Scope 3 TWG Phase 2 Meeting Minutes

Meeting 10
Date: March 19, 2026
Time: 09:00 – 11:00 AM ET
Location: Virtual

Attendees

Technical Working Group Members

1. Sahil Aggarwal, Siemens Healthineers
2. Nasser Ayoub, EPD International
3. Alissa Benchimol, Greenhouse Gas Management Institute
4. Zola Berger-Schmitz, Science Based Targets initiative
5. Lindsay Burton, Ernst & Young
6. Stephanie Cap, WBCSD
7. Leo Cheung, The Carbon Trust
8. Betty Cremmins, Independent
9. Dario Alessandro de Pinto, Banca d'Italia
10. Holly Emerson, Duke University
11. Hugo Ernest-Jones, Science Based Targets initiative
12. Ibrahim Eryazici, ISO
13. Victor Gancel, Danfoss
14. Anne Grau, ISO
15. Alasdair Hedger, Ellen MacArthur Foundation
16. Ashwini Hingne, WRI
17. Susanne Vedel Hjuler, Independent
18. Atsushi Inaba, ISO
19. Elijah Innes-Wimsatt, Conservation International
20. Kumar Moorthy Iyer, ISO
21. Tom Jackson, Loughborough University
22. Meghan Kennedy, NetApp
23. Marion Kurdej, EcoAct
24. Tim Letts, WWF
25. Alan Lewis, Smart Freight Centre
26. Ryan Maloney, Apple
27. Shannon McIlhone, Partnership for Carbon Accounting Financials (PCAF)
28. Christoph Meinrenken, Columbia University
29. Nadia Montoto, KPMG
30. Alejandro Morera Gonzalez, ISO
31. Elliot Muller, CIRAIG, Polytechnique Montreal
32. Nicola Stefanie Paczkowski, BASF
33. Hetal Patel, Phoenix Group
34. Vishwesh Pavnaskar, Indorama Ventures
35. Colin Powell, PwC
36. Verena Radulovic, Center for Climate and Energy Solutions (C2ES)
37. Benedicte Robertz, Umicore
38. James Salo, S&P Global Sustainable1
39. Fabiola Isabel Schneider, University College Dublin
40. Julie Sinistore, WSP
41. Stacy Smedley, Eastern Research Group
42. Alan Sean Somerville, University of Stirling
43. Arundhati Srinivasan, Maersk
44. Sangwon Suh, Watershed
45. Michael Taptich, Amazon
46. Carl Vadenbo, ecoinvent association
47. Ulf von Kalckreuth, Deutsche Bundesbank

Guests

N/A

GHG Protocol Secretariat

1. Alexander Frantzen
2. Claire Hegemann

3. Allison Leach
4. David Rich

Documents referenced

2. Scope 3 – Full Group – Meeting 10 - Presentation – 20260319 ("Presentation")

Summary

Item	Topic and Summary	Outcomes
1	**Attendance and housekeeping** The Secretariat presented the meeting agenda, housekeeping rules and decision-making criteria.	N/A
2	**Definitions of direct and indirect use-phase emissions** The Secretariat presented an alternative approach based on previous TWG discussion and provided several examples to demonstrate the boundary logic.	N/A
3	**Requiring all or some processing emissions (and defining processing vs use)** The Secretariat presented a summary of previous discussions, proposed definitions for processing and use, classification options and decision-making criteria analysis.	N/A
4	**Quantification methodologies for durable products** The Secretariat presented stakeholder feedback, the current requirements and guidance, and a comparison of the current vs. stock-based approach.	N/A
5	**Future-year emission factor restrictions** *Skipped due to time constraints*	N/A
6	**Next steps** The Secretariat presented the next steps.	The Secretariat will distribute meeting minutes and post-meeting survey

Discussion and outcomes

1. Housekeeping

- Refer to Presentation slides 2 – 8.
- The Secretariat presented the meeting agenda, housekeeping rules and decision-making criteria.

Discussion

- N/A

Outcomes

- N/A

2. Definitions of direct and indirect use-phase emissions

- Refer to Presentation slides 11 – 18.
- The Secretariat presented an alternative approach based on previous TWG discussion and provided several examples to demonstrate the boundary logic.

