



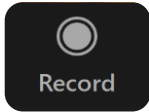
Draft for TWG discussion

Scope 2 Technical Working Group Meeting

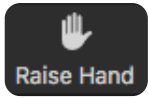
Meeting #8

February 19, 2025

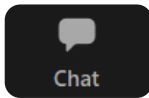




This meeting is recorded.



Please use the Raise Hand function to speak during the call.



You can also use the chat function in the main control.



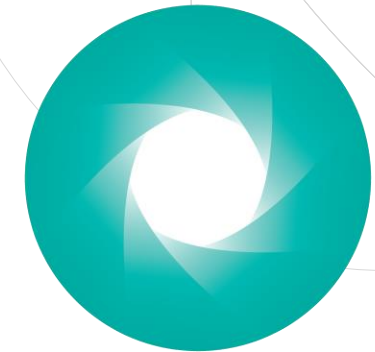
Recording, slides, and meeting minutes will be shared after the call.



Be mindful of sharing group discussion time; keep comments as succinct as possible.

Agenda

1. **Housekeeping & goals for meeting (2 min)**
2. **Context for consideration (3 min)**
3. **Summary of key issues raised in market-based method (MBM) revisions (15 min)**
4. **Process for using Miro for between-meeting progress on issues (5 min)**
5. **Issue 1: Vintage and market boundaries (90 min)**
6. **Next steps (5 min)**



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Goals of today's meeting



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Goals of today's meeting

1. Share key issues identified across market-based method revisions submitted

- a. Share process for using Miro board to continue discussion and progress between-meetings on key issues

2. Poll the group and gather feedback on areas of convergence and divergence for Issue 1 to:

- a. Inform next iteration of revisions to be made by proposal author groups
- b. Provide awareness to the rest of TWG on market-based revisions under development in working toward consensus
- c. Encourage further collaboration

Decision Making Criteria assessment of market- based improvement options



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Lookback at TWG feedback from Meetings 4 & 5 on stakeholder proposals submitted related to the market-based method

TWG Majority Assessment

GHG Protocol Decision Making Criteria and Hierarchy		Option A: Maintain the Current Market-Based Method Accounting and Reporting Requirements	Option B: Time and Location Matching	Option C: Three Pillars (Time and Location Matching Plus Resource Newness)	Option D: Introduce additionality or causality test in the Scope 2 Quality Criteria	Option E*: Induced – avoided emissions
Scientific integrity		Mixed (14/26)	Mixed / Yes (20/26)	Mixed / Yes (18/26)	Mixed (19/26)	Mixed (12/26)
Corporate Standard GHG accounting and reporting principles	Relevance	Mixed (20/26)	Mixed / Yes (21/26)	Yes (17/26)	Mixed (21/26)	N/A (18/26)
	Completeness	Yes (23/26)	Yes (24/26)	Mixed (20/26)	Mixed (22/26)	N/A (19/26)
	Consistency	Mixed (20/26)	Yes (20/26)	Yes (21/26)	Mixed (22/26)	N/A (18/26)
	Transparency	Yes (20/26)	Yes (21/26)	Yes (21/26)	Mixed (22/26)	N/A (18/26)
	Accuracy	Mixed (13/26)	Mixed / Yes (15/26)	Yes (15/26)	Mixed (20/26)	N/A (17/26)
	Comparability	Mixed (20/26)	Mixed / Yes (21/26)	Mixed / Yes (20/26)	Mixed (24/26)	N/A (18/26)
Supports decision making that drives ambitious global climate action		Mixed (17/26)	Mixed / Yes (19/26)	Yes (16/26)	Mixed (22/26)	Mixed (14/26)
Supports programs based on GHG Protocol and uses of GHG data		Mixed (23/26)	Mixed (22/26)	Mixed (22/26)	Mixed (22/26)	Mixed / No (22/26)
Feasibility to implement		Yes (14/26)	Mixed (15/26)	Mixed / No (19/26)	Mixed (20/26)	Mixed (16/26)

Note: Combinations of these options were proposed by TWG members in MB revision submissions

*Option E now being discussed in S2 subgroup

Summary of key issues raised in revisions



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Summary of topics raised in MBM revision submissions (1/2)

Proposal 1 (2 TWG members)	Proposal 2 (15 TWG members)	Proposal 3 (8 TWG members)
<ul style="list-style-type: none"> • Changing the described purposes and uses of the MBM 	<ul style="list-style-type: none"> • Changing the described purposes and uses of the MBM 	<ul style="list-style-type: none"> • Consequential impact of procurement and consumption is assumed TBD later (TWG sub-group)
<ul style="list-style-type: none"> • Introduce demand-side and supply-side temporal data quality criteria hierarchy 	<ul style="list-style-type: none"> • Introduce demand-side and supply-side temporal data quality criteria hierarchy 	<ul style="list-style-type: none"> • Changing the described purposes and uses of the MBM
<ul style="list-style-type: none"> • Introduce a spatial and temporal deliverability requirement <ul style="list-style-type: none"> ➢ Where data is available 	<ul style="list-style-type: none"> • Introduce methodology for demonstrating spatial correlation 	<ul style="list-style-type: none"> • Introduce consumption data hierarchy to enable various procurement strategies
<ul style="list-style-type: none"> • Introduce causality requirement 	<ul style="list-style-type: none"> • Introduce a spatial and temporal deliverability requirement <ul style="list-style-type: none"> ➢ For loads above 5 GWh per region ➢ If data is not available load profiles can be used 	<ul style="list-style-type: none"> • Introduce requirement for qualified energy attribute certificates (EACs) (or supplier attestation) used in matching consumption with CFE to meet proof of purchase and deliverability (used for CFE Score %) <ul style="list-style-type: none"> • Introduce spatial deliverability criteria • Introduce temporal hierarchy for EACs • Introduce criteria related to the treatment of standard supply / clarify order of operations so all qualified EACs count equally (voluntary and compliance) • Introduce a financial relationship/causality requirement (for continued discussion)
<ul style="list-style-type: none"> • Requirement for final inventory total to include two totals 	<ul style="list-style-type: none"> • Introduce criteria related to the treatment of standard supply and preferential claims <ol style="list-style-type: none"> a. Facility age b. Original offtaker c. Public ownership d. Bundled purchase e. %-carbon-free electricity (CFE) in grid f. Causal relationship 	<ul style="list-style-type: none"> • Introduce emission factor data hierarchy for all unmatched consumption (without qualified EACs) (used to calculate market-based inventory) <ul style="list-style-type: none"> • Use best available fossil EF information (fossil EACs, specific resources, supplier-specific EF, fossil residual mix, fossil grid average) • Eliminate use of grid system average
	<ul style="list-style-type: none"> • Use fossil mix instead of grid-average emission factor (EF) where residual mix is unavailable 	

