Scope 3 TWG Phase 2 Meeting Minutes

Meeting 12
Date: April 30, 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. Stephanie Cap, WBCSD
6. Bin Chen, Fudan University
7. Leo Cheung, The Carbon Trust
8. Karis Choi, HSBC
9. Betty Cremmins, Independent
10. Mathilde Crepy, ECOS
11. Dario Alessandro de Pinto, Banca d'Italia
12. Holly Emerson, Duke University
13. Hugo Ernest-Jones, Science Based Targets initiative
14. Ibrahim Eryazici, ISO
15. Victor Gancel, Danfoss
16. Anne Grau, ISO
17. Alasdair Hedger, Ellen MacArthur Foundation
18. Susanne Vedel Hjuler, Independent
19. Atsushi Inaba, ISO
20. Elijah Innes-Wimsatt, Conservation International
21. Zaour Israfilof, ISO
22. Tom Jackson, Loughborough University
23. Meghan Kennedy, NetApp
24. Michael King, Cisco Systems, Inc.
25. Aysegul Koseoglu, Inter IKEA
26. Tim Letts, WWF
27. Ryan Maloney, Apple
28. Shannon McIlhone, Partnership for Carbon Accounting Financials (PCAF)
29. Nadia Montoto, KPMG
30. Elliot Muller, CIRAIG, Polytechnique Montreal
31. Nicola Stefanie Paczkowski, BASF
32. Hetal Patel, Phoenix Group
33. Vishvesh Pavnaskar, Indorama Ventures
34. Colin Powell, PwC
35. Benedicte Robertz, Umicore
36. James Salo, S&P Global Sustainable1
37. Fabiola Isabel Schneider, University College Dublin
38. Julie Sinistore, WSP
39. Stacy Smedley, Eastern Research Group
40. Arundhati Srinivasan, Maersk
41. Talita Sturba, University of Sao Paolo
42. Michael Taptich, Amazon
43. Carl Vadenbo, ecoinvent association
44. Ronald Voglewede, Walmart
45. Ulf von Kalckreuth, Deutsche Bundesbank
46. Luhui Yan, Carbonstop

Guests

N/A

GHG Protocol Secretariat

1. Alexander Frantzen
2. Claire Hegemann
3. Kevin Kurkul

4. Luke Jones

Documents referenced

2. Scope 3 – Full Group – Meeting 12 - Presentation – 20260430 ("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	**Attribution to components** The Secretariat presented existing guidance, stakeholder feedback, open questions to resolve and results from the pre-meeting TWG survey on attribution to components, and introduced options accompanied by decision-making criteria analysis.	N/A
3	**Digital products** The Secretariat presented the problem statemen and a case study of accounting in a software company, and introduced options accompanied by decision-making criteria analysis.	N/A
4	**Action and Market Instruments Secretariat presentation** A representative from the Action and Markets Instruments Secretariat presented the history and reasoning behind the establishment of the AMI workstream, its mandate, workplan and timeline. They presented the AMI phase 1 whitepaper and explained the reporting structure put forth in it, namely the four statement model.	N/A
5	**Introduction to circularity topics** The Secretariat presented a summary of stakeholder feedback and recommendations, and proposed topics of the series F (circularity) revisions, including a brief introduction to the first topic, circular economy definitions	The Secretariat will set up taskforces with interested TWG members.
6	**Next steps** The Secretariat presented the next steps.	N/A

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. Attribution to components

- Refer to Presentation slides 9 – 16.
- The Secretariat presented existing guidance, stakeholder feedback, open questions to resolve and results from the pre-meeting TWG survey on attribution to components, and introduced options accompanied by decision-making criteria analysis.