Discussion

- A TWG member stated that there is an issue with Example 1, questioning what the product is that the company is responsible for.
- A TWG member asked whether it is appropriate to use terms such as "direct," "directly," or "direct emissions" within the definitions of direct and indirect emissions.
- A TWG member asked how a web-based platform in Example 2 would fall under Category 11.
    - The Secretariat stated that web-based platforms are currently listed as direct use-phase emissions in the standard.
    - A TWG member stated that, based on the example, Category 11 appears to begin when a user creates a login, which they believe would fall under Category 1 rather than use-phase emissions.
    - The Secretariat clarified that the example is written from the perspective of the application provider.
    - A TWG member added that the application provider relies on servers to deliver the service.
- A TWG member asked whether, in Example 1, additives or catalysts that are combusted would still be considered direct emissions, noting that making them indirect and optional could omit a significant industry.
- A TWG member suggested that the example likely refers to fuel additives.
- A TWG member raised a question regarding the precision of terminology, specifically whether the wording should refer to fuel or energy.
    - The Secretariat stated that it should refer to fuel and energy.
    - A TWG member noted that accompanying notes in the example focus only on energy.
    - The Secretariat clarified that in Example 1, both the fuel and additives are combusted and generate direct use-phase emissions.
- A TWG member questioned whether the example creates appropriate incentives, noting that adding a product that improves fuel efficiency could increase reported Scope 3 emissions, potentially discouraging such innovations.
    - A TWG member agreed with this concern.
    - The Secretariat stated that, in such cases, there could be a subcategory distinguishing products that reduce emissions from those that increase emissions. The Secretariat added that avoided emissions could be captured separately through consequential methods in AMI.
- A TWG member emphasized that emissions are not limited to energy use, but also include process and fugitive emissions.
- A TWG member stated that digital products do not inherently generate emissions, but the systems that deliver them—such as data storage, network connectivity, and computation infrastructure – are significant and growing sources of emissions. The member noted that current Scope 3 approaches are product-centric, whereas digital systems require a system-based boundary.
    - A TWG member asked whether these emissions would fall under dependent operations.
    - A TWG member confirmed that storage, network, and computation emissions could be classified as dependent operation emissions when required to deliver the service.
    - The TWG member further stated that digital use-phase emissions should be mandatory in Category 11, noting that optional treatment could lead to underreporting.
- A TWG member asked whether emissions reductions from additives would be reflected in Scope 1 emissions.
- A TWG member stated that the current framework allows companies to include optional emissions to capture reductions, providing flexibility in how companies reflect mitigation efforts.

- A TWG member emphasized that consequential life cycle assessment and avoided emissions are not included in Category 11.
- A TWG member stated that if an issue is difficult to clearly define, it should be made optional, and that overly complex requirements may reduce usability of the standard. The member questioned whether such complexity is necessary for achieving decarbonization.
    - A TWG member agreed with this perspective.
    - A TWG member added that optional inclusion should not justify retaining unclear elements.
    - The Secretariat asked whether the suggestion was to retain the current standard.
    - A TWG member confirmed that the suggestion is to keep the current standard unchanged.
    - A TWG member suggested returning to the current standard language and refining it to remove inconsistencies in interpretation.
- A TWG member stated that it is important to distinguish whether an additive is necessary for the operation of a product. The member noted that if a product (e.g., a car) can function without the additive, it may not be appropriate to assign the full emissions of the primary fuel to the additive.
- A TWG member stated that it would be helpful to clarify the specific inconsistencies or challenges in the current standard that the proposed changes aim to address.
- A TWG member stated that poorly designed accounting rules could have market impacts, particularly if they penalize innovation. The member noted that while consequential approaches in AMI may address this, close coordination between Scope 3 and AMI is needed, including potentially aligning public consultations.
    - The Secretariat stated that efforts are being made to create synergies between working groups and that combining public consultations is under consideration.
- A TWG member stated that the working group should have initially focused on defining the significant reporting boundary for Scope 3, expressing concern that boundaries continue to expand without clear limits.
- A TWG member agreed and stated that introducing new terminology could create additional ambiguity and interpretation challenges, particularly given near-term target timelines.
- A TWG member emphasized that prior stakeholder engagement focused on providing guidance and clarity on indirect emissions, rather than removing them, and noted that the current discussion appears to be aligned with that objective.
- A TWG member stated that dividing emissions into three categories would likely increase confusion rather than improve clarity, and recommended retaining existing terminology while improving examples and clarifying application.
    - The Secretariat stated that this approach would emphasize case-based clarification rather than universal definitions.
    - A TWG member agreed, noting that clarity in application is more important than achieving perfect definitions.
- A TWG member stated that there appears to be consensus on retaining current terminology while providing additional clarification and examples.
- A TWG member stated that companies would benefit from an extension of existing tables to provide more concrete guidance. The member noted that intermediate products present challenges, particularly in distinguishing between emissions at integration into a final product and emissions associated with the operation of the final product, which affects the distinction between Category 10 and Category 11.
    - A TWG member agreed that examples are particularly helpful for companies in addressing these challenges.
- A TWG member stated that while there is a link between Scope 3 accounting and avoided emissions, there is also a key difference: Scope 3 requires allocation of emissions, whereas avoided emissions frameworks may recommend not allocating due to complexity.
- A TWG member stated that a recently published standard by IEC allows for allocation in avoided emissions methodologies.
    - A TWG member clarified that non-allocation is a recommendation in some frameworks, but allocation is not prohibited.
- A TWG member asked whether, in the case of using a free AI tool, all associated energy consumption would be considered indirect emissions.
    - The Secretariat responded that, for an AI software provider, there is typically a direct connection to the underlying hardware (e.g., chips), but noted uncertainty in the specific classification.

