

Scope 2 TWG Meeting Minutes

Meeting number 4

Date: 17 December 2024

Time: 09:00 – 11:00 EST

Location: "Virtual" via Zoom

Attendees

Technical Working Group Members

1. Simone Accornero, Flexidao
2. Enam Akoetey-Eyiah, I-TRACK Standard Foundation
3. Avi Allison, Microsoft
4. Priya Barua, Clean Energy Buyers Alliance
5. Matthew Brander, The University of Edinburgh
6. Yenhaw Chen, Taiwan Institute of Economic Research
7. Jules Chuang, Mt. Stonegate Green Asset Management Ltd.
8. Jessica Cohen, Constellation Energy Corporation
9. Killian Daly, EnergyTag
10. Abhilash Desu, Science Based Targets Initiative (SBTi)
11. Stuti Dubey, D-REC Foundation
12. Pengfei Fan, China Electric Power Planning & Engineering Institute (EPPEI)
13. Neil Fisher, The NorthBridge Group
14. Aileen Garnett, Genesis Energy Limited
15. Andrew Glumac, CDP
16. Svend Brun Fjendbo Hansen, Ørsted
17. Peggy Kellen, Center for Resource Solutions
18. Emma Konet, Tierra Climate
19. Matthew Konieczny, Watershed
20. Holly Lahd, Center for Green Market Activation
21. Stephen Lamm, Bloom Energy
22. Erik Landry, GRESB
23. Lissy Langer, Technical University of Denmark (DTU)
24. Kelly Lichter, PepsiCo
25. J. Andrea Méndez Velásquez, Atmosphere Alternative
26. Gregory Miller, Singularity Energy
27. Yiwen Qiu, Independent
28. Henry Richardson, WattTime
29. Wilson Ricks, Princeton University
30. Alexandra Styles, HIR Hamburg Institut Research
31. Devon Swezey, Google
32. Kae Takase, Renewable Energy Institute
33. Linda Wamune, Energy Peace Partners
34. Sophia Wang, Gilead Sciences
35. Stephen Buskie, WBCSD
36. Alex Perera, WRI
37. James Critchfield, EPA
38. Matthew Gray, Transition Zero

Guests

None present

GHG Protocol Secretariat

1. Kyla Aiuto
2. Elliott Engelmann
3. Chelsea Gillis
4. Michael Macrae
5. Alexander Frantzen
6. Claire Hegemann
7. Michaela Wagar

Documents referenced

1. Discussion Paper 3: Technical improvements to the market-based method
2. Assessment of Studies on US Hydrogen Tax Credits and Potential Takeaways for Scope 2 Guidance (authored by Brattle Group)
3. Survey #3: Technical improvements to the market-based method

Item	Topic and Summary	Outcomes
1	<i>Welcome</i> The Secretariat welcomed attendees, reviewed the agenda, and outlined the meeting's objective to discuss initial TWG perspectives on proposed options to update the market-based method.	N/A
2	<i>Current purposes of the market-based method</i> The Secretariat presented a framework for feedback on the market-based method and clarified its definition and purpose in the Scope 2 Guidance. TWG members discussed their perspectives on the purposes of the market-based method.	N/A
3	<i>Background on hydrogen research and related studies on C&I load</i> The Secretariat provided background on research related to commercial and industrial (C&I) electricity consumption and hydrogen produced via electrolysis using grid-connected electricity. TWG members discussed their perspectives on this research and relevance for informing decisions related to scope 2 accounting.	N/A
4	<i>Assessment and discussion on Options A-C</i> The Secretariat provided an overview of Options A, B and C, then reviewed their assessment of Options A-C using the Decision-Making Criteria. TWG members discussed their perspectives on Options A-C.	N/A
5	<i>Next steps</i> The Secretariat concluded the discussion, noting that the meeting the next day would be related to Options D and E, as well as a discussion on overall next steps for drafting revisions.	N/A

Summary of discussion and outcomes

1. Welcome

- The Secretariat welcomed attendees, reviewed logistics, confirmed that minutes and resources would be shared post-call and highlighted the agenda's focus on gathering feedback on changes to the market-based method.
- The Secretariat shared an overview of where we are within the process, acknowledging that TWG members have yet to receive the complete timeline for the revision work.
- The Secretariat reviewed the meeting goals: Focusing this meeting on Options A-C, and that in the meeting the next day on December 18th we will cover Options D and E.

