

Scope 3 TWG

Phase 2

Meeting Minutes

Meeting 8

Date: February 5, 2026

Time: 09:00 – 11:00 AM ET

Location: Virtual

Attendees

Technical Working Group Members

1. Sahil Aggarwal, Siemens Healthineers
2. Alissa Benchimol, Greenhouse Gas Management Institute
3. Zola Berger-Schmitz, Science Based Targets initiative
4. Lindsay Burton, Ernst & Young
5. Bin Chen, Fudan University
6. Leo Cheung, The Carbon Trust
7. Karis Choi, HSBC
8. Betty Cremmins, Independent
9. Mathilde Crepy, ECOS
10. Dario Alessandro de Pinto, Banca d'Italia
11. Verena Ehrler, IESEG School of Management
12. Holly Emerson, Duke University
13. Talita Esturba, WayCarbon
14. Alasdair Hedger, Ellen MacArthur Foundation
15. Susanne Vedel Hjuler, Independent
16. Tom Jackson, Loughborough University
17. Meghan Kennedy, NetApp
18. Michael King, Cisco Systems, Inc.
19. Aysegul Koseoglu, Inter IKEA
20. Marion Kurdej, EcoAct
21. Tim Letts, WWF
22. Alan Lewis, Smart Freight Centre
23. Wenjuan Liu, RMI
24. Ryan Maloney, Apple
25. Shannon McIlhone, Partnership for Carbon Accounting Financials (PCAF)
26. Christoph Meinrenken, Columbia University
27. Nadia Montoto, KPMG
28. Elliot Muller, CIRAIG, Polytechnique Montreal
29. Nicola Stefanie Paczkowski, BASF
30. Hetal Patel, Phoenix Group
31. Vishwesh Pavnaskar, Indorama Ventures
32. Colin Powell, PwC
33. Benedicte Robertz, Umicore
34. James Salo, S&P Global Sustainable1
35. Fabiola Isabel Schneider, University College Dublin
36. Julie Sinistore, WSP
37. Sangwon Suh, Watershed
38. Michael Taptich, Amazon
39. Francesca Testa, CDP
40. Carl Vadenbo, ecoinvent association
41. Ronald Voglewede, Walmart
42. Ulf von Kalckreuth, Deutsche Bundesbank

Guests

N/A

GHG Protocol Secretariat

1. Alexander Frantzen
2. Claire Hegemann
3. Allison Leach
4. Luke Jones

Documents referenced

2. Scope 3 – Full Group – Meeting 8 - Presentation – 20260205 (“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	Category 10 and 11 The Secretariat presented revision E1. Minimum boundary requirement for category 10 and 11, organized into subitems E1.1 through E1.8	The Secretariat will set up a subgroup for members to work on the definitions of direct and indirect use-phase emissions.
3	Next steps The Secretariat presented the next steps.	The Secretariat will distribute meeting minutes.

Discussion and outcomes

1. Housekeeping

- Refer to Presentation slides 2 – 9.
- The Secretariat presented the meeting agenda, housekeeping rules and decision-making criteria.

Discussion

- N/A

Outcomes

- N/A

2. Category 10 and 11

- Refer to Presentation slides 11 – 66.
- The Secretariat presented revision E1. Minimum boundary requirement for category 10 and 11, organized into subitems E1.1 through E1.8
 - E1.1 Consider definitions of direct use-phase and indirect use-phase (cat 11)
 - E1.2 Consider definitions of processing vs use of products
 - E1.3 Optionality of indirect use-phase emissions in required scope (cat 11)
 - E1.4 Inclusion of cradle-to-gate (well-to-tank) emissions for fuels/energy
 - E1.5 Explicit inclusion of cradle-to-gate emissions for capital goods
 - E1.6 Accounting for indirect energy loss in systems
 - E1.7 Accounting for non-physical products and services
 - E1.8 Boundary treatment for products with multiple uses, or diverse customer bases