    - A TWG member emphasized that significant energy is used even for free tools and that excluding these emissions from accountability would be problematic.
- A TWG member stated that large language models present a challenge because of the high upfront energy required for training, which may be used many times, making allocation of training emissions per use very small.
- A TWG member asked whether the group's objective is to expand downstream emissions requirements or to clarify and refine existing requirements, suggesting that a combination of refining language and adding case studies may be the most practical approach.
- A TWG member stated that an effective approach would combine specific examples with general principles, allowing consistent interpretation across new cases.
- A TWG member emphasized the need to ensure that foundational definitions are clear, and then supported by examples.
    - The Secretariat noted that there is a chicken-and-egg challenge between defining concepts and developing examples.
- A TWG member emphasized that emerging technologies such as AI will continue to evolve, and that guidance should be sufficiently flexible or forward-looking to remain applicable. The member highlighted data centers and AI as growing sources of emissions.
    - The Secretariat noted that similar challenges exist with other technologies such as cryptocurrency, where emissions are front-loaded but enable ongoing use. The Secretariat added that AI models could be viewed similarly to capital goods, with high upfront emissions and extended use over time.
    - A TWG member asked whether such training emissions would fall under Category 2.
    - The Secretariat confirmed that this could be the case.
- A TWG member stated that it would be helpful to clearly articulate the principle behind including emissions in each category, and to include a column specifying whether each item is required (shall), recommended (should), or optional (may).
    - A TWG member agreed and suggested also including a rationale column.
- A TWG member asked whether it would be helpful to propose tracked changes to existing definitions and develop a case study template for group review.
- A TWG member stated that certain cases, such as software classified as direct use-phase emissions, demonstrate inconsistencies in current rules. The member suggested identifying such "fringe cases" and clarifying their treatment. The member added that many optional Category 11 emissions share a common characteristic: they require an additional product or technology to generate emissions (e.g., hot water for shampoo, microwaves for frozen meals). The member further noted the importance of addressing intermediate products that involve both processing and use-phase emissions, as well as final products that generate emissions independently.
    - A TWG member agreed and proposed a two-step approach: (1) identify historical fringe cases, and (2) develop aligned case studies for future treatment.

<u>Outcomes</u>

- The Secretariat will follow up with a survey to gather the TWG's indicative votes.

3. Requiring all or some processing emissions (and defining processing vs use)

- Refer to Presentation slides 18 – 24.
- The Secretariat presented a summary of previous discussions, proposed definitions for processing and use, classification options and decision-making criteria analysis.