Summary of topics raised in MBM revision submissions (2/2)

Proposal 4 (1 TWG member)

- Changing the described purposes and uses of the MBM
- Introduce a temporal deliverability recommendation and explicit temporal matching data requirement
- Updated spatial deliverability requirements based on deliverability of certificates not electrons and characteristics of distribution systems
 - Changes to certificate sales language
- Change the market-based data precision hierarchy
- Update order of operations guidance
 - Introduce guidance on standard delivered carbon free electricity
- Introduce two types of residual mixes (A and B)
- Update guidance on goal setting and tracking based on what different totals can credibly communicate
- Introduce clarifications on reporting about impact

Proposal 5 (1 TWG member)

- Changing the described purposes and uses of the MBM
- Establish a hierarchy of market boundaries (*TBD, not yet proposed*)
- Define criteria for cross-boundary contracts and accounting (*TBD, not yet proposed*)
- Introduce requirement that contractual procurement options (e.g. PPAs) include EACs
- Introduce regulatory additionality requirement for EACs

Proposal 6 (1 TWG member)

- Introduce criteria related to the treatment of standard supply and preferential claims

Key issues identified for discussion on market-based method revisions

- **Issue 1:** Vintage and market boundaries
- **Issue 2:** Role of causality, incrementality, standard supply service, and voluntary procurement
- **Issue 3:** Estimated vs. actual activity data
- **Issue 4:** Treatment of residual mix
- **Issue 5:** Dual reporting, goal setting and tracking, and additional metrics
- **Issue 6:** Refinement of purposes, uses, and claims; clarifications on reporting impacts

Issue 1: Vintage and market boundaries

Key Questions

- **Vintage**
 - Should the requirement for Scope 2 Quality Criteria 4, Vintage, be updated?
 - Is a temporal hierarchy for contractual instruments needed to define and apply the requirement?
 - Should the same hierarchy for temporal matching apply to all reporting entities regardless of geography, size, and/or volume of consumption?
 - When using the applicable hierarchy, should the most precise temporal interval for which both activity data and contractual instruments are available be required (shall), recommended (should), or allowed (may)?
- **Market boundaries**
 - Should the description of Scope 2 Quality Criteria 5, Market boundaries, be updated?
 - If spatial deliverability is required, how should the requirement be applied?
 - If a set of conditions is required to meet spatial deliverability, what conditions should be used to define spatial deliverability?

Issue 2a: Causality, incrementality & additionality in market-based scope 2 inventories

Key Questions

- Should **causality, incrementality, or additionality** be required in scope 2 reporting?
- Are these criteria meant to improve **inventory accuracy**, or **drive performance/market impact**?
- How would applying these tests impact the **GHGP Completeness principle**?
- Should criteria apply **globally** or vary by geography, company size, or energy consumption?
- If introduced, what **types of tests** should be required (e.g., regulatory, financial, timing-based)?

Issue 2b: Treatment of standard supply service & voluntary procurement

Context

- TWG members proposed “standard supply service” (SSS) to include electricity supplied under regulated cost recovery, government mandates, or publicly owned generation.

Key Questions

- Should SSS be **distinctly treated** in the market-based method **compared to voluntary procurement**?
- Should voluntary procurement be **“stackable”** on top of SSS carbon-free electricity (CFE)?
- Should any **additional requirements** (e.g., causality or incrementality tests) be applied to **voluntary** procurement claims? If additional requirements are applied, which should test(s) should be considered?
- Should causality tests apply to **all** attribute claims (SSS, fossil, voluntary procurement) or **only voluntary** procurement?

Issue 3: Estimated vs. actual activity data

Key Questions

- Should *estimated* **hourly profiles** of activity data be allowed for market-based reporting when *actual* metered data is unavailable?
- If allowed, should its use be **required, recommended, or optional**?
- Should there be **limits on its application** (e.g., only for small consumers or when no better data exists)?

Issue 4: Treatment of residual mix

Key Questions

- Should a **residual mix** be required to align with **temporal matching and spatial boundaries**?
- If EACs and supplier attestations are used, should the **residual mix be replaced** with a **fossil-only emission factor hierarchy**?
- Should the **grid-average emission factor** be eliminated from the MBM hierarchy?