Discussion

E1.1

- A TWG member stated that a common example is software emissions, where the standard and the guidance contradict each other on direct and indirect emissions.
 - The Secretariat acknowledged awareness of this issue.
- A TWG member asked whether the discussion concerns direct versus indirect use-phase emissions or the definition of direct use-phase emissions, and requested clarification on the exact question.
 - The Secretariat asked whether the definition makes sense, and whether it can be clearly and consistently understood and applied.
- A TWG member stated that the definitions make sense when read. The member added that when referring to a product that directly consumes energy, it is unclear whether a battery directly consumes energy or whether a car does. The member emphasized that the greater challenge is determining who should report these emissions—the producer of the car or the many companies contributing components. The member stated that the definition itself is clear, but the definition of “product” is not.
 - The Secretariat responded that sections E1.3–E1.7 address elements of this question.
- A TWG member stated that, using the concept of a car, this issue has caused significant challenges in the development of the Science Based Targets initiative automotive standard. The member provided the example of car lights, which consume electricity and may generate emissions through electrical systems or fossil fuel-based electricity generation. The member asked whether there is a definition of intermediate product in this context. The member added that accessing the information needed to accurately calculate emissions from car lights is almost impossible at present. The member stated that the definition makes sense in isolation but not within a broader system composed of many intermediate products, and asked where this is addressed between sections E1.1–E1.8.
 - The Secretariat stated that this will be ensured to be raised. The Secretariat asked whether there are lessons from the Science Based Targets initiative automotive standard that would be helpful in this context.
 - A TWG member stated that earlier guidance addressed auto parts but was not fully developed. The member explained that initial discussions focused on whether components were connected to the drivetrain or powertrain. The member added that many accessories, cabling, and other components fall outside the direct remit of the definition and require further clarity. The member noted that issues of energy transmission and auto part components raise questions regarding intermediate versus final products.
- A TWG member stated that, from a life cycle assessment perspective, it is uncertain whether this issue can be fully resolved, but suggested that incorporating the concept of control could be helpful. The member noted that control appears elsewhere in the standard, including distinctions between primary and secondary data. The member provided an example that companies may not have control over how consumers use products, such as shampoo in the shower, and referenced the removal of the use phase from a company’s carbon footprint on that basis. The member further provided the example of an air freshener that does not consume electricity itself but is used in a car, which consumes energy, and noted that such scenarios could lead to extensive reporting burdens. The member suggested that incorporating an element of control could help delineate boundaries.
 - The Secretariat asked whether there are robust definitions of control that could be codified to ensure consistent interpretation.
 - A TWG member stated that the term “influence” may be more appropriate than “control.”
 - A TWG member stated that, because control is used in other parts of the standard, companies are already familiar with it, and noted that in the product standard it relates to ownership.
 - A TWG member agreed with the use of “influence.”
 - A TWG member stated that, if this concept is considered, “influence” may be preferable to “control,” as control could allow entities to opt out too easily. The member added that companies can influence outcomes.
 - A TWG member suggested the phrase “influence indirect consumption of energy during use.”
 - A TWG member agreed with this suggestion.
 - A TWG member stated that any opt-out provision would require justification.