<u>Discussion</u>

- A TWG member emphasized the need to clearly spell out what the classification is for. Option 1 on slide 23, counterparty processing versus other party processing, makes sense considering data availability and the possibility of getting direct information. If the classification is used for deciding what is a shall/should/may, it becomes tricky because the next step can be more or less random depending on

whether the trade is with a large company or a small intermediary. Asking the counterpart for direct information would be a good use of efforts.
    - The Secretariat added that the classifications originated from the observation that there is no technical way to define where processing ends and use begins. There are too many cases to define this technically.
    - A TWG member stated that it is necessary to define what a final product is, and then everything else is intermediate.
    - The Secretariat replied that gasoline, for example, can be both a final product and an intermediate.
    - A TWG member stated that this is correct; it is partly final and partly intermediate.
    - The Secretariat asked other members whether it is possible to define for all cases.
    - Many TWG members responded saying "no."
- A TWG member stated in the chat that the boundary should mirror Scope 3.1, where engagement is generally with Tier 1 suppliers, not Tier N management. The same should apply here for immediate counterparty processing (Tier 1).
    - A TWG member agreed.
- A TWG member asked about exceptions and products that undergo second, third, or more uses.
    - A TWG member added that this could involve hundreds of uses.
    - A TWG member provided a list of products that ethylene goes into:
      Polyethylene → bags, films, bottles, pipes, containers
      PET and polyester fiber production → beverage bottles, textiles
      Polystyrene and styrene derivatives → foam packaging, insulation, synthetic rubber
      PVC production via ethylene dichloride → pipes, flooring, window frames
      Ethylene oxide → ethylene glycol (antifreeze, coolants, polyester production)
      Surfactants, detergents, ethanolamine, polyglycols, solvents (via ethylene oxide pathways)
      Medical device sterilization (as ethylene oxide)
      Automotive components → bumpers, tanks, dashboards (via polyethylene and derivatives)
      Agricultural use → fruit ripening agent for bananas, avocados, tomatoes, pears, etc.
      Industrial refrigerant for low temperature processes
      Welding fuel gas (minor use)
      Consumer goods → packaging, films, toys, household products (via polyethylene and PVC)
- A TWG member stated that when considering downstream emissions, the scope balloons to thousands of applications.
- A TWG member explained that a chemical used to make a part, like a tire, which is then used in a truck, and subsequently the tires are replaced and shredded for other uses, raises the question of where the use phase of the original chemical occurs and whether the manufacturer can know this or should be responsible.
- The Secretariat stated that a company's ability to calculate downstream emissions is not a reason for materiality assessment for investors.
- A TWG member stated that while it is important to capture downstream emissions, companies should not be overburdened.
- A TWG member emphasized that even if emissions are not immediately easy to decarbonize, they should be included optionally. The goal is to encourage companies to take action where possible. They lean toward option 2 on slide 23.
- A TWG member stated uncertainty about whether data from other processing would be decision useful, as reporting past the counterparty processing step may not support decision making.
- A TWG member stated that Category 10 is not easy, but the standard provides relatively clear guidance. Option 2 is currently required to the point where estimates are possible. The question is whether this should be rolled back.
    - The Secretariat stated that members seem to want to maintain the current requirement, leave the distinction between processing and use to users, and maintain the 'shall.'
    - A TWG member agreed to keep it as is.
- A TWG member stated that requiring all processing emissions could be complicated, as some companies still struggle with Scope 1 and Scope 2. Default values could help.
- A TWG member asked whether a decision tree could help determine when it makes sense to include emissions.

- A TWG member stated that it is necessary to define 'downstream counterparty' because a direct customer could be a distributor rather than the immediate processor.
- A TWG member agreed with the earlier comment about not overcomplicating requirements and emphasized the standard should remain usable. The 5% exclusion threshold can target what is sufficiently material. Increasing the threshold could be an option if capturing 95% is too burdensome.
- A TWG member suggested using Tier 1 processing as required and Tier N as optional or estimated.
- A TWG member noted that ethylene is a highly complex molecule, and using it as an example may skew perspectives. Other value chains like steel, cement, or clothing may be simpler.
- A TWG member stated that Category 10 becomes simpler if the final customer is known and the first useful application of the product is clear. Case studies show a difference between products where applications are generally known (e.g., auto parts, semiconductor chips, milk, pulp) versus chemicals with many possible destinations. The current Category 10 chapter has good content; elaboration could focus on examples of known versus unknown applications.
- A TWG member emphasized that downstream emissions are difficult to disentangle. The core issue is distinguishing final versus intermediate products and knowing the value chain. For concrete products, using product-specific information where available and sector-level information where gaps exist is a practical approach.
- A TWG member provided guidance from Table 5.11 regarding intermediate products:
  For Category 9, either: a) define final products, or b) define the next key processing steps before uncertain diversion. If (a), then Categories 10, 11, and 12 of the intermediate product can be calculated. If (b), some of Category 10 can be calculated, but 11 or 12 may not be feasible, though it may be possible case-by-case. Previously, sub-group discussions suggested that reporting companies could calculate a subset of downstream categories, but confusion may arise if some members believe that calculating any category requires calculating all.