Issue 5: Dual reporting, goal setting & tracking, and additional metrics

Key Questions

- Should scope 2 maintain the requirement to **dual report** the location & market-based methods?
 - Should guidance for **target/goal setting and tracking** be based upon the location-based or market-based method, or should there be separate goals based on each method?
- What (if any) **additional metrics** should be reported?
 - Consequential impact measures
 - CFE % score using the MBM
 - 'Carbon intensity' and 'carbon exposure' metrics per geographic region using location-based method

Issue 6: Refinement of purposes, uses, and claims; clarifications on reporting impacts

Key Questions

- For the **location-based method**, what are the clarified:
 - Purposes
 - Uses (both internal and external)
 - Appropriate claims to be made
- For the **market-based method**, what are the clarified:
 - Purposes
 - Uses (both internal and external)
 - Appropriate claims to be made
- For the **consequential impact measures**, what are the clarified:
 - Purposes
 - Uses (both internal and external)
 - Appropriate claims to be made

Process for using Miro for between-meeting discussions



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Miroboard Usage Guidance

1. Miro will be used as a tool to help facilitate between-meeting progress on key issues.
2. The use of Miro is *optional but encouraged* to enable further discussion and alignment on issues in advance of live meeting polls.
3. For each of the six key issues identified for the market-based method, the list of corresponding questions have been posted to the Miro board, with several options below each question.
4. Additional issues from the remaining areas of focus on the location-based method will be added to the board in the coming weeks.
5. Use the option areas below each question to add Sticky Notes in support of specific options with details added to your Sticky Notes as needed for additional context.
6. Use the Comment feature to ask questions and add comments to each others' Sticky Notes.
7. Use the Thumbs Up and Thumbs Down features to indicate support / lack of support on each others' Sticky Notes.
8. The Secretariat will use the content generated in the Miroboard to facilitate meeting and discussion planning for the issues identified.
9. If there are key issues or questions that TWG members feel are relevant for discussion but not listed on the Miroboard, there are various areas on the board to offer those suggestions and feedback.
10. If any of the current questions are not clearly articulated, there are also areas to offer that feedback.
11. The Miroboard may change, expand, or evolve as new or different questions are added, modified, or deleted.
12. For questions, reach out to Kyla Aiuto and Chelsea Gillis.

Issue 1: Vintage and market boundary Scope 2 Quality Criteria



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Vintage / temporal matching





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Core changes to vintage across proposals:

- **Proposal 1:** Requires instruments to be matched to the period of energy consumption and introduces a hierarchy for reporting based on data granularity. Allows exemptions based on consumption thresholds.
- **Proposal 2:** Introduces a stricter "same-hour" matching requirement for instruments but allows exceptions based on consumption thresholds. Requires the use of the highest available temporal precision for emissions reporting.
- **Proposal 3:** Requires 'Qualified EACs' to be issued and redeemed in the same period as consumption, with matching requirements corresponding to an Energy Attribute Certificate hierarchy, ensuring consistency in period-based temporal correlation.
- **Proposal 4:** Maintains the current "as close as possible" matching requirement while emphasizing that emissions factors must align with the temporal granularity of activity data.

Vintage: Detailed summary of proposed revisions on temporal matching and the precision hierarchy for market-based instruments

Proposal 1	Proposal 2	Proposal 3	Proposal 4
<p>Criteria 4: Temporal matching</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be matched to the period of energy consumption to which the instrument is applied.</p>	<p>Criteria 4. Temporal correlation</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be issued and redeemed for the same hour as the energy consumption to which the instrument is applied, except in certain cases listed in Table B, Slide 26.</p>	<p>Criteria 4. Vintage</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be issued and redeemed in the same period as the energy consumption to which the instrument is applied.</p>	<p>Criteria 4. Vintage</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be issued and redeemed as close as possible to the period of energy consumption to which the instrument is applied. <i>(No changes)</i></p>
<p>Companies shall calculate and report scope 2 emissions at the highest temporal granularity achievable based on the data available to them, according to the hierarchies outlined in Demand-side temporal data quality criteria table (To be discussed in Issue 3) and Supply-side temporal data quality criteria table (Table A, Slide 25).</p>	<p>Companies shall calculate and report scope 2 emissions at the highest available precision of temporal granularity according to the hierarchies outlined in Demand-side temporal data quality criteria table (To be discussed in Issue 3) and Supply-side temporal data quality criteria table (Table B, Slide 26).</p>	<p>A company shall first follow the Energy Attribute Certificate Data Hierarchy to determine the appropriate temporal matching (hourly, monthly, annually, etc)</p> <p>This timing (vintage) shall be consistent with temporal consumption matching hierarchy (to be discussed in Issue 3) and energy attribute certificate matching hierarchy (Table C, Slide 27) for the market-method.</p>	<p>Each unit of electricity consumption shall be matched with an emission factor appropriate for the activity data's temporal granularity and that consuming facility's location or market.</p>
<p>Threshold exemption for hourly</p> <ul style="list-style-type: none"> ➤ Electricity consumption at low-usage sites, up to 5(10?) GWh/yr per region would instead use monthly/annual data 	<p>All emission factors shall be used in the highest precision of temporal [and spatial] correlation available.</p> <p>Threshold exemption from hourly</p> <ul style="list-style-type: none"> ➤ Electricity consumption up to 5GWh/yr per region 	<p>Matched Carbon-Free Electricity (CFE) Consumption must be met by Qualified EACs that meet proof of purchase and deliverable S2 Quality Criteria.</p> <p>Similar to the EAC data hierarchy, emission factors for Unmatched CFE Consumption should use the most appropriate, accurate, precise, and highest quality temporal data available (i.e., hourly, monthly, annual)</p>	<p>Where sub-annual temporal (e.g. hourly) activity data is available, companies should use this data calculate energy use and facilitate granular temporal matching.</p>
 			