Summary of discussion

N/A

Outcomes (e.g. recommendations, options)

N/A

2. Current purposes of the market-based method

- The Secretariat provided the definition of the scope 2 inventory as stated in the Corporate Standard and the Scope 2 Guidance and the definition of the market-based method. The Scope 2 Guidance's description of the emission rate approach for scope 2 allocation methods was also presented.
- The Secretariat reviewed Scope 2 Guidance text on the decision-making value of the market-based method.

- The Secretariat reviewed the purposes of the market-based method as described in the Scope 2 Guidance, pointing out which purposes differ from how the purpose of the location-based method is described. This included the Guidance's description on one of the market-based method purpose to influencing electricity supply mix.
- The Secretariat opened up discussion on the purposes of the market-based method as they are currently stated.

Summary of discussion

- Some TWG members stated it is time to revisit and clarify the purposes of the market-based method, referencing evidence now available to assess whether the method achieves its purposes, which was not available when the Scope 2 Guidance was initially written. Support for the purposes as they are currently written was also shared.
- Many TWG members indicated that the broadness of the purposes as they are currently stated within the Scope 2 Guidance makes it difficult to assess each method's proposed revisions
- Some TWG members indicated a desire for a succinct definition of 'purpose' and for explicit clarity on the intended purpose of the market-based method, including whether it is intended to:
 - Represent physical flow of electricity or contractual flow of electricity
 - Be an accurate inventory of value chain emissions
 - Be consistent with value chain inventory methods used in other scopes within the Corporate Standard, including whether emissions in inventories must add up to emissions in the real world
 - Cause an emission impact
 - Account for attributional emissions associated with purchased supply deliverable to consumption
 - Be independent of procurement strategy, or indicate a preferred method for procurement
- Some TWG members suggested it may be useful to reorient the current purposes and more clearly delineate them by way of 'who,' 'what,' 'why,' and 'how.' Some examples included:
 - Who each of the different types of end users are (i.e. GHG accounting practitioners, clean energy procurement practitioners, data providers, disclosure policies and programs, target setting policies and programs, auditors, outside users of the results, etc.)
 - What we are seeking to measure
 - Why we want to measure it
 - What outcome it leads to
 - How end users should or should not use the results of each method (and whether appropriate for the GHG Protocol to determine this)
- Additional purposes of the market-based method were proposed by some TWG members, which included:
 - Hot spot identification within the value chain of companies
 - Attributing purchased supply to consumption
 - Enabling decision making that increases supply of low carbon energy on the grid
 - Optimally balancing clean supply with demand reliably and affordably
 - Tracking progress for national inventories and renewable energy targets
- TWG members also pointed out it would be helpful to reorganize the Scope 2 Guidance document in way that separates out the requirements from the more detailed explanations, such that a reporting organization could more easily reference what is required.

Outcomes (e.g. recommendations, options)

N/A

3. Background on grid emissions related to hydrogen electrolysis research and related studies on commercial and industrial loads

- The Secretariat described the relationship between scope 2 accounting questions and recent research that has been conducted on both C&I electricity consumption as well as hydrogen produced via electrolysis using grid-connected electricity
- The Secretariat included important caveats about the appropriateness of this research in answering key scope 2 questions, particularly in relation to assumptions used within the research, geographical limitations of the studies, and distinctions between hydrogen-related electricity demand versus C&I demand.

- The Secretariat opened the opportunity for comments or questions about the usefulness of capacity expansion modelling research for revising the Scope 2 Guidance.

Summary of discussion

- The discussion centered on the relevance and limitations of capacity expansion modelling research.
 - A member questioned how the results from capacity expansion models apply to the individual decision-making of end users and raised concerns that they are not an appropriate tool for informing an accounting standard as what works for a central planner policy decision maker is different to informing decisions for end users of electricity. A member responded that expansion models do work as central planning tools but also show the theoretical outcome of an efficient competitive market for electricity on the supply and demand side, and these models should broadly reflect the economic incentives that are faced by consumers of power and independent power producers.
 - There was wide support for a question raised about the relevance of hydrogen research since the research studied new load, whereas C&I load is existing load, to which a TWG member clarified that some of the research did assess scenarios of existing load, as well as new load.
 - Other members suggested that any new C&I load should be treated the same way as new hydrogen-related load.
 - A member acknowledged that the research doesn't seek to answer what the optimal attributional GHG accounting method is, but it does show the outcomes of certain assumptions combined together.
 - A member noted that capacity expansion models in cited research do not account for sub region congestion and assume deliverability within a grid region, which limits the ability to draw conclusions from the research since some research has shown that ignoring sub regional deliverability can cause emissions to *increase*.
 - A member responded, noting that zonal models don't assume perfect deliverability; instead, they assume that intra-regional transmission expansion is sufficient to deliver new generation to load. The TWG member further stated that accuracy of this assumption will depend on local transmission planning practices, but that research does show a lack of sufficient new transmission can limit the impacts of procurement over large distances
 - A member shared a perspective that capacity expansion modeling does not account for anything that occurs in the future outside of assumptions provided to the model, such as changes on the grid that result from new policies that change market dynamics, etc.
 - A member noted that capacity expansion models are useful, but outcomes should be interrogated. The details of the assumptions are very important, as some assumptions were seen as unrealistic. An example provided included the modelling of all corporate purchasers as if they are a single block operating in tandem creates a level of inefficiency and counter productivity.

