- [ ] Concern that administrative, data management, and audit challenges posed by this approach would place an undue burden and costs on reporters
- [ ] Concern that requiring hourly matching does not create meaningful improvements to inventory accuracy
- [ ] Concern that a requirement for hourly contractual instruments could discourage global participation in voluntary clean energy procurement markets
- [ ] Other (please explain)

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

Please enter at most 4000 characters

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.

See answer 73 for an example of how load profiles can be helpful in the shift to hourly certificates.

We expect that companies spending a minimum of hundreds of thousands of dollars or euros per year on power have a good incentive to understand the shape of their load, but where this is not disclosed to them having a load profile is still helpful. For example, it can help rule out hours where there is likely very low load, when modelling carboin emissions from a monthly bill.

In the absense of data disclosed from suppliers, this can create more accurate hourly figures because the carbon intensity of power can change considerably based on the time of day and location. In some scenarios companies may refuse to dislose load profiles for commercial confidentiality reasons - in the face of this, having a default load profile for the kind of load would would be a fairer representation than a flat baseline figures over the month / year.

Load profiles for different kinds of buildings are freely available, like the example from NREL in the USA below

https://www.nrel.gov/buildings/end-use-load-profiles

77. 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. 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.

What is the approximate share of your organization's total load that would be subject to hourly matching, excluding any exemptions:

- ○ 0%
- ○ 1–25%
- ○ 26–50%

- ◯ 51–75%
- ◯ 76–100%
- ◯ Unsure

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.

1 - Much less 2 - Slightly less 3 - Same 4 - More 5 - Much more

1 2 3 4 5

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.

1 - Much less 2 - Slightly less 3 - Same 4 - More 5 - Much more

1 2 3 4 5

80. What are the feasibility measures you would anticipate relying on:

**Select all that apply**

- ☐ Load profiles for activity data (facility-specific)
- ☐ Load profiles for activity data (utility/customer-class or regulator-approved)
- ☐ Load profiles for activity data (time-of-use averages)
- ☐ Load profiles for activity data (flat average across hours)
- ☐ Load profiles for contractual instruments (same production asset)
- ☐ Load profiles for contractual instruments (facility-specific)

- [ ] Load profiles for contractual instruments (regional publicly available)
- [ ] Phased implementation
- [ ] Legacy clause

81. What are the assumed main drivers affecting internal workload and external service costs after applying feasibility measures:

**Select all that apply**

- [ ] Registry/market access for hourly EACs
- [ ] Vendor/platform upgrades or new tools
- [ ] Data integration (profiles, APIs), system configuration
- [ ] Assurance/internal controls and evidence trails
- [ ] Staff capacity/training
- [ ] Contracting/sourcing changes for hourly instruments
- [ ] Metering/interval data access arrangements
- [ ] Other (specify)

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

Please enter at most 4000 characters

83. **Update to Scope 2 Quality Criteria 5**

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?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

84. Please provide reasons of support, if any.

**Select all that apply**

- [x] Improves accuracy and scientific integrity of MBM results
- [x] Strengthens transparency and public verifiability
- [x] Enhances comparability across reporters and frameworks using GHG Protocol data
- [x] Improves decision-usefulness for external disclosures
- [x] Better reflects grid operation, reduces misallocation
- [ ] Provides sufficiently flexible options for organizations to demonstrate deliverability outside of the defined deliverable market boundaries
- [ ] Defined market boundaries reflect a boundary your organization already uses for procuring contractual instruments
- [ ] Agree that the proposed market boundary for my region(s) accurately reflects deliverability
- [ ] Agree that the defined market boundaries align with mandatory or voluntary reporting requirements in your region
- [x] Improves risk and opportunity assessment related to contractual relationships
- [x] 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.

Tightening up the geographic boundaries that are usable for market-based claims, so they might accurately represent the physical reality of the grid, meets the criteria of integrity, impact and feasibility for GHG protocol updates.

When buying power in power markets, grid regions are used already used as the basis for deciding whether power can actually be sold in a given place and used by the buyer. Bringing the environmental attributes to follow these would make this more consistent, providing more credible claims of higher integrity.

This is an improvement over current market boundaries which allow certificates for clean power from Iceland to be used as the basis of claims made in Germany, despite there being no physical connection between the two, and thousands of kilometres of open ocean dividing the two. Allowing this stretches the credibility of the MBM to breaking point, so requiring tighter geographic boundaries helps remedy this.