Proposal 1 (same as Proposal 2)

Table A. Supply-side temporal data quality criteria

Data Granularity	Derived from	Applicable to	Precision
Hourly	Hourly-stamped EACs or production data	All electricity consumption	Higher
	Monthly or Annual-stamped EACs combined with hourly production meter data.		
	Facility-specific production profile Total facility production scaled according to an estimated facility-specific production profile		
	Regional publicly available production profile Total regional consumption scaled according to a regional production profile for resources of the same fuel type		
Monthly	Monthly-stamped EACs or monthly total production data	Electricity consumption at low-usage sites, up to 5(10?) GWh/yr per region	Lower
Annual	Annually-stamped EACs or annual total production data		

Proposal 2 (same as Proposal 1)

Table B. Supply-side temporal data quality criteria

Data Granularity	Derived from	Applicable to	Precision
Hourly	Hourly-stamped EACs	All electricity consumption	Higher
	Monthly or Annual-stamped EACs combined with hourly production meter data.		
	Facility-specific production profile Total facility production scaled according to an estimated facility-specific production profile		
	Regional publicly available production profile Total regional consumption scaled according to a regional production profile for resources of the same fuel type		
Monthly	Monthly-stamped EACs or monthly total production data	Electricity consumption at low-usage sites, up to 5(10?) GWh/yr per region	Lower
Annual	Annually-stamped EACs or annual total production data		

Proposal 3

Table C. Energy Attribute Certificate Data Hierarchy

Energy Attribute Certificates (EACs)	Indicative examples
Granular Certificates	<p>Granular certificates (GCs), Time energy attribute certificates (T-EACs) associated with voluntary procurement (green tariff, retail contract, etc,)</p> <p>Contracted EACs (PPA)</p> <p>Supplier hourly allocation and retirement of GCs on behalf of customer</p>
Estimated Hourly EACs	<p>Based on standard supply profiles by resource type and location applied to monthly or annual EACs (e.g., PJM, NREL PV Watts Tool, EIA)</p>
Monthly EACs	<p>Renewable Energy Certificates (U.S., Canada, Australia and others)</p> <p>Generator Declarations (U.K.) for fuel mix disclosure</p> <p>Guarantees of Origin (EU)</p> <p>Electricity contracts (e.g. PPAs) that also convey RECs or GOs</p> <p>Any other carbon-free certificate instruments (including supplier attestations in markets without energy attribute certificates) meeting the Scope 2 Quality Criteria</p>
Annual EACs	<p>Same as above for monthly EACs, but annual</p>

Proposal 4

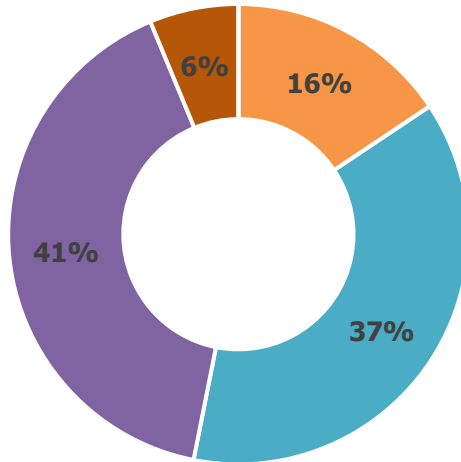
Table D. Market-based scope 2 data hierarchy examples