Outcomes

- The Secretariat will follow up with a survey to gather the TWG's indicative votes.

4. Quantification methodologies for durable products

- Refer to Presentation slides 25 – 37.
- The Secretariat presented stakeholder feedback, the current requirements and guidance, and a comparison of the current vs. stock-based approach.

Discussion

- A TWG member stated that an initial thought is that if a stock-based approach is taken for the use phase, the same should apply for end-of-life. Otherwise, there is a perverse incentive for companies to encourage downstream customers to discard or stop using their product to remove it from the reporting company's books. The goal should be to encourage longer use of more efficient products over time.
- A TWG member stated that this assumes the company is not selling a replacement product.
- A TWG member acknowledged this point and added that implications for other relevant upstream and downstream categories, not just end-of-life, also need to be considered.
- A TWG member asked in the chat whether there is a simple way to model this.
- A TWG member added that they have the same question and are neutral on the issue.
- A TWG member stated that with the current approach, there is an incentive to assume shorter product use, but this is only an assumption and cannot be controlled. With a stock-based approach, more active management is possible, changing the dynamic and creating opportunities or disincentives for acting on previously manufactured products.
- A TWG member stated that they favor the stock-based approach because it demonstrates degradation of efficiency over time, and the rate of change can be rapid.
- A TWG member emphasized that the ability to recognize improvements to product energy use after sale, such as through software updates, extended warranty schemes, or circularity initiatives, is missing from

the standard. They support making this an option and note interesting implications for end-of-life impacts.
    - The Secretariat added that a second option provides a midway point.
- A TWG member stated that the idea is attractive, but implementation would be challenging. Otherwise, strict rules would apply per category of product.
- A TWG member stated that companies with business models around preventative maintenance that improves long-term efficiency would be able to demonstrate this with a stock-based approach, echoing previous points.
- A TWG member stated that the example of replacing inefficient HVAC systems illustrates the need to balance changes in purchased goods and services emissions with impact reductions in the use phase. Ideally, incentives should support repairs or modularity that improves efficiency and/or reuse of old inefficient products as inputs for new products to reduce purchased goods and services emissions.
- A TWG member emphasized the need to consider broader implications across other relevant categories, including purchased goods and services, Scope 1 and Scope 2 for manufacturing the product, and potentially downstream processing if significant for manufacturing new products.
- A TWG member noted that discussions appear to be moving toward an annualized footprint approach. Annualized Scope 3 for Category 2 was discussed previously, and they agree with previous points on Category 12. For these categories, an annualized version of Scope 3 could be offered. For Category 1, the decision on whether to include it in an annualized version is still open.
- A TWG member asked to recall the outcome of the discussion on annualized Category 2.
    - A TWG member responded that the current approach should be maintained, with annualized reporting optional.
- A TWG member stated that transparency on lifetime assumptions would be very valuable. The automotive sector illustrates discrepancies in using different lifetime expectations for emissions reporting versus customer communications and parts warranties.

Outcomes

- The Secretariat will follow up with a survey to inform the next TWG's meeting continued discussion on this topic.

5. Quantification methodologies for durable products

- Refer to presentation slides 38 – 41.

Discussion

- *Skipped due to time constraints*

Outcomes

- N/A

6. Next Steps

- Refer to presentation slides 42 – 44.

Discussion

- N/A

Outcomes

- The Secretariat will circulate follow-up surveys.

Summary of written submissions received prior to meeting

N/A