- A TWG member asked how products such as thermostats should be treated, noting that while they consume little electricity, they can influence overall energy consumption.
- The Secretariat stated that using the term “control” to draw a boundary between category 10 and category 11 raises challenges, as indirect emissions are defined as emissions occurring at sources owned or controlled by another company. The Secretariat stated that “influence” is not a binary concept and is circumstantial. The Secretariat noted that in category 15, percentage equity control is used as a proxy for influence over an investee, referencing significant influence from controlling equity.
- A TWG member asked how to determine what is “good enough” from a profile and use-phase perspective. The member stated that many stakeholders may assume certain daily use quantities for products such as shampoo, and without baseline assumptions it is difficult to compare footprints within a product category, within a company, or across companies. The member emphasized that even with primary data, interpretation can be challenging. The member stated that guidance is needed, particularly if considerations extend beyond the value chain. The member added that temporal allocation is also difficult. The member stated that the Technical Working Group may not be able to unpack all nuances, but could highlight open scientific questions and identify where further guidance is needed.
 - The Secretariat stated that this is worth considering and depends on timelines.
 - The Secretariat stated that reaching out to academic communities and other stakeholders to publish papers could add time unless relevant papers are already available, and offered to contact academics on the topic.
 - A TWG member stated that this could be considered as a second phase and would go through the approval program.
 - A TWG member agreed with the comments.
 - A TWG member clarified that the Technical Working Group can articulate what is possible and necessary, and that broad criteria will raise open scientific questions that can be highlighted as an outcome of the work.
- A TWG member proposed defining direct use-phase emissions as emissions from products that directly use energy during use, and indirect use-phase emissions as emissions from products that require energy to be used but do not directly use energy themselves.
- A TWG member stated that, in the case of automobile electronics, there is disagreement regarding whether use-phase emissions should be calculated based on energy consumption over the lifetime or allocated by weight of the electronics within the vehicle. The member stated that both approaches are compliant with the current standard, and that from a life cycle assessment perspective the appropriate method depends on the goal and scope of the study. The member added that electronics can be redesigned to reduce use-phase emissions, and that the most appropriate approach may lie between weight-based and consumption-based calculations. The member emphasized that clearer guidance is needed, as the current standard contains ambiguity regarding the appropriate choice.
- A TWG member stated that sector-specific guidance will be needed, particularly alignment on allocation methods.
 - A TWG member agreed and stated that allocation examples are more critical than a single definition that fits every scenario.
- A TWG member asked whether new definitions can be proposed and what the objective of the discussion is.
- A TWG member suggested including a decision tree in the guidance to assist users, with questions such as whether the product directly uses energy, enables energy consumption without using energy itself, or whether energy use is integral to product function.
 - A TWG member stated that it is necessary to clearly define what “product” refers to, and suggested it should relate to the product a company sells. The member provided the example that chemical companies sell plastics, not cars, and questioned whether chemical producers should report emissions associated with operating cars.
 - A TWG member agreed.
 - A TWG member stated that such emissions should be included for consistency with other decisions.
 - A TWG member stated that excluding such emissions would imply that upstream companies are not required to report downstream emissions, which may not be appropriate. The member stated

- that chemical companies often have market data on the end uses of their materials and could report use-phase emissions based on weight contributions.
- A TWG member stated that a decision tree for categorization would be helpful, along with sector-specific guidance for product classes with high variability.
 - A TWG member stated that more precise language is needed to define “direct” and “indirect,” and questioned whether indirect emissions are limited to those that influence energy consumption. The member emphasized the need for deeper discussion of these terms.
 - A TWG member reminded the group that not all emissions arise from energy use.
 - A TWG member clarified that the previous example referred to programmed product use, such as washing machine cycles, including water use and duration.
 - A TWG member stated that there is confusion regarding the distinction between direct and indirect emissions across Scope 1, Scope 2, and Scope 3.
 - A TWG member stated that products causing fugitive emissions or forming greenhouse gases during use are not clearly addressed in the definitions. The member emphasized that, beyond energy-related emissions, other sources of emissions should be considered.
 - The Secretariat agreed.
 - A TWG member stated that in the Science Based Targets initiative, the terms “mandatory” and “optional” emissions are used to avoid confusion regarding direct and indirect emissions across Scope 1, Scope 2, and Scope 3.
 - The Secretariat provided an example of beauty brands producing shampoo and conditioner as separate products, resulting in consumers purchasing two products. The Secretariat stated that a company designing a single product that washes without drying hair could reduce cradle-to-gate emissions and reduce indirect use-phase emissions from water heating. The Secretariat stated that indirect energy use to heat water could represent approximately 80% of a beauty brand’s Scope 3 emissions. The Secretariat added that selling one product instead of two could reduce such emissions by approximately 50% and reduce the Scope 3 inventory by approximately 40%. The Secretariat noted that consumer preferences may limit uptake of all-in-one products and stated that this example illustrates the difficulty of defining control and influence.
 - A TWG member shared literature references related to electricity accounting in life cycle assessment and allocation choices in attributional and consequential life cycle assessment, noting their relevance to methodological questions regarding electricity-related emissions and allocation based on causality.
 - A TWG member referenced literature on life cycle assessment of vehicle lightweighting and estimating use-phase fuel consumption and related emissions. The member also referenced a case study involving jeans designed for cold-water washing to reduce greenhouse gas emissions associated with hot water use.
 - A TWG member stated willingness to further review and summarize relevant literature if helpful.