Data	Description	Examples
Tracked and backed by energy attribute certificates; resource specific with temporal granularity	<ul style="list-style-type: none"> •Resource-specific granular EAC data •Generator-specific, transaction-specific, or product specific granular data •Granular energy attribute certificates or equivalent instruments that are unbundled, bundled with electricity, conveyed in a contract for electricity, or delivered by a utility in a specified product or transaction •Granular product-specific and resource-specific load-serving entity (LSE) data backed by certificates 	<ul style="list-style-type: none"> •Time-stamped EACs •Time-stamped EACs from resource-specific utility contracts
Tracked and backed by energy attribute certificates; resource-specific	<ul style="list-style-type: none"> •Resource-specific EAC data •Generator-specific, transaction-specific, or product-specific •Energy attribute certificates or equivalent instruments that are unbundled, bundled with electricity, conveyed in a contract for electricity, or delivered by a utility in a specified product or transaction •Product-specific and Resource-specific LSE data backed by certificates 	<ul style="list-style-type: none"> •Renewable Energy Certificates (U.S., Canada, Australia and others) •Generator Declarations (U.K.) for fuel mix disclosure •Guarantees of Origin (EU) •Electricity contracts (e.g. PPAs) that convey RECs or GOs •Other certificate instruments meeting the Scope 2 Quality Criteria •Voluntary renewable electricity tariffs, program or product that are resource-specific and convey RECs or GOs •SDRE/SDCE that is based on certificates
Untracked actively contracted; resource-specific	<ul style="list-style-type: none"> •Generator-specific, transaction-specific, or product-specific •Contracts for electricity, such as power purchase agreements (PPAs), with specified sources, where electricity attribute certificates do not exist or are not required for a usage claim 	<ul style="list-style-type: none"> •In the U.S., contracts for electricity from specified nonrenewable sources like coal in regions other than NEPOOL and PJM •Contracts that convey attributes to the entity consuming the power where certificates do not exist •Contracts for power that are silent on attributes, but where attributes are not otherwise tracked or claimed
Load serving entity (LSE)-specific and product-specific emissions rates; not resource-specific	<ul style="list-style-type: none"> •Emissions associated with retail electricity sales to customers that are product-specific (disaggregated by product) but where resource-specific quantities of EACs are unknown or not disclosed. •Supplier/Utility emission rates, such as standard product offer, that are disclosed according to best available information; can only be applied to utility load (electricity being purchased from the utility) 	<ul style="list-style-type: none"> •Product-specific emissions rates without resource-specific information
LSE-specific aggregated retail delivered emissions rates: not resource-specific	<ul style="list-style-type: none"> •Emissions associated with retail electricity sales to customers, reflecting all market transactions, procurement, and purchasing decisions by the LSE; •Supplier/Utility emission rate aggregated for all retail sales; can only be applied to utility load (electricity being purchased from the utility) 	<ul style="list-style-type: none"> •Emission rate allocated and disclosed to retail electricity users, representing the entire delivered energy portfolio and all attribute transactions (not only the supplier's owned assets, for example) and not broken out by resource type
Type B residual mix delivered	<ul style="list-style-type: none"> •Residual mix that uses energy production data and factors out generation included in specified transactions but includes publicly shared generation 	<ul style="list-style-type: none"> •Default-delivered or standard delivery/non-voluntary specified energy where utility-specific mixes are not available •Load not covered by specified purchases where utility-specific mixes are not available
Type A residual mix delivered	<ul style="list-style-type: none"> •Residual mix that uses energy production data and factors out generation included in specified transactions 	<ul style="list-style-type: none"> •Calculated by EU country under RE-DISS project b, c •Null power
Adjusted regional or subnational grid average production	<ul style="list-style-type: none"> •A grid average emissions total that is adjusted for imports and exports of physical power 	<ul style="list-style-type: none"> •Possible future eGRID
Regional or subnational grid average production	<ul style="list-style-type: none"> •Average emission factors representing all electricity production occurring in a defined grid distribution region that approximates a geographically precise energy distribution and use area. 	<ul style="list-style-type: none"> •eGRID total output emission rates (U.S.) •Defra annual grid average emission factor (U.K.)
National grid average production	<ul style="list-style-type: none"> •Average emission factors representing all electricity production information from geographic boundaries that are not necessarily related to dispatch region, such as state or national borders. No adjustment for physical energy imports or exports, not representative of energy consumption area. 	<ul style="list-style-type: none"> •IEA national electricity emission factors

Poll questions on defining vintage/temporal matching and its associated precision hierarchy for scope 2 market-based instruments (1/3)

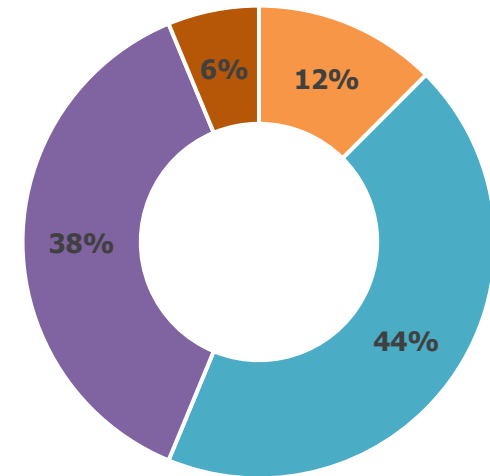
1.1. Should the name for the Scope 2 Quality Criteria 4, Vintage, be updated? If so, which of the following proposed alternatives is most appropriate?

- a. Leave as is (Vintage)
- b. Temporal matching
- c. Temporal correlation
- d. Other (please describe in chat)
- e. Needs more information (please describe in chat)



1.2. Should the requirement for Scope 2 Quality Criteria 4, Vintage, be updated? If it needs to be updated, what should it be?

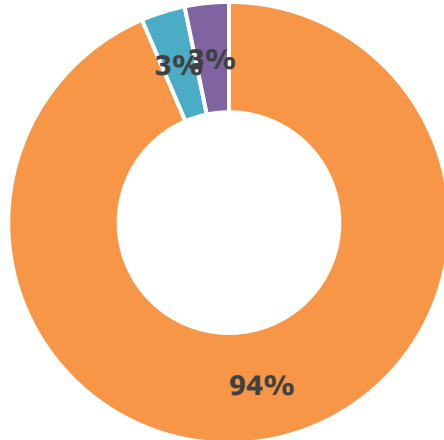
- a. Be issued and redeemed as close as possible to the period of energy consumption (no change)
- b. Be issued and redeemed in the same period as the energy consumption to which the instrument is applied
- c. Be issued and redeemed for the same hour as the energy consumption to which the instrument is applied
- d. Need more information (please describe in chat)



Poll questions on defining vintage/temporal matching and its associated precision hierarchy for scope 2 market-based instruments (2/3)

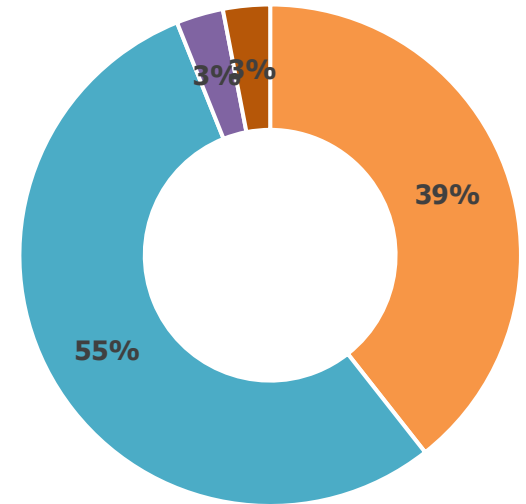
1.3. Is a temporal hierarchy for contractual instruments needed to define and apply the requirement in question 1.2?