Similarly, this is an improvement from an impact point of view as well - it incentivises investing in areas where decarbonisation is necessary, not just where it is easy and cheap to deploy additional new clean generation.

You see this in various regions around the world - like in Norway, where clean generation is comparatively easy to deploy, and the where certificates are used. Certificates generated in Norway are overwhelmingly used in other countries where actual new clean generation is sorely needed, and the availability of low priced undifferentiated certificates, erodes any pricing power that might certificates generated in those countries might enjoy that could improve the economics of a project.

## 86. Please provide reasons of concern or why you are not supporting, if any.

*Select all that apply*

- [ ] Proposed deliverability requirements do not improve alignment with GHG Protocol Principles
- [ ] Concern that narrower market boundaries restrict companies' abilities to invest in areas where renewable energy development could yield the greatest decarbonization impact
- [ ] Concern that narrower market boundaries could prompt a shift away from long-term agreements (i.e., PPAs) to spot purchases (unbundled certificates)
- [ ] Sourcing contractual instruments within deliverable market boundaries should follow an optional “may” rather than a required “shall” approach
- [ ] Sourcing contractual instruments within deliverable market boundaries should follow a recommended “should” rather than a required “shall” approach

- [ ] Concern that the defined market boundaries do not align with mandatory or voluntary reporting requirements in your region
- [ ] Support deliverability in principle, but the proposed market boundary for my region does not reflect deliverability
- [ ] Market boundaries should be defined as the geographic boundaries of electricity sectors, which align with national, and under certain circumstances, multinational boundaries
- [ ] Exemptions to matching within deliverable market boundaries should be allowed for markets lacking sourcing options
- [ ] Other (please explain)

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

Please enter at most 4000 characters

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

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* for references to these options):

- ( ) The US Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID)
- (•) DOE Needs Study Regions (45V)
- ( ) Wholesale Market/Balancing Authority
- ( ) Unsure
- ( ) Other

89. If you selected 'eGRID', 'DOE Needs Study Regions', 'Wholesale Market/Balancing Authority', or 'Other' 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.

Department of Energy ""Needs Study"" regions are more feasible because they are already aligned with the existing regulation covering clean hydrogen tax credit Rrules - which already have stringent requirements around hourly matching and location.

These Needs Study regions are also likely to have a higher impact than regular grid boundaries because they more accurately represent congestion within the grids.

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.

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

92. 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.

    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.

    1 - Much less 2 - Slightly less 3 - Same 4 - More 5 - Much more

    1 2 3 4 5

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.

    1 - Much less 2 - Slightly less 3 - Same 4 - More 5 - Much more

    1 2 3 4 5

94. What are the feasibility measures you would anticipate relying on to report using deliverable market boundaries:

**Select all that apply**

- [ ] Phased implementation
- [ ] Legacy clause

95. What are the assumed main drivers affecting internal workload and external service costs after applying feasibility measures:

**Select all that apply**

- [ ] Data access/rights for EACs/registries aligned to deliverable market boundaries
- [ ] Vendor/platform upgrades or new tools
- [ ] Data integration (profiles, APIs), system configuration
- [ ] Assurance/internal controls and evidence trails
- [ ] Staff capacity/training
- [ ] Contracting/sourcing changes for contractual instruments within deliverable market boundaries
- [ ] Metering/activity data reporting configured to match deliverable market boundaries
- [ ] Other (specify)

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

Please enter at most 4000 characters

97. New guidance for Standard Supply Service (SSS)

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.

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

1 2 3 4 5

98. Please provide reasons of support, if any.

**Select all that apply**

- [x] Helps ensure that SSS resources are fairly allocated to all consumers and prevents procurement by specific organizations
- [x] Clarifies the order of operations so that organizations may claim SSS first and then make voluntary procurements
- [x] Supports consistent treatment of shared supply across different market structures
- [x] Protects the integrity of market-based accounting by avoiding double counting of attributes from SSS
- [ ] Other (please explain)

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

This standard supply service provides a higher degree of integrity that was not there before - It stops companies claiming credit for deploying generation that has been paid for by other entities.

From an impact point of view this is helpful, as companies that want to make a credible claim of decarbonising their power, would need to invest in storage or additional clean generation that they otherwise would be able to claim if the Standard Supply Service did not exist.