E1.5

- A TWG member stated that capital use represents a significant share of value in the national economy and that embodied emissions from capital goods across value chain partners are substantial. The member stated that excluding embodied emissions from capital goods would result in omission of a significant portion of emissions.
 - The Secretariat stated that the intention was not to reopen discussion for other categories and that the focus for now is on category 10 and category 11.
- A TWG member stated that while reducing emissions without overburdening reporters is important, some rules remain focused on energy consumption. The member stated that in a decarbonized energy system, capital goods may become the primary contributors to emissions and that companies’ focus areas for reductions will shift accordingly. The member stated that all such emissions should be included, with exclusion permitted where emissions are demonstrated to be immaterial or irrelevant. The member added that lack of control could be a basis for exclusion and clarified that inclusion would not necessarily increase workload due to existing provisions allowing exclusion of immaterial sources.
 - A TWG member agreed with this point.

- The Secretariat stated that for complex supply chains, reporters should be encouraged not to exclude emissions sources and to undertake calculations where possible. The Secretariat asked whether inclusion of capital goods could discourage reporting.
- A TWG member stated that the concern lies not within the GHG Protocol itself but in external schemes, platforms, and regulations that treat inclusion in the GHG Protocol as compulsory without maintaining flexibility.
- A TWG member stated that requiring companies to demonstrate irrelevance would increase burden because companies would need to calculate emissions before excluding them. The member noted that embodied emissions of labor are not included and suggested that making capital goods optional would be more consistent with that treatment. The member stated that reliance on demonstrating immateriality could undermine practicality and conflict with provisions such as the 5% exclusion threshold.
- A TWG member stated that beyond measurement challenges, the justification for exclusion can be resource-intensive, particularly in the absence of standardized methods. The member stated that bespoke substantiation requires significant effort and diverts time from abatement activities.
- A TWG member stated that discussion should focus on the value added and the actual benefit of including such emissions. The member stated difficulty in seeing how this would not become a numerical exercise and expressed concern regarding justification, particularly for upstream inclusion.
 - The Secretariat asked whether making such emissions optional for category 10 and category 11 would address the concern.
 - A TWG member responded that optional treatment may be acceptable but that a “should” requirement would be difficult to support.
- The Secretariat stated that a survey would be conducted regarding modality, including whether the requirement should be “should,” “shall,” “may,” or none of the above.
- A TWG member stated that the materiality of embodied carbon of capital goods varies by category and sector. The member stated that as renewable energy increases, embodied carbon in category 3 may become more material, while embodied carbon of a diesel truck in category 4 may be less material. The member added that in category 14, embodied carbon of newly constructed infrastructure may be material, whereas fit-out emissions may not be. The member suggested leaving inclusion optional, providing guidance with examples where embodied carbon may be material and relevant, and requiring disclosure of assumptions.

E1.6

- A TWG member stated that the issue is not whether components have an impact, but how such impacts can be addressed. The member referenced prior work under the SBTi automotive standard, noting identification of four categories of impact, including mass-based impacts, direct electrical consumers, and power train efficiency. The member stated that while vehicle manufacturers can assess impacts at the whole-vehicle level, component manufacturers face significant complexity due to varying operating conditions. The member stated that an initial proposal to use weight- or mass-based allocation ignored other impacts, and that the group ultimately limited inclusion to power train-related components due to practical constraints. The member emphasized the need to balance theoretical completeness with practical feasibility.
 - A TWG member expressed agreement with this statement.
 - A TWG member added that substantial time had previously been spent revisiting this issue without resolution.
- A TWG member stated that the discussion appears to be extending into the concept of avoided emissions reporting.
 - A TWG member agreed and noted that tire manufacturers use Product Category Rules to calculate energy consumption from rolling resistance and categorize those emissions in category 11.
- A TWG member stated that example E1.6 illustrates the type of issue that sector groups should reach agreement on.
- A TWG member stated that example E1.6 on energy losses should include cables, wires, and rechargeable batteries as examples.
- A TWG member asked whether the discussion should be tied back to the definition of indirect emissions.