- a.Yes
- b.No
- c.Other (please describe in chat)
- d.Need more information (please describe in chat)



1.4. Should the same hierarchy for temporal matching apply to all reporting entities regardless of geography, size, and/or volume of consumption?

- a.Yes, all reporting entities should have the same hierarchy (based on data availability), regardless of geography, size, or volume of consumption.
- b.No, there should be a different hierarchy for reporting entities depending on geography, size, or volume of consumption (thresholds to be determined).
- c.Other (please describe in chat)
- d.Need more information (please describe in chat)

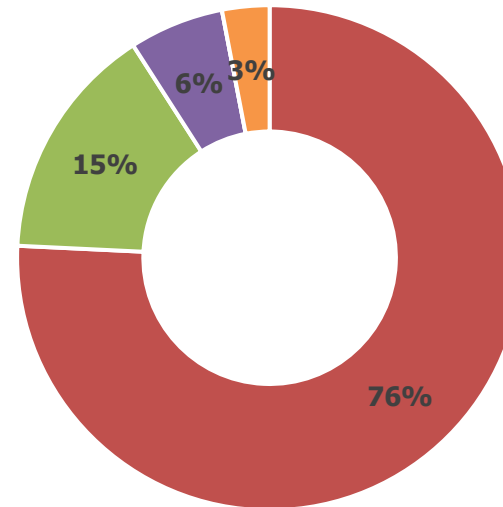


Poll questions on defining vintage/temporal matching and its associated precision hierarchy for scope 2 market-based instruments (3/3)

1.5. When using the applicable hierarchy, should the most precise temporal interval for which both activity data and contractual instruments are available be required (shall), recommended (should), or allowed (may)?

The most precise temporal interval for which both activity data and contractual instruments are available...

- a....shall be used.
- b....should be used.
- c....may be used.
- d.Only [data with specific precision] shall be used. Other temporal intervals (even if more precise) shall not be used.
- e.Need more information (please describe in chat)



Market boundaries / spatial matching



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Core changes to market boundaries across proposals:

- **Proposal 1:** Requires instruments to be sourced from the same spatially deliverable boundary as the reporting entity's electricity consumption, defined by either the grid or distribution network.
- **Proposal 2:** Requires instruments to be sourced from the same market zone, explicitly prohibiting claims where no physical transmission pathway exists between generation and load.
- **Proposal 3:** Proposes criteria for determining deliverability based on bidding zones and/or market load zones, or through deliverability demonstration requirements. For inventory reporting, requires instruments to be sourced from generation deemed "Deliverable (Qualified EACs)" to the consumption location. Allows for the ability to report purchased supply/contractual instruments associated with "Uncertain Deliverability" or "Not Deliverable" for use in supporting consequential claims or leadership programs separate from the scope 2 market-based inventory.
- **Proposal 4:** Maintains the current requirement that instruments be sourced from the same market, clarifying that markets must have shared electric systems and legally enforceable instruments.

Market boundaries: Detailed summary of proposed revisions on spatial matching for market-based instruments

Proposal 1	Proposal 2	Proposal 3	Proposal 4
<p>Criteria 5. Spatial boundaries</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be sourced from the same spatially deliverable boundary in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied.</p>	<p>Criterion 5. Spatial correlation</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: be sourced from the same market zone, [as defined in Table E slide 35], in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied.</p>	<p>Criteria 5. Deliverability and market boundaries</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall: Be sourced from generation that is deemed "deliverable" (Table F, slide 36) to the reporting entity's electricity-consuming operations to which the instrument is applied.</p>	<p>Criteria 5: Market boundaries</p> <p>All contractual instruments used in the market-based method for scope 2 accounting shall be sourced from the same market in which the reporting entity's electricity-consuming operations are located and to which the instrument is applied. <i>(No changes)</i></p>
<p>'Physically supplying' could be defined by:</p> <ol style="list-style-type: none"> 1. Grid 2. Distribution network 	<p>Companies shall therefore apply one of the methodologies listed in Table E to all market-based scope 2 claims. Companies shall not claim use of attributes for which there is not a physical transmission pathway between the generation facility from which the attributes are sourced and the load to which they are applied.</p>	<p>Only purchased supply and/or contractual instruments associated with generation that is deemed "deliverable" to the location of consumption shall be used in the calculation of a market-based inventory. Consumption can be supplied with either deliverable CFE (Matched CFE Consumption using Qualified EACs) or fossil resources (Unmatched CFE Consumption).</p>	<p>Markets for contractual instruments shall meet the following conditions:</p> <ol style="list-style-type: none"> 1. The generation represented by the instrument and the electricity consuming activity are both part of shared electric systems where that resource-type is present and electricity with different generation attributes are mixed. 2. Instruments are legally enforceable where both the generation represented by the instrument and the electricity consumption occur.