Discussion

- A TWG member stated that previous thinking within the Science Based Targets initiative has focused first on whether a component is connected to the drivetrain or powertrain, and then on whether it directly consumes electricity or is involved in energy transfer. They added that if a part impacts vehicle fuel efficiency, it becomes relevant. This becomes complex for companies selling thousands of components, as many classify only components with direct electricity consumption and do not consider parts that influence fuel efficiency indirectly. Many components involved in energy transfer still affect fuel efficiency and are typically part of the drivetrain or powertrain.
- A TWG member stated that materiality of the impact needs to be considered.
- A TWG member stated that this appears almost impossible to define upfront with specificity. They suggested that a solution based on materiality or ability to influence may be needed, similar to historical approaches to operational control. Responsibility can always be subdivided until it reaches a grey area where manufacturers are no longer responsible. They did not see a way to prescribe a rule that works in all cases and suggested that practitioners document the reasoning process used. Sector-level guidance could later support comparability and harmonization.
- TWG member agreed with the previous speaker.
- A TWG member agreed that the issue is difficult and stated that only the direct use phase of the final product should be reported. Any broader boundary would be extremely difficult to define, as data quality is limited at those levels, and the results would have limited usefulness.
- A TWG member stated that vehicle body parts can affect fuel efficiency through weight or aerodynamics and agreed that the boundary is difficult to define.
- A TWG member stated that the car, rather than the engine, should be considered the relevant reporting level because there are too many variables outside the control of the engine manufacturer.
- A TWG member stated that piston performance depends on the rings and the condition of the cylinder.
    - A TWG member stated that the piston example may not be a demonstrative one and suggested checking it with automotive manufacturers.
    - A TWG member provided a building materials example, asking whether every building material that affects building energy use would need to be considered, including windows, insulation, sealants, and mechanical equipment. Building energy use depends on the combined design of all materials, while material manufacturers have no control over the final design. Reporting should occur at the final product level.
    - A TWG member stated that it seems very challenging for piston manufacturers to know and account for emissions across all engines in which the piston may be used.
- A TWG member agreed with the previous speaker's general approach and asked for clarification regarding whether an engine manufacturer should report use phase emissions for the car as the final product or only for the engine itself.
    - A TWG member responded that the car should be the reporting boundary.
    - A TWG member noted that the guidance already includes an example of an airplane engine manufacturer reporting direct use phase emissions for the engine, and supported an approach that disaggregates reporting in a sensible manner.

- A TWG member agreed with the previous speaker and asked whether it would be possible to identify key parts using a materiality filter, such that reporting would be expected when emissions are clearly a significant portion of a company's emissions. They suggested as a way around the "shall" or "may" debate.
- A TWG member stated that the engine directly consumes fuel.
    - A TWG member responded that engine efficiency depends on many variables, including vehicle weight, speed, and gear selection.
    - A TWG member clarified that the engine manufacturer would report Category 11 emissions for the engine itself being used, rather than for the car apportioned by weight.
- A TWG member stated that the existing guidance should be maintained. They supported keeping a clear distinction based on whether the intermediate product directly emits emissions during use. Additional examples could clarify application, and cautioned against adding excessive complexity. Maintaining the existing "may" language is appropriate and suggested requiring optional emissions to be reported separately in order to improve comparability.
    - The Secretariat stated that separating required and optional emissions reporting is an outcome from the Series B revisions.
- A TWG member stated that the Science Based Targets initiative and Smart Freight Centre have considered this issue extensively. They distinguished between components such as seatbelts or tires, which are inputs to a vehicle without a direct connection to the drivetrain, and engines, where companies generally account for full use phase emissions. Many automotive component manufacturers with SBTs already report direct use phase emissions under Category 11 for products such as spark plugs that directly use energy. They added that while it is not possible to provide every example, it would be useful to include broader examples of drivetrain, powertrain, and electrically powered components expected to fall under Category 11.
- A TWG member agreed with maintaining a "may" approach and stated that component manufacturers often want to communicate their end-use emissions impacts. They supported using a clear distinction such as engines versus engine components. They provided an example of a lawnmower manufacturer, stating that the engine producer should report use phase emissions because the engine design drives those emissions, whereas the lawnmower manufacturer has little influence over engine design and instead focuses on factors such as durability and weight. The member emphasized the need for examples while cautioning against overly prescriptive guidance and recommended consulting industry experts to ensure examples are accurate.
- A TWG member stated that consideration should be given to the degree of influence a manufacturer has over overall emissions. Where the vehicle manufacturer also designs the engine, responsibility is greater. However, if the engine is designed by another company, the vehicle manufacturer has less responsibility for those emissions. Reporting should be mandatory for the car manufacturer and linked requirements to the level of control over emissions.
- A TWG member provided an example of ducts used in applications such as heating, ventilation, and air conditioning systems, aircraft, and locomotives. Ducts involve energy losses and that engineers work to reduce these losses. Excluding these impacts would overlook an important emissions reduction opportunity and suggested that energy losses should be treated as direct use phase impacts.
- A TWG member agreed and stated that engine manufacturers and manufacturers of drivetrain and powertrain components already account for these impacts in Category 11 as part of science-based target setting. The current debate concerns whether components that only transfer energy or influence fuel efficiency should also be considered direct use phase.
- A TWG member stated that cars are not the only products with use phase emissions and that many other products have intermediate components contributing to use phase emissions. Developing broadly applicable rules from a single automotive example could create unintended consequences across sectors such as electronics, televisions, data centers, appliances, shampoo, and detergents.
- A TWG member stated that selectively including familiar examples would create further grey areas in the standard. The approach should either apply consistently across all sectors or defer to industry-specific standards.
- A TWG member stated that wherever there is energy loss, whether through electricity, friction, or boundary effects it needs to be accounted for.
- A TWG member stated that intermediate components that directly consume energy or involve energy losses should be included.