- A TWG member stated that the group needs to decide whether to retain the current direct/indirect structure or consider renaming, redefining, or expanding it, such as to a three-bucket approach.
- A TWG member stated that depending on how items such as cabling, insulation, and rolling efficiency are treated, it is difficult to justify including some and not others. The member stated that it appears to be either all included or all excluded, and asked how to manage that distinction.
 - A TWG member stated that a simple solution would be to require only the final product manufacturer to report such emissions, though this is a simplified view. The member added that if companies wish to communicate avoided emissions, comprehensive inclusion would be required. The member suggested limiting reporting to final products for Scope 3 purposes and addressing broader considerations in avoided emissions guidance.
- A TWG member stated that companies require a mechanism to communicate how they enable energy or emissions reductions, such as through heat pumps, and that this relates to avoided emissions, which would need to be defined separately.
- A TWG member stated that building insulation can have significant influence, but impacts vary widely depending on deployment context. The member stated that quantification would require standardized implementation scenarios that may not reflect real-world variability.
- A TWG member stated that treatment of components has historically been challenging, with preliminary discussions often required.
- A TWG member stated that complexity also exists within intermediate products, such as cathode active material relative to batteries and electric vehicles.
- A TWG member summarized potential next steps as: (1) defining what constitutes a product, and (2) clarifying what constitutes indirect use phase emissions.
- A TWG member stated support for moving away from direct and indirect terminology and expressed interest in a three-bucket framework as an opportunity to revise the structure rather than retain existing terminology.
 - A TWG member stated that alternatives should be considered.
 - A TWG member expressed support for a three-bucket approach and for avoiding reuse of direct/indirect terminology.
 - A TWG member agreed and stated that reuse of direct and indirect terminology in another context is confusing.
- A TWG member suggested that differentiation between passive and active users of energy could inform bucketing principles.
- The Secretariat stated that changes to the framework or definitions could reduce interoperability with downstream standards and that such changes may represent a step change, which should be considered.
 - A TWG member stated that because regulations reference the GHG Protocol, it is important to ensure clarity in definitions.
- A TWG member suggested forming a subgroup to draft revised language.
- A TWG member proposed a revised structure for category 11, noting alignment in part with a previously discussed three-tier concept. The member suggested the following structure:
 - Mandatory category 11 emissions would include:
 - “Fuels and feedstock” (as currently defined).
 - “Greenhouse gases and products that contain or form greenhouse gases that are emitted during use” (as currently defined).
 - Products that themselves consume energy (fuel and electricity) during use, including intended or unintended consumption or losses (e.g., motors, lights, computer chips, LCD screens, cables, rechargeable batteries, internal combustion engines, oil and gas drilling equipment).
 - Products or services that require energy (fuel and electricity) or form and/or release process or fugitive emissions to function as intended (e.g., catalytic converters, seatbelts, pots and pans, perishable food requiring refrigeration or cooking, hot water for soap or shower gel, laptops, web-based software, washing machines).
 - Optional category 11 emissions would include:
 - Other emissions associated with the product’s use phase (e.g., washing clothes).
- A TWG member asked how to determine the boundary between category 10 and category 11, providing the example of methanol used to produce formaldehyde, which is then used to produce plastic. The

member asked whether the methanol producer should report the emissions associated with converting formaldehyde into plastic.