Proposal 2

Table E. Methodology for demonstrating spatial correlation

Methodology for demonstrating spatial correlation	Boundary definitions (proposed)
<p>Attributes sourced from generating facilities located within the same spatial boundary as the load to which they are applied</p>	<ul style="list-style-type: none"> • For the United States, transmission regions established by the US government for verification of electricity consumption by clean hydrogen producers; • For the European Union, ENTSO-E bidding zones, e.g. required by the EU for verification of electricity consumption by renewable hydrogen producers*; • For Russia, electricity market price zones; • For Canada, provincial and territorial energy markets as defined by the Canada Energy Regulator; • For mainland China, government-recognised regional power systems; • For Brazil, SIN subsystems; • For Australia, NEM regions and other isolated regional grids; • For India, power market bid areas; • For all other countries, country-level boundaries OR the boundaries of individual wide-area synchronous electricity grids, whichever is smaller. <p>*an offshore bidding zone interconnected to a given spatial boundary is to be considered as within that boundary</p>
<p>Contracts demonstrating physical delivery of power bundled with associated attributes across spatial boundaries to the corporate customer</p>	

Proposal 3

Table F. Scope 2 Deliverability Criteria

Scope 2 Deliverability Criteria

1. Deliverable (Qualified EACs)

- a. Bidding Zones (EU) or Market Load Zones (US)
- b. Outside Bidding Zones or Market Load Zones with deliverability demonstration requirement¹:
 - i. Subnational or regional grid regions (e.g., eGRID in the US)
 - ii. RTO/ISO/Balancing Authority
 - iii. Imports into spatial boundary

2. Uncertain deliverability: EACs sourced from generation outside subnational or regional grid regions unable to meet **any** of the deliverability demonstration requirements; everything else

3. Not deliverable: generation from distant, not interconnected grids

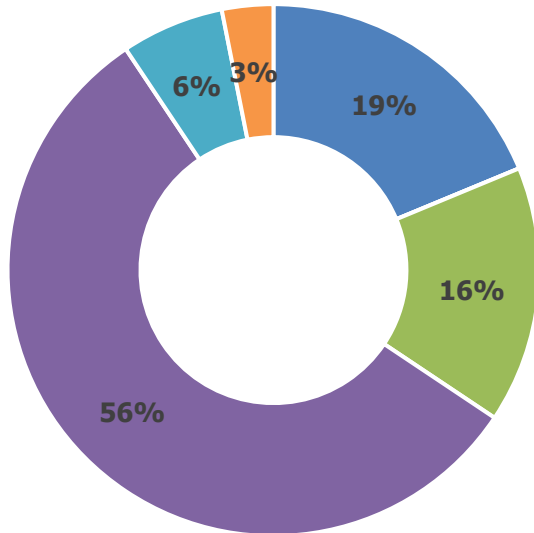
¹ Deliverability demonstration requirement may be satisfied **when any of the following conditions are met:**

- 1) EAC bundled with supply coupled with firm transmission rights and schedule,
- 2) Supply contract (PPA) or tariff (including EACs) with delivery to customer included, or
- 3) Proof of no congestion between EAC generation source location and load. Where no congestion within RTO and trading across connected boundaries is permitted when LMP at consumption times 1.05 (marginal loss allowance) is less than or equal to the LMP at generation.

Poll questions on defining market boundaries/spatial matching for scope 2 market-based instruments (1/2)

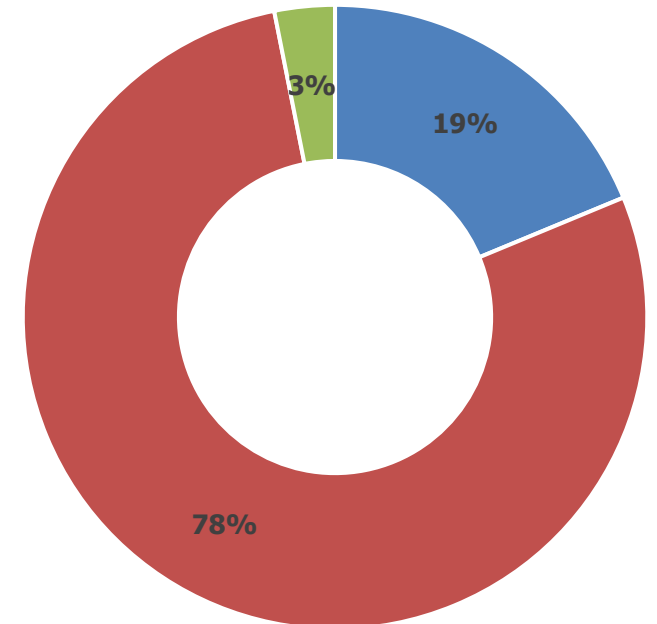
1.6. Should the name for the Scope 2 Quality Criteria 5, Market boundaries, be updated? If so, which of the following proposed alternatives is most appropriate?

- a. Leave as is (Market boundaries)
- b. Spatial boundaries
- c. Spatial correlation
- d. Deliverability and market boundaries
- e. Other (please describe in chat)
- f. Needs more information (please describe in chat)



1.7. Should the description of Scope 2 Quality Criteria 5, Market boundaries, be updated to reflect a more spatially deliverable boundary? If so, which of the following options is most appropriate?

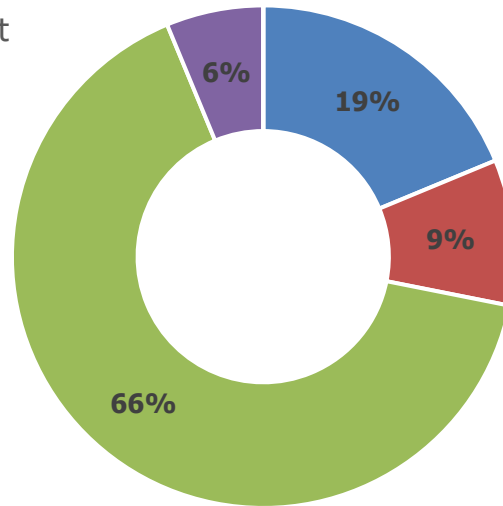
- a. Be sourced from the same market (No changes)
- b. Be sourced from generation that is deemed spatially "deliverable" (details to be defined).
- c. Other (please describe in chat)
- d. Needs more information (please describe in chat)