Outcomes (e.g. recommendations, options)

N/A

4. Assessment and discussion on Options A-C

- Secretariat described their assessment across Options A-C, including initial observations.
- The Secretariat posed discussion questions and opened discussion on Options A-C.

Summary of discussion

The discussion covered aspects of Options A-C, and their appropriateness and feasibility.

- Purposes:
 - Some members thought that maintaining the status quo is inadequate for decarbonization.
 - Some also suggested that the GHG Protocol should remain policy neutral.
 - Some suggested that the purposes should focus on accounting not outcome purposes.
 - Some stressed the importance of viewing the Corporate Standard as a value chain inventory rather than a performance standard.
- New resources:

- A member raised a question about how to account for purchases from old, non-additional clean energy sources under the different options (A, B, C), and if under Option C non-new resources would be allocated to the whole grid.
- It was noted that resources failing the newness criteria could go into a residual grid mix. A member raised that this could lead to a perverse outcome where there is an incentive to use the residual mix as it is cheaper to get a better emission factor that way. The member suggested that instead of a requirement for newness that users should instead report the share of new resources they procure and the type of energy source. There was some support for this increased disclosure.
- Some members thought introducing thresholds like newness complicates discussions, and prioritizing accounting purposes may simplify matters.
- A member noted that when considering the importance of newness, the degree of impact varies whether it is in relationship to simply facility age versus the organization having proof of causality on financing the project to be built.
- Existing resources:
 - Members discussed the order that emission factors should be applied to electricity purchases. A paper published by CRS was referenced which concluded that it is credible to make a claim that applies the emission factor from the proportion of CFE in the grid to a user's electricity purchases if there are clear, credible methods to determine what is being delivered. Some members highlighted that this order of operations isn't usually applied in practice.
 - The conversation touched on the need to address existing nuclear and hydroelectric resources in voluntary markets, especially given recent retirements of nuclear plants.
- Time and location matching:
 - Some members emphasized the need for precise time and location matching for accurate emissions reporting
- Causality/additionality:
 - Some members suggested and others questioned whether strict causal relationships are necessary for assessing overall system impacts.
- Feasibility
 - Some members mentioned significant difficulties in obtaining accurate emission factors, especially outside the U.S.
 - Some members raised that if a high priority is given to granularity then a majority of the world will not be able to meet the standard.
- Regional considerations:
 - There was concern about how restricting supply to only new renewables might disproportionately affect less advanced markets, thus highlighting the need to recognize regional disparities.
- Hierarchical options
 - The potential for creating a hierarchy of options based on feasibility was mentioned, suggesting a tiered approach might be beneficial.

Outcomes (e.g. recommendations, options)

N/A

5. Next steps

- The Secretariat concluded the discussion, noting that the meeting the next day would be related to Options D and E, as well as a discussion on overall next steps for drafting revisions.

Summary of discussion

N/A

Outcomes (e.g. recommendations, options)