100. Please provide concerns or why you are not supporting.

**Select all that apply**

- [ ] Markets should self-determine how resources that fall under SSS are allocated to customers
- [x] Concern of regionally applicable challenges to implementation
- [x] Unclear how partial subsidies affect SSS classification
- [x] Unclear rules/definition of SSS

- [ ] All contractual instruments should be eligible for voluntary procurement.
- [ ] Other (please explain)

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

It is not clear how the standard supply service would work across every geographic region globally. Also, different parts of the world have different subsidy regimes, which can make it harder to make a clear judgement about a particular form of generation should be included in the standard supply service construct.

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.

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

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**

- [ ] Vertically integrated investor-owned utility
- [ ] Government entity operating in a service area without supplier choice
- [ ] Distribution utility in a restructured market where certain electricity supply and/or contractual instrument purchases are subject to non-by passable, regulated cost recovery
- [ ] Other (please explain)

- [ ] Unsure

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

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

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?

- (●) Yes
- ( ) No
- ( ) Unsure

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

Yes - there are various regions where there is already an evidence base of existing government funded energy proejcts that could be added to an SSS for a country.

Where there is no pre-existing SSS database, if you knew what energy projects were already funded historically from government funds and how much they generated in a given year, you would likely know enough to to allocate that as a share of generation across all users, rather than it being allocated to a single buyer.

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**

- [x] Project age
- [x] Technology or fuel type
- [x] Project ownership (e.g. government owned projects)
- [x] Projects tracked in compliance registries
- [x] Combination of above criteria
- [ ] Other (please specify)

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

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

112. Please provide any additional feedback on SSS.

Please enter at most 4000 characters

## 113. Updated definition of residual mix emission factors

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?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

114. Please provide reasons of support, if any.

**Select all that apply**

- [x] Establishes clear definition for residual mix emission factors
- [x] Improves accuracy and relevance of market-based reporting
- [x] Protects the integrity of market-based accounting by avoiding double counting of attributes within the MBM
- [x] Clarifies the market boundary a residual mix emission factor should be calculated for
- [x] Improves comparability and transparency across organizations and regions
- [x] Helps incentivize voluntary sourcing of contractual instruments
- [x] Provides an option for reporters without access to an hourly residual mix emission factor
- [ ] Other (please explain)

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

Please enter at most 4000 characters

116. Please provide reasons of concern or why you are not supporting, if any.

**Select all that apply**

- [ ] Requiring a residual mix emission factor to be calculated per market boundary will further reduce availability of residual mix emission factors

- [ ] Allowing reporters to use different temporal precision of residual mix emission factors within a deliverable market boundary will negatively impact comparability
- [ ] 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
- [ ] Markets should self-determine if Standard Supply Service is included in a residual mix emission factor
- [ ] Increases administrative complexity of calculating a residual mix emission factor
- [ ] Other (please explain)

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

Please enter at most 4000 characters

118. 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).

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. For all other regions please answer in regard to the deliverable market boundaries defined in the table *Proposed methodologies for demonstrating deliverability.*

- ( ) 1 - Far from ready
- ( ) 2 - Somewhat ready
- ( ) 3 - Neutral
- ( ) 4 - Mostly ready

- ○ 5 - Largely ready
- ○ Insufficient basis to assess

119. Please indicate the main registry you are most familiar with and are referencing when answering questions 118 and 120-122. If you're familiar with other registries, briefly describe (for up to three registries) whether their level of readiness is notably different.

Please enter at most 4000 characters

120. Please indicate your expected lead-time to reach "ready" (score 4–5), based on your current trajectory:

- ○ <12 months
- ○ 12–24 months
- ○ 24–36 months
- ○ >36 months
- ○ Unknown

121. Please indicate your expected lead-time to reach "ready" (score 4-5), if investment/coordination accelerate:

- ○ <12 months
- ○ 12–24 months
- ○ 24–36 months
- ○ >36 months
- ○ Unknown

122. Please describe the basis for your assessment:

- ○ Public roadmap/docs
- ○ Operator/vendor commitments
- ○ Pilot/production use
- ○ Professional judgment
- ○ Other (specify)

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

Please enter at most 4000 characters

124. Provide new requirement for use of fossil-based emission factors

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?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

125. Please provide reasons for support, if any.

**Select all that apply**

- ☐ Helps improve accuracy and scientific integrity of MBM by reducing the risk of double counting of carbon free electricity
- ☐ Provides an option for reporters without access to a residual mix emission factor
- ☐ Incentivises development and publication of residual mix emission factors by requiring use of a more conservative emission factor as a fallback option

- [ ] Other (please specify)

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

While residual mixes are helpful, they are not always available in every country, And where they are available, they are not always available in a timely manner, nor freely accessible, placing barrier on their use.

