Scope 3 TWG Phase 2 Meeting Minutes

Meeting 3
Date: October 9, 2025
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. Diane Buzea, WBCSD
7. Bin Chen, Fudan University
8. Leo Cheung, The Carbon Trust
9. Betty Cremmins, Independent
10. Holly Emerson, Duke University
11. Talita Esturba, WayCarbon
12. Victor Gancel, Danfoss
13. Susanne Vedel Hjuler, Independent
14. Meghan Kennedy, NetApp
15. Aysegul Koseoglu, Inter IKEA
16. Tim Letts, WWF
17. Alan Lewis, Smart Freight Centre
18. Ryan Maloney, Apple
19. Paola Martinez, Independent
20. Shannon McIlhone, Partnership for Carbon Accounting Financials (PCAF)
21. Christoph Meinrenken, Columbia University
22. Nadia Montoto, KPMG
23. Elliot Muller, CIRAIG, Polytechnique Montreal
24. Nicola Stefanie Paczkowski, BASF
25. Hetal Patel, Phoenix Group
26. Vishwesh Pavnaskar, Indorama Ventures
27. David Quach, Wesfarmers
28. Benedicte Robertz, Umicore
29. James Salo, S&P Global Sustainable1
30. Fabiola Isabel Schneider, University College Dublin
31. Julie Sinistore, WSP
32. Stacy Smedley, Eastern Research Group
33. Arundhati Srinivasan, Maersk
34. Michael Taptich, Amazon
35. Enric Tarrats, Banc Sabadell
36. Francesca Testa, CDP
37. Carl Vadenbo, ecoinvent association
38. Ronald Voglewede, Walmart
39. Ulf von Kalckreuth, Deutsche Bundesbank

Guests

N/A

GHG Protocol Secretariat

1. Alexander Frantzen
2. Claire Hegemann
3. Alley Leach
4. Dario de Pinto

Documents referenced

2. Scope 3 – Full Group – Meeting 3 - Presentation – 20251009 ("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	**Data Quality** A Secretariat employee from the Corporate Standard ("CS") workstream presented outcomes from the CS TWG regarding potential disaggregation of measured emissions was presented in the context of existing disaggregation tiers developed by the Scope 3 TWG.	The TWG discussed the applicability and harmonization of adding a measured tier to further differentiate specific emissions data, based on language to-be-developed by the CS TWG. The Secretariat will poll members via a follow-up survey.
3	**Boundary Setting** The Secretariat presented boundary setting considerations related to: • Category 8 (amortization of embodied emissions of leased assets) • Category 2 (amortization of remaining unamortized emissions of capital goods) • Category 11 (sold product annualization)	The boundary setting discussion will continue in the next meeting on October 30th.
4	**Next steps** The Secretariat presented next steps.	The Secretariat will circulate the meeting minutes.

Discussion and outcomes

1. Housekeeping

- Refer to Presentation slides 3 – 9.
- The Secretariat presented the meeting agenda, housekeeping rules, and decision-making criteria.

Discussion

- N/A

Outcomes

- N/A

2. Data Quality

- Refer to Presentation slides 11 – 18.
- A Secretariat employee from the CS workstream presented outcomes from the CS TWG regarding introducing an additional tier for measured emissions to add to Scope 3 proposed disaggregation rules.