Summary of written submissions received prior to meeting

N/A

Scope 2 TWG Meeting Minutes

Meeting number 5

Date: 18 December 2024

Time: 09:00 – 11:00 EST

Location: "Virtual" via Zoom

Attendees

Technical Working Group Members

1. Simone Accornero, Flexidao
2. Enam Akoetey-Eyiah, I-TRACK Standard Foundation
3. Avi Allison, Microsoft
4. Matthew Brander, The University of Edinburgh
5. Stephen Buskie, WBCSD
6. Charles Cannon, RMI
7. Yenhaw Chen, Taiwan Institute of Economic Research
8. Jules Chuang, Mt. Stonegate Green Asset Management Ltd.
9. Jessica Cohen, Constellation Energy Corporation
10. James Critchfield, EPA
11. Killian Daly, EnergyTag
12. Abhilash Desu, Science Based Targets Initiative (SBTi)
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23. Stephen Lamm, Bloom Energy
24. Erik Landry, GRESB
25. Lissy Langer, Technical University of Denmark (DTU)
26. Kelly Lichter, PepsiCo
27. J. Andrea Méndez Velásquez, Atmosphere Alternative
28. Gregory Miller, Singularity Energy
29. Alex Perera, WRI
30. Yiwen Qiu, Independent
31. Henry Richardson, WattTime
32. Wilson Ricks, Princeton University
33. Alexandra Styles, HIR Hamburg Institut Research
34. Devon Swezey, Google
35. Kae Takase, Renewable Energy Institute
36. Linda Wamune, Energy Peace Partners
37. Sophia Wang, Gilead Sciences

Guests

None present

GHG Protocol Secretariat

1. Kyla Aiuto
2. Elliott Engelman
3. Chelsea Gillis
4. Michael Macrae
5. Alexander Frantzen
6. Natalia Chebaeva
7. David Rich
8. Kevin Kurkul

Documents referenced

1. Discussion Paper 3: Technical improvements to the market-based method
2. Assessment of Studies on US Hydrogen Tax Credits and Potential Takeaways for Scope 2 Guidance (authored by Brattle Group)
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Item	Topic and Summary	Outcomes
1	<i>Welcome</i> The Secretariat welcomed attendees, reviewed the agenda, and outlined the meeting’s objective to continue discussing initial TWG perspectives on proposed options to update the market-based method.	N/A
2	<i>Assessment and discussion on Option D</i> The Secretariat presented an overview of Option D, requiring an additionality or causality test in the Scope 2 Quality Criteria, in addition to the Secretariat’s and TWG’s assessment of the option using the Decision-Making Criteria. TWG members discussed the approach.	N/A
3	<i>Assessment and discussion on Option E</i> The Secretariat presented an overview of Option D, which would net induced and avoided emissions, in addition to the Secretariat’s and TWG’s assessment of the option using the decision-making criteria. TWG members discussed the approach.	N/A
4	<i>Plan for proposing redline changes to the Scope 2 Standard</i> The Secretariat presented on the plan for TWG members to propose changes to the Scope 2 Standard. The Secretariat answered process-related questions.	N/A
5	<i>Next steps</i> The Secretariat concluded the discussion with a reminder on the due dates of location- and market-based revision first drafts, as well as a reminder of the next meeting date on January 16 th , 2025.	N/A

Summary of discussion and outcomes

1. Welcome

- The Secretariat welcomed attendees, reviewed logistics, confirmed that minutes and resources would be shared post-call and highlighted the agenda’s focus on gathering feedback on changes to the market-based method.
- The Secretariat further clarified the meeting goals: Focusing today on Options E and D, and planning for next steps and redline changes to the Scope 2 Guidance.

Summary of discussion

N/A

Outcomes (e.g. recommendations, options)

N/A

2. Assessment and discussion on Option D

- The Secretariat described Option D, which would require an additionality or causality test within the Scope 2 Quality Criteria. The Secretariat reviewed their assessment of Option D using the Decision-Making Criteria and the TWG’s assessment of Option D, noting areas where there was differences between Secretariat and TWG assessments.
- The Secretariat introduced questions for discussion and opened the floor to TWG members.

Summary of discussion

- Some TWG members indicated support for the use of additionality tests in the scope 2 market-based method. Arguments in favor included:
 - That establishing a causal link between a reporting entity and the emission rate(s) used in a GHG inventory is an essential component of inventory accounting.