In this scenario, having a fossil based emission factor would be relatively easy to compute and avoid the double counting that currently undermines the existing system.

Various regions already provide data on the share of generation for power consumed and power produced. Deriving a fossil-only version of this generation mix would be relatively straightforward to implement.

127. Please provide reasons for concern or why you are not supporting, if any.

**Select all that apply**

- [ ] Defaulting to fossil-based emission factors is overly conservative and may overstate actual emissions
- [ ] Organizations that lack access to residual mix data due to systemic or regional limitations may be disproportionately impacted
- [ ] Undermines comparability between organizations that can access residual mix data and those that cannot
- [ ] Misaligned with the definition and/or purpose of the MBM
- [ ] Other (please specify)

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

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

130. 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, and not specific components of the market-based revision. Please assume the default exemption conditions selected in Section 5.3.1

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?

- ○ 1 - Insufficient
- ○ 2 - Somewhat sufficient
- ○ 3 - Sufficient
- ◉ 4 - Moderately sufficient
- ○ 5 - Highly sufficient
- ○ No basis to assess

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.

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

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.

Please enter at most 4000 characters

134. 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.

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?

- ○ No meaningful improvement (unlikely to change comparability/interpretations)
- ○ Minor improvement (noticeable but unlikely to change comparability)
- ○ Moderate improvement (could change some comparability/assessments)
- ○ Substantial improvement (likely to change comparability benchmarks)

- ◯ Not sure / no basis to assess

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

Please enter at most 4000 characters

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?

- ◯ No meaningful improvement (unlikely to change comparability/interpretations)
- ◯ Minor improvement (noticeable but unlikely to change comparability)
- ◯ Moderate improvement (could change some comparability/assessments)
- ◯ Substantial improvement (likely to change comparability benchmarks)
- ◯ Not sure / no basis to assess

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

Please enter at most 4000 characters

138. For questions 134-137, please provide the basis for your assessment

**Select all that apply**

- ☐ Direct empirical analysis (e.g., back-testing with hourly factors)
- ☐ Operational experience applying hourly MBM
- ☐ Professional judgment informed by literature/briefings
- ☐ General awareness (no direct analysis)

- [ ] Prefer not to say

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.

1 - Much less 2 - Slightly less 3 - Same 4 - More 5 - Much more

1 2 3 4 5

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**

- [ ] Hourly matching and deliverability requirements may change prices due to supply available at specific times and locations of demand
- [ ] Shaping/firming or storage products required to align hourly supply with load
- [ ] Contract tenor or credit/collateral requirements that increase all-in price
- [ ] Need to structure multiple smaller PPAs instead of one large, aggregated contract, reducing economies of scale and increasing fixed transaction and development costs
- [ ] 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
- [ ] Procurement costs to purchase EACs in secondary/spot markets to cover residual hours
- [ ] Other (please explain in next question)
- [ ] None

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?

Please enter at most 4000 characters

142. 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.

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)?

1 - No impacts 2 - Low impacts 3 - Neutral impacts 4 - Moderate impacts 5 - Significant impacts

1 2 3 4 5

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).

Please enter at most 4000 characters

144. If mid–high impacts: select affected areas:

**Select all that apply**

- [ ] Own-use
- [ ] Hedge accounting
- [ ] IAS 37
- [ ] Other (please explain)

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

Please enter at most 4000 characters

146. 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.

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?

- ○ Yes
- ○ Somewhat
- ◉ No
- ○ I do not support the development of impact metrics outside the scope 2 inventory.

147. If you answered "yes" or "somewhat" to question 146, which of the following rationale captures your views?

**Select all that apply**

- ☐ Allows for continued investment in electricity projects outside of my deliverable market boundary
- ☐ Provides a complementary metric to quantify actions such as energy storage or demand response
- ☐ Causes less disruption of existing electricity procurement practices
- ☐ Provides additional relevant information for users of GHG data
- ☐ Provides additional approaches for target setting
- ☐ Other (please specify)

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

Please enter at most 4000 characters

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.