    - A TWG member added that this should also include components that directly emit greenhouse gases.
    - A TWG member agreed.
- A TWG member stated that there are clear differences between electronic components or semiconductors and products such as shampoo or laundry detergent that require water or machinery for use. These should not be conflated and that the discussion should focus on mechanical products.
- A TWG member stated that the discussion had focused heavily on energy use, but asked whether the same logic should apply to process emissions and fugitive emissions associated with products used in final products.
    - The Secretariat responded that the same rules would apply. If an intermediate product causes fugitive emissions within an energy-consuming system, the same rules would apply; otherwise, the issue becomes a materiality decision.

Outcomes

- N/A

3. Digital products

- Refer to Presentation slides 17 – 23.
- The Secretariat presented the problem statemen and a case study of accounting in a software company, and introduced options accompanied by decision-making criteria analysis.

Discussion

- A TWG member stated that a product is a product, whether digital or physical, and that having consistent rules for products makes sense. Creating a separate category for digital products could also raise questions about services and whether they constitute a third category. Creating a separate reporting structure for digital products, particularly given the blurred boundary between digital products and services, could have unintended consequences.
- A TWG member stated that it is helpful to clarify that upstream emissions are expected for any company purchasing products or services from data centers, as this applies to the majority of companies. Companies selling software themselves represent a separate category. For those companies, accounting for software in Category 11 as optional may be appropriate, but it should be clearly distinguished from mandatory reporting requirements.
- A TWG member stated that if these types of differentiations continue to be introduced, the category itself may lose coherence.
- A TWG member stated that the most contentious issue is how customers connect to and use digital products. They noted that customers require their own internet and connectivity infrastructure to access digital products and asked whether those impacts should be included or excluded.
- A TWG member stated that one area of divergence between the SBTi and GHGP has historically related to software. They provided the example of a software company that does not lease or sell physical equipment, stating that under the SBTi perspective there would be no Category 11 reporting requirement. Software has always created confusion because users require another product in order to access the software, unlike other indirect use-phase emissions sources where the rationale is clearer.
- A TWG member stated that the current binary distinction between direct and indirect use phase is creating challenges. Software cannot be used without a computer, and excluding it entirely would feel like an omission. The debate is whether software should be treated as direct or indirect use phase, but emphasized that it should be included in some form. Software coding choices can influence energy efficiency and therefore involve some degree of influence over energy use.
- A TWG member stated that guidance should establish clear distinctions between direct and indirect use phase. Software should be treated as indirect use phase, recognizing that software developers can influence energy consumption. The sector should report these emissions, software may be an example where indirect emissions 'should' or 'shall' be reported. They emphasized that reporting requirements should focus on emissions impacts.

- A TWG member stated that relatively few companies are purely software companies, but that optional treatment is important because many companies incorrectly assume that any user visiting their website creates category 11 emissions. They emphasized the need to distinguish between software as a primary business activity and activities such as website visits.
- A TWG member stated that there are certain indirect or optional emissions sources within category 11 that are one step removed but are still more critical for companies to report than others, and stated that software is one such example.
- A TWG member stated that electricity used on a laptop should be considered at least partially direct for a software provider. Although it may be argued that hardware consumes the electricity rather than software, the functional purpose of the hardware is to enable use of software applications. Energy consumed by processors, chips, screens, and cables is ultimately used to support software use.

Outcomes

- N/A

4. AMI Secretariat presentation

- Refer to Presentation slides 24 – 30.
- A representative from the Action and Markets Instruments Secretariat presented the history and reasoning behind the establishment of the AMI workstream, its mandate, workplan and timeline. They presented the AMI phase 1 whitepaper and explained the reporting structure put forth in it, namely the four statement model.

Discussion

- A TWG member asked about the process of the AMI TWG in relation to the Land Sector and Removals Standard, particularly regarding traceability issues. They asked whether the AMI process is bound to the existing LSRG or whether AMI outcomes could lead to revisions of LSRS. They also asked whether the different ledgers could potentially be aggregated together or whether they would operate separately without aggregation.
    - A representative from the AMI Secretariat stated that the LSRS currently contains interim traceability guidance and that the responsibility for completing this topic has been transferred to the AMI process. The AMI process aims to build on existing guidance developed over the past twenty years wherever possible. Regarding aggregation, they stated that one purpose of the multi-statement model is to avoid aggregation across reporting elements. They explained that the statements are intended to fit together as a narrative framework rather than as quantitatively aggregated results.
- A TWG member asked whether the market-based inventory discussion is considering market-based instruments for Scope 1 and Scope 3 in addition to Scope 2.
    - A representative from the AMI Secretariat confirmed that this is being considered. The discussion extends beyond renewable electricity certificates to topics such as biomethane claims in Scope 1 and sustainable aviation fuel claims in Scope 3. The specific quantification, reporting, and accounting methods remain unresolved and may not align exactly with current or proposed Scope 2 market-based methods, although the overall intent would be similar.
- A TWG member asked whether discussions have considered a potential hierarchy or perception of hierarchy between the statements.
    - A representative from the AMI Secretariat confirmed that this is part of the discussion and stated that perceptions of hierarchy are among the more difficult issues to manage. For example, Statement 3 is easier to distinguish from Statement 1 because the two serve fundamentally different purposes, whereas Statement 2 overlaps more closely with Statement 1. A hierarchical approach remains under consideration, potentially allowing different forms of recognition depending on geography, market context, and other circumstances. No resolution has been reached and that the group is broadly trying to avoid creating perceptions of hierarchy while also considering whether such a design choice could support the intended objectives.