- That the current market-based method system is not accomplishing what it was set out to do, and that some form of additionality requirement therefore has value.
 - That the corporate market has an appetite for ways to distinguish between higher and lower quality REC purchases, and additionality is one method of achieving this.
- Some TWG members argued against the use of additionality tests, often citing feasibility and implementation concerns. Examples of these concerns include:
 - Proving additionality in practice is very difficult, and few projects would ultimately be able to meet the threshold of these tests.
 - There are some tests that can be used to determine whether an entity has played a decisive role in causing a project to move forward, but that it is much harder to prove whether an entity's actions increased the renewable energy capacity on the grid.
 - Additionality tests are very difficult to audit.
 - Additionality tests would increase costs significantly for corporate buyers.
 - One comment pointed to sections of the Scope 2 Guidance that describe why an additionality test was not deemed appropriate when drafting the original text of the document.
- On the topic of additionality, the conversation featured a discussion on various definitions of additionality, including:
 - ISO 14064:1.
 - The UK Green Buildings Council list of intervention types that can collectively achieve additionality.
 - Financial additionality tests, as exemplified by Ever.Green.
- Many TWG members raised the topic of mixing attributional and consequential emissions, and that this could be problematic in a GHG inventory. Some further points on this include:
 - That an additionality test is inherently consequential, and therefore might not make sense in an inventory.
 - That the concept of additionality implies impact, which is fundamentally different than allocating emissions to users of electricity.
- Some TWG members noted that implementing some form of consequential analysis in an inventory is not necessarily problematic, depending on the kind of analysis used.
 - One TWG member noted that since an additionality test ultimately still results in the use of an emission rate, as opposed to an avoided emissions value, additionality tests are not fundamentally consequential.
- One TWG member noted that discussing concepts generally rather than individual issues in isolation is difficult and recommended that the TWG begin to focus on these individual issues separately.
- One TWG member noted that Option D does not adequately address how to handle the differences between renewable energy that has been mandated, and voluntary renewable energy purchases.

Outcomes (e.g. recommendations, options)

N/A

3. Assessment and discussion on Option E

- The Secretariat described Option E, which nets induced and avoided emissions, provided some background on inventory and project accounting approaches, and also on marginal emission rates and their use in project accounting frameworks.
- The Secretariat reviewed the TWG's scope of work, including clarifying the role of project-based accounting methodology relative to scope 2 accounting.
- The Secretariat reviewed their assessment of Option E, as well as the TWG's assessment of the option and where the two differed.

Summary of discussion

- A group of TWG members shared a view that Option E, as written, is not an appropriate solution for a scope 2 market-based method as well as other challenges. Observations included:
 - That the option mixes consequential and attributional accounting, or more simply, is not an attributional accounting method.
 - The use of short-run marginal emission rates in the proposed option ignores long term structural change, such as the building of new power plants or the retirement of existing power plants.

- That the removal of restrictions on market boundaries may aggravate oversupply issues in the energy markets.
- That the use of counterfactuals is very hard to audit.
- That the use of marginal emission rates may have worse outcomes as renewable energy development increases.
- That the use of marginal emission rates may create opportunities for corporate buyers to game the accounting system and obfuscate true emissions impacts.
- Many TWG members also noted the value of consequential analysis for decision-making related to electricity and stressed that while it may not be appropriate within scope 2 inventory accounting, the need remains for a measure of consequential impacts. Supporting arguments included:
 - That a method of reporting impact is necessary, and the current market-based method falls short in this regard.
 - Option E works well in creating the right incentives for companies to take action.
 - There are ways to use certain combinations of emission factors that address some of the problems identified with Option E.
- Many TWG members supported the reporting of emissions impacts, using a method like Option E, separately from the GHG inventory.
- One TWG member cautioned that with any new accounting approach, such as the one presented by Option E, it is very important to evaluate all potential implementations of the approach to ensure the right outcomes.
- One TWG member noted that Option E works well to account for the value of energy storage, and that any method should strive to accurately quantify the benefits of storage solutions.

Outcomes (e.g. recommendations, options)

N/A

4. Plan for proposing redline changes to the Scope 2 Standard

- The Secretariat provided an overview of the timeline and instructions for proposing revisions to the scope 2 standard included in the *Scope 2 Revision Guide Framework for Phase 1* provided to TWG members.
- The Secretariat described a template document that can be used by TWG members to propose changes to key sections of text from the Scope 2 Guidance, which has been posted on the TWG SharePoint.

Summary of discussion

- Questions were answered on how TWG members may consider establishing groups for joint revision development, proposing changes and associated rationale, and how proposed changes will be evaluated by the TWG members and the Secretariat in future meetings.

Outcomes (e.g. recommendations, options)

N/A

5. Next steps

- The Secretariat concluded the discussion, noting the next meeting date on January 16th, 2025 at 17:00 EST/23:00 CET/(+1) 06:00 CST.
- The Secretariat reiterated due dates for initial proposed revisions:
 - Location-based: Due January 14th, 2025
 - Market-based: Due January 29th, 2025

Summary of discussion

N/A

Outcomes (e.g. recommendations, options)

Summary of written submissions received prior to meeting

N/A