The existence of a separate impact metric does not really change the need for reform of the existing scope 2 guidance - they are not doing the same job.

We have experience developing various metrics for understanding the different environmental impacts of using software that is relevant here. These metrics are design to better reflect the actions available to software developers who might write code a particular way to induce fewer emissions, but have much less influence over procurement. With this in mind the metrics used to measure the impact of software recognise this and instead aim to acheive different goals to attributional carbon accounting.

We think the inverse applies here as well - the actions that the proposed changes to scope 2 incentivise are different, and assume different actors.

For this reason we think it's better to have separation than to conflate two different activities with different goals.

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**

- [x] There is no agreed-on methodology for calculating these impact metrics
- [x] The existence of impact metrics would divert investment from time-matched and deliverable electricity procurement
- [x] These metrics are not currently required in mandatory disclosure frameworks
- [x] These metrics are not currently part of target setting programs
- [x] These metrics may not be appropriately auditable
- [x] These metrics could result in greenwashing
- [ ] Other (please specify)

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

The challenges with the current Scope 2 system are well documented, and well understood, and these proposals go a long way to resolving some of the key shortcomings.

The GHG protocol scope 2 guidance is used as the basis for many existing laws, as well as future proposed ones. As a result, they need to use the best available science to accurately reflect the likely impact of actions being taken - and capture the scale of the challenge of decarbonizing the energy system.

They also need to be auditable in a meaningful way, so they are robust to challenges - without this they do not demonstrate the feasibility that this update to Scope 2 requires.

There may well be a place for impact based metrics, but one challenge is that they almost always rely on a counterfactual, which in many many cases, which often doesn't capture the wider systemic impacts - it often just moves them out of the scope of the particular impact metric.

We are also aware of pressure by large actors like Meta and Amazon, who are pushing for alternative measures to the proposed changes in the scope 2 so they can continue to make low-credibility claims about using clean energy, without being penalised. Allowing this would be wrong, and allow bad actors to forgoe the necessary investments required for credible claims about running on clean energy.

Decarbonisation is hard and we need to be honest about the scale of the challenge, rather than stick with the artifical local maximum that exists under the current system.

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.

Please enter at most 4000 characters

# Section 6

## Exemptions - Hourly Matching Exemption Threshold

153. **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.

On a scale of 1-5 do you support allowing for exemptions to hourly matching using one of the options (1-4) described above?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

154. Please provide your reasons for support, if any.

**Select all that apply**

- [x] 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
- [x] Encourages organizations under a threshold to continue to engage in voluntary procurement using an annual procurement approach
- [x] Provides a more equitable approach for reporting as hourly matching could be more challenging for organizations under a threshold
- [x] Reduces transition strain on the electricity market and hourly matching infrastructure
- [ ] Other (please provide)

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

Please enter at most 4000 characters

156. Please provide your concerns or reasons for why you are not supporting, if any.

**Select all that apply**

- [ ] Reduces accuracy and relevance of MBM reporting
- [ ] Introduces inconsistencies across companies, reducing transparency and comparability for users
- [ ] Creates reputational risk and increases skepticism about MBM claims
- [ ] Fragments the voluntary market and may slow the transition to wider availability/use of hourly data
- [ ] Feasibility is better addressed via temporary measures (e.g., phase-ins/legacy) rather than ongoing exemptions
- [ ] Tools and infrastructure are improving rapidly, making broad exemptions increasingly unnecessary
- [ ] Support an exemption, but a different criterion should be used for defining eligibility
- [ ] Other (please provide)

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

Please enter at most 4000 characters

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

Please enter at most 4000 characters

159. Load-based exemption threshold

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

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

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**

- [ ] Number of employees
- [x] Net annual turnover
- [x] Balance sheet
- [x] Emissions (scope 1 + LBM scope 2)
- [ ] Company location (high and upper-middle income countries and low- and lower-middle income countries)

- [ ] Other (please explain)

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

"The criteria for defining small and medium companies varies from region to region. So having clear, easy to manage criteria avoids This being too easy to gain.

Using the Company location would not work so well, Because the majority of an energy market isn't necessarily tied to whether it is a high income country or a low income country. "

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.

- ○ Option 1
- ○ Option 2
- ○ Option 3
- ◉ Option 4
- ○ None of the above (please explain)

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.

Please enter at most 4000 characters

165. Please provide additional comments regarding your answer to question 163, including the main reasons why it is the most appropriate and any geographic or industry specific considerations that influenced your response.