- A TWG member asked for clarification on how the current market-based method in Statement 1 would function going forward and how physical traceability would operate.
    - A representative from the AMI Secretariat stated that Scope 2 is somewhat exceptional because location-based and market-based methods are already defined. They stated that, for now, Scope 2 in Statement 1 is the currently defined location-based method, while Scope 2 in Statement 2 is the currently defined market-based method. Unresolved questions remain regarding the definition of deliverability and mass balance approaches in different contexts.
    - A TWG member encouraged a consistent approach across all three scopes and asked what level of effort reporters should expect from the different statements, noting that there is confusion on this issue.
    - A representative from the AMI Secretariat stated that the expected level of effort will depend on the specific requirements under development. Statement 1 would remain the primary required reporting element, while Statements 2, 3, and 4 may be optional.
    - A TWG member stated support for keeping Statements 2, 3, and 4 optional.
- A TWG member stated that, if they understood Statement 2 correctly, it is intended to capture procurement choices, particularly positive procurement choices. They asked whether this could instead be addressed through a non-greenhouse gas indicator, which might be easier or simpler to report.
    - A representative from the AMI Secretariat stated that this is part of the concept under consideration. One objective of the AMI work is to provide different options so that reporters and regulators can determine what is most appropriate in their context.
- A TWG member asked how AMI would contribute to an aggregated Scope 1, 2, and 3 annual emissions footprint. They asked whether the approach is intended to add up emissions or instead account for reductions that were not previously recognized.
    - A representative from the AMI Secretariat stated that this issue remains part of the broader discussion and that the goal is to achieve clarity and avoid confusion or inconsistency in interpretation of the statements.
- A TWG member asked whether the impacts of dual Scope 1, 2, and 3 reporting on product carbon footprints have been fully considered. Applying market-based approaches beyond Scope 2 could significantly increase complexity for product carbon footprint methodologies, particularly regarding value chain consistency, data availability, allocation rules, and comparability. They asked how market-based Scope 3 data would be translated into product carbon footprint results and whether safeguards or default approaches would be provided to avoid methodological inconsistencies.
    - A representative from the AMI Secretariat stated that this issue is recognized within the process but remains unresolved. They added that it will be an important design consideration as requirements continue to be developed.
    - A TWG member stated that work to harmonize consequential emissions approaches is timely, given the difficulties companies face in accounting for circularity across Scope 3. Such approaches should only be used as proxies where companies are unable to measure absolute emissions reductions.
- A TWG member stated that they were confused by the explanation that Statement 3 is consequential and includes avoided emissions, because current avoided emissions methodologies are not based on consequential life cycle assessment approaches.
    - A representative from the AMI Secretariat stated that the avoided emissions category within Statement 3 is different than the other statement 3 categories. Categories within Statement 3 are generally not expected to be aggregated, which may reduce potential inconsistencies. Creating a separate statement for avoided emissions remains a possibility if needed.
- A TWG member asked about interaction between the AMI process and the other technical working groups. Many issues are interrelated and that decisions within Scope 3 depend heavily on parallel decisions AMI, and vice versa. They expressed hope that the standards can be reviewed holistically rather than in isolation before finalization.
    - A representative from the AMI Secretariat stated that the Secretariat is actively communicating across workstreams to identify cross-workstream issues during development. The first draft of the standard in 2027 will open broader feedback channels to all interested parties.

<u>Outcomes</u>

- N/A

5. Introduction to circularity

- Refer to Presentation slides 31 – 41.
- The Secretariat presented a summary of stakeholder feedback and recommendations, and proposed topics of the series F (circularity) revisions, including a brief introduction to the first topic, circular economy definitions.

Discussion

- A TWG member noted that ISO has a circular economy standard, that should be leveraged for this work.
    - A TWG member agreed.

Outcomes

- The Secretariat will set up the circularity taskforces with interested members.

6. Next Steps

- Refer to presentation slides 42 – 44.

Discussion

- N/A

Outcomes

- N/A

Summary of written submissions received prior to meeting

N/A