Poll questions on defining market boundaries/spatial matching for scope 2 market-based instruments (2/2)

1.8. If spatial deliverability is required per question 1.7, how should the requirement be applied?

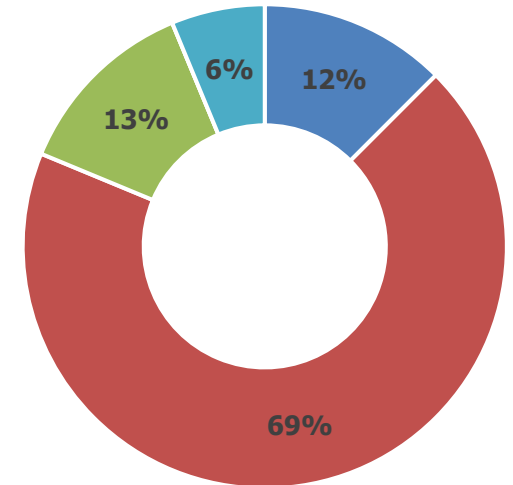
- a. With a specific definition per each country or geographic region (if so, details to be determined)
- b. With a set of conditions to be met (if so, details to be determined)
- c. Combination of A and B
- d. No changes, leave as is
- e. Other (please describe in chat)
- f. Needs more information (please describe in chat)



1.9. If a set of conditions is required to meet spatial deliverability per question 1.8, what conditions should be used to define spatial deliverability for matching contractual instruments with activity data in the market-based method?

The electricity-consuming activity and the generation source are within a shared market boundary where contractual instruments are legally recognized...

- a. Regardless of physical power deliverability.
- b. With evidence that power can be physically delivered between them.
- c. With evidence that power can be physically delivered without intra-regional transmission constraints, including through contractual mechanisms where applicable.
- d. Other (please describe in chat)



Next steps



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Next steps

- **Posting revisions:** Suggested redlines and rationale slides will continue to be posted to SharePoint on a rolling basis as they are received, allowing TWG members to both submit and refine revisions over time.
- **Review expectations:** TWG members should review all posted market and location-based method revision materials . The Secretariat will update on additional submissions from TWG members as they become available. In addition to engaging during TWG calls, members are encouraged to discuss feedback with proposal authors outside of formal meetings.
- **Miroboard engagement:** TWG members should begin engaging on Miro to progress on discussion and alignment for the key issues identified. For questions on accessing and using the Miroboard, reach out to Kyla Aiuto and Chelsea Gillis.
- **Facilitated discussions:** The Secretariat will identify emerging consensus and areas needing further collaboration. We welcome input on these considerations.
- **Ongoing review:** Meetings through June will provide ongoing opportunities to further develop and refine content.
- **Next meeting: Wednesday, March 5th**, 17:00 EST/23:00 CET/(+1) 06:00 CST (will include Review of ISB feedback)
- **Next iteration of market-based revisions:** Updates or new market-based revisions are requested **by March 5th ***

Thank you!

If you'd like to stay updated on our work, please [subscribe](#) to GHG Protocol's email list to receive our monthly newsletter and other updates.



Addendum



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Phase 1 Scope of Work related to market-based method

1) Clarify objectives and consider any changes to the accounting and reporting requirements of the Scope 2 Standard

- a) Clarify the objectives and purpose of the scope 2 location-based and market-based methods
- b) Clarify the objectives and purpose of dual reporting of the location-based and market-based methods in scope 2
- c) Clarify the relationship between scope 2 inventory accounting and electricity sector project accounting methodologies such as in the GHG Protocol Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects
- d) Explore whether alternative or additional scope 2-related metrics should be included in a GHG emissions report

2) Location-based method technical improvements

- a) Determine whether to require or recommend more accurate data than currently required, such as hourly data or consumption-based grid average emissions data
- b) Clarify how to account for electricity generated and consumed from on-site projects within the reporting company's organizational boundary using the location-based method
- c) As needed, evaluate technology-specific implications of location-based method technical improvements

3) Market-based method technical improvements

- a) Review the Scope 2 Quality Criteria to consider revisions to the market boundary and vintage criteria requirements
- b) Review the Scope 2 Quality Criteria to consider new requirements related to impact, additionality, or resource newness
- c) Clarify how to account for carbon-free electricity and renewable power supplied under utility programs or regulatory compliance schemes in the market-based method and what information must be included in a supplier- or utility-specific emission factor
- d) Evaluate if updates to the emission factor data hierarchy and order of operations in applying emission factors, energy attribute certificates, etc. are appropriate
- e) As needed, evaluate technology-specific implications related to market-based method technical improvements

4) Role of project-based accounting methodology relative to scope 2 accounting

- a) Clarify the relationship between scope 2 inventory accounting and electricity sector project accounting methodologies such as the GHG Protocol Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects
- b) Determine how and to what extent the quantification and reporting of GHG emission impacts of grid-connected electricity projects using the project method is required by the standard
- c) Clarify potential interactions between carbon credits sourced from carbon-free generation facilities and EACs from the same resource

5) Guidance for regional variation in energy markets

- a) Consider the development of guidance and additional examples of scope 2 calculations for the location-based and market-based methods for various energy markets globally
- b) Create additional guidance for accounting for the purchase and sale of energy associated with "off-grid" energy generating installations, including microgrids

6) Interaction with policies and programs

- a) Clarify what each scope 2 accounting method/metric represents and provide directions and recommendations for their use by mandatory disclosure rules, target-setting programs, and for individual reporters