Please enter at most 4000 characters

166. Should exemptions be time-limited (i.e. phased-out over time) or ongoing?

- (●) Time-limited (i.e. phased out over time)
- ( ) Ongoing
- ( ) Unsure
- ( ) Do not support exemptions

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).

Please enter at most 4000 characters

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?

Please enter at most 4000 characters

169. In exercising the exemption, should the organization be considered in conformance with the Corporate Standard and Scope 2 Standard?

- ( ) Yes, organizations using the hourly matching exemption should be considered in conformance
- ( ) No, organizations using the hourly matching exemption should NOT be considered in conformance
- (●) A separate conformance level should be defined for companies exercising the exemption

- ○ Unsure
- ○ Other (please explain)

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

If an organization is taking advantage of this exemption, then it should be clear that they are doing so, because it does reflect a specific degree of organizational effort. There shouldn't be a penalty for doing so, but it should be clear when it takes place.

# Section 7

## 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)?

1 - No Support 2 - Little Support 3 - Neutral 4 - General Support 5 - Fully Support

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|

172. Please provide your reasons for support, if any.

**Select all that apply**

- ☑ Reflects a reasonable balance of integrity, impact and feasibility as existing long-term contracts reflect significant financial and operational commitments to energy resources
- ☑ Encourages organizations with legacy contracts to continue to engage in voluntary procurement using an annual procurement approach
- ☑ Provides a more equitable approach by ensuring that early adopters of Scope 2 Guidance are not disadvantaged
- ☑ Helps maintain trust and market confidence in long-term contracts
- ☑ Provides a pragmatic pathway for organizations to transition to updated Quality Criteria

- [ ] Other (please provide)

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

Not having any legacy clause at all would be extremely problematic for people who have already signed various agreements to procure clean power. But we have to acknowledge that not every contract reflects the same level of credibility and ambition.

An existing long term fixed price power purchase agreements that have led to the creation of new additional clean energy generation represent a much more credible contract than one to buy a number of unbundled certificates with unclear connection to the actual consumption they are being matched against, and they can't be treated the same.

Just like how there is an exemption for small to medium size enterprises proposed, there needs to be some clear indication of when a legacy clause is being usedfor a claim to run on clean energy. this needs to include the share of energy consumption that is being met by legacy clauses, along with the geography of the certificates being used to match this consumption to avoid distorting the proposed markets for more granular certificates.

There also needs to be a time limit for how long legacy contracts can actually be used - we propose a maximum of 10 years.

There must be no extension of legacy contracts as well - this would undermine and distort any market for new certificates if people could just extend an existing contract with more capacity rather than have to meet the more rigorous criteria when making further purchases of power.

174. Please provide your concerns or reasons for why you are not supporting, if any.

**Select all that apply**

- [ ] Reduces overall accuracy and relevance of MBM reporting
- [ ] Introduces inconsistencies across companies, reducing transparency and comparability for users
- [ ] Not aligned with MBM’s purpose, weakens credible market signals and abatement planning, and may conflict with regulatory expectations
- [ ] Creates reputational risk and increases skepticism about MBM claims
- [ ] Fragments the voluntary market and may slow the transition to wider availability/use of hourly data

- [ ] Other

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

Please enter at most 4000 characters

176. Which date should determine a contract's eligibility under a Legacy Clause?

- (•) Contract signed prior to implementation date of the Scope 2 Standard (post phase-in period)
- ( ) Contract signed prior to publication date of the Scope 2 Standard
- ( ) Other (please explain)
- ( ) Do not support Legacy Clause

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

Please enter at most 4000 characters

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.

Enter your answer

179. 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.

Does a legacy clause pose material implications for users of climate-related financial risk disclosure programs?

1 - No implications 2 - Minimal implications 3 - moderate implications 4 - many implications 5 - Significant implications

1 2 3 4 5

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.).

Enter your answer

181. 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.

Which transition approach best balances continuity and comparability for the Scope 2 MBM whilst maintaining integrity, impact, and feasibility?

- ○ Legacy clause: allow existing contracts that meet current quality criteria to continue to be reported under the MBM as described in Question 178.
- ○ 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. Include a separate disclosure that disaggregates results affected by contracts signed prior to this date.
- ○ Other (please specify)

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.

Please enter at most 4000 characters

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 format

Number must be between 2000 ~ 2099