E1.2

- A TWG member stated that the proposal seemed perfectly valid when read in isolation, but that reviewing the example highlighted real-world complexities.
- A TWG member stated that, for clarity, the definition should refer to the end use of end goods by the consumer, rather than the end use of intermediate products.
- A TWG member asked how to define the processing stage and when a component is considered completely transformed, using the example of methanol converted into formaldehyde and then into plastic. The member asked whether the methanol producer should account for emissions from formaldehyde production or plastic production, and where the boundary should be drawn.
- A TWG member asked for examples of practical mitigation levers arising from measuring emissions from processing of sold products.
 - A TWG member provided examples, including using chemical formulations that do not release greenhouse gases during transformation and co-development with clients to reduce process transformation emissions.
 - A TWG member added that alternative chemicals requiring lower energy to process could be used.
- A TWG member stated that their company manufactures parts and questioned where to draw the line for chemicals, noting that in their case the powder does not chemically change, and that this does not make it easy to define the boundary for category 10.
- The Secretariat asked whether Table 5.11 addresses the boundary ambiguity and quoted the relevant language on direct use-phase emissions of sold intermediate products by the end user, including the example of a motor incorporated into an automobile. The Secretariat noted that, currently, the boundary for category 10 is the scope 1 and scope 2 emissions of processing emitted by a client, not the client's clients.
 - A TWG member stated that this was also their interpretation, but asked whether companies would then continue into category 11 if the new product has use-phase emissions, referring to the ambiguity identified on slide 32.
 - The Secretariat asked whether the issue relates to continued chemical processing that releases emissions, resulting in a chain of direct emissions, and whether it is unclear at what point emissions become indirect.
- A TWG member questioned what mitigation opportunities would be missed by not estimating emissions from processing of sold products, suggesting this may be a low return-on-investment category. The member stated that few companies currently estimate this category, that existing approaches are inconsistent, and that there may be low value in collecting this information.
 - A TWG member agreed.
- A TWG member stated that companies should go as far as they can, noting that there is a wide range of intermediate products in practice.
- A TWG member stated that there is value in including these emissions because it incentivizes suppliers of intermediate products to co-innovate reductions. The member suggested removing the term "inclusion" from the definition, as it may imply components that are simply fastened or assembled without transformation.
- A TWG member stated that if downstream categories 10 and 11 were not required, oil and gas companies would strongly support that outcome. The member suggested defining the boundary by counterparty (e.g., end user vs. business-to-business client), noting that while this approach is not scientifically perfect, it may be appropriate for a corporate accounting standard rather than a full life-cycle assessment framework.
 - Several TWG members expressed support for this approach, including limiting the boundary to immediate counterparties or suppliers.
 - A TWG member stated that the standard should not be limited strictly by immediate counterparty, as this could allow companies selling to wholesalers or distributors to avoid reporting. The member suggested allowing reasonable assumptions about future processing, transformation, installation, and end use through to the final product.

- A TWG member agreed that distributors illustrate the challenge, but that the counterparty concept may still provide a clear and understandable boundary.
- A TWG member stated that collecting these data is important, similar to enabled or portfolio emissions, because companies bear responsibility for what they enable and economic ties should be understood.
- A TWG member stated that while oil and gas companies might welcome reduced requirements, the group should prioritize its efforts. The member noted that combustion of petrochemicals is a larger issue and questioned whether the difficulty of delineating boundaries outweighs the potential benefits.
- A TWG member clarified that concern about oil and gas companies' preferences is not itself a reason to adjust the boundary. However, if categories 10 and 11 are not required broadly, there would need to be a strong justification for maintaining stricter requirements for oil and gas companies than for other sectors such as chemicals.
 - Several TWG members supported limiting requirements to "known downstream use."
 - A TWG member noted that oil and gas used for plastics represents approximately 14% currently, and that petrochemicals are expected to drive a significant share of oil demand growth through 2050.
- A TWG member stated that the standard should include key illustrative examples, with further detail delegated to sector-specific guidance. The member noted that it is not feasible to resolve all sector-specific complexities within the core standard and that the standard should instead prompt the right questions and provide off-the-shelf guidance.
- A TWG member reiterated that use of sold products should be included, but that processing of sold products poses practical challenges and may create defensibility concerns. The member supported limiting requirements to "known downstream use" as a possible solution.
- A TWG member noted that they had previously proposed more prescriptive, industry-specific boundary requirements for oil and gas, given the systemic importance of fossil fuels, drawing an analogy to stricter disclosure requirements for banks.
- A TWG member suggested beginning the next meeting with this topic and presenting a set of structured boundary options for discussion.
- A TWG member stated that whether E-Liability proponents favor a proposal is not a sufficient argument against it, and emphasized the need to ensure the category provides operational value.
- A TWG member suggested setting differentiated requirements for categories 10 and 11 based on sector or other criteria.
 - A TWG member disagreed with being overly prescriptive, but supported the use of examples beyond sector standards.
- A TWG member agreed that categories 10 and 11 provide decision-useful information on resilience to carbon markets and transition risks, and also inform product design considerations. The member emphasized that the role of the standard is to provide guidance rather than remove requirements.
 - A TWG member added that identifying stranded assets is important.

Outcomes

- The Secretariat will facilitate the creation of a subgroup to work on the definitions of direct and indirect use-phase emissions

6. Next Steps

- Refer to presentation slides 67 – 70.

Discussion

- N/A

Outcomes

- The Secretariat will distribute the meeting minutes.

Summary of written submissions received prior to meeting

N/A