Discussion

- A TWG member recommended inverting the numbering of the tiers, suggesting that "measured" (if introduced) should be Tier 1, with numbers increasing therefrom so that the first tier represents the most specific emissions.
    - A TWG member disagreed, stating that this would cause significant confusion among GHG professionals working on national inventories following IPCC guidelines (for which the tier number increases as data quality increases and vice versa).
    - A TWG member asked how "measured" compares with Continuous Emissions Monitoring Systems (CEMS), which directly measure emissions from a pipe and are considered a form of verification, whereas the provided example appeared to still represent a calculation.
    - A TWG member noted that external frameworks generally attribute higher numbers to higher-quality tiers, and that assigning numbers to tiers at this stage is only indicative.
    - A TWG member clarified that CEMS would indeed be considered "measured." The member added that in that case, no calculated emissions should be categorized in the "measured" tier.
- A TWG member asked whether spend-based calculations refer to spend-based emission factors. The member gave the example of using monetary amounts spent on diesel, retrieved from invoices, to estimate diesel volume, and multiplying it by a fuel-specific emission factor, asking which tier that would fall under.
    - The Secretariat responded that any time an EEIO emission factor is used, it would fall into the EEIO tier. In the instance where a company derived activity data from spend data, that would not be specific, regardless of the type of emission factor used, and therefore would be recorded as non-specific.
    - Another TWG member confirmed that spend-based refers to the emission factor used.
    - The Secretariat confirmed this understanding.
- A TWG member requested for examples, beyond the current example presented for transportation. The member said that, for transport, it may not be particularly useful to differentiate measured vs. specific emissions data; and they would like to see cases where differentiating measured vs. specific *is* relevant.
    - The Secretariat acknowledged this and explained that, for example, the resulting emissions for a company that uses its own (measured) diesel emissions vs. an average emission factor for diesel, would be very similar. Another example is stationary combustion, where companies may have direct monitoring capabilities.
    - The member added that one case where the different *could* be significant is for direct monitoring (measures) of fugitive emissions vs. calculated fugitive emissions.
- A TWG member stated that Category 1 (purchased goods and services) is the most important category for many organizations. The member said that, currently, if emissions data is received from a supplier, then it would be classified as supplier specific. The member asked: If this is now considered "measured," what does "specific" mean?
    - The Secretariat replied that: Whether a supplier's emissions data is measured, specific, non-specific, or EEIO/spend-based, depends on how the supplier quantified said emissions.
    - The TWG member noted that a product emission factor is always a combination of specific (or less specific) and measured data and expressed uncertainty about how this distinction would apply to a cradle-to-gate emission factor for a product or materials.
    - The Secretariat stated that this concern had been raised previously within Scope 3 Group A, and by breakout groups organized for members of Scope 3 Group A, which included a consideration of feasibility; and while a number of Scope 3 TWG members (across the full TWG) did not support disaggregation, however, the majority of the full Scope 3 TWG voted to require disaggregation.
    - The TWG member clarified that while they were not opposed to disaggregation, however, they asserted that it would be difficult to distinguish between "measured" and "specific" in many cases (e.g., for cradle-to-gate emissions of products, including product carbon footprints).

- A TWG member expressed concern that the terms "specific" and "measured" are so similar that they could cause confusion. The member stated that achieving "specific" data is already a major accomplishment and warned that introducing an additional (higher) tier could dis-incentivize companies from collecting or pursuing the collection of specific activity data (and using specific emissions factors).
- A TWG member noted that any scope 3 emissions calculations involving allocation could not be considered "measured."
- A TWG member stated that they also do not see a difference between "specific" and "measured" with regard to product-level emissions.
- A TWG member expressed reservations about the transport example, stating that a reporting company preparing a scope 3 inventory would typically *not* have access to fuel use data or spend-data, as this is not commercially shared (i.e., is trade secret or confidential); it would be based on transport activity data (e.g., kilometer, tonne-kilometer, or unit-kilometer), which can be specific or non-specific. The variation would be which emission factor is used, including emission factors constructed from multiple specific and less specific emission factors. The TWG member suggested finding a simpler example rather than transport; or refine this example to adapt it for scope 3 emissions.
    - The Secretariat responded that this example was developed from a scope 1-perspective and acknowledged the concerns regarding its application to scope 3, which presents additional challenges. The Secretariat asked: Would the Scope 3 TWG see value in harmonizing data specificity (disaggregation) tiers between scope 1 and scope 3 or is it O.K. to have a different approach (tiering) in scope 3 versus scope 1?
    - The TWG member stated that disaggregation would certainly be more challenging for scope 3 emissions; and that expectations regarding categorization and disaggregation should reflect this.
    - The TWG members said that: What needs further consideration is how to disaggregate scope 3 emissions that is quantified in an aggregated manner, for example, many emission factors reflect the aggregation of multiple variables, and which are generally held by the scope 1 operator (which is controlled by a value chain partner of a company preparing a scope 3 inventory). But a value chain partner may be unwilling to share scope 1 operator data (for confidentiality or trade secret) and may only be willing to share aggregated emissions data comprised of measured, specific, non-specific, and/or EEIO/spend-based data (which then may or may not have been allocated). This presents the challenge that: There may be an economically and legally *reasonable* amount of intentional obfuscation of primary information to protect a company's business interests and to maintain existing contracts. This means that the requirements for disaggregating scope 3 emissions should be less prescriptive than for scope 1 emissions.
- A TWG member asked about the anticipated benefits or outcomes of this classification approach for scope 3 emissions. For context, many Scope 3 TWG members, in discussing disaggregation for scope 3 emissions, warned that adding more than three (3) tiers would add complexity and hamper feasibility; and adding a measured tier to the four (4) tiers currently proposed for scope 3 emissions, would increase complexity. They questioned how much value-add a measured tier would provide for scope 3 emissions, specifically.
    - The Secretariat said that this was discussed by the CS TWG, but the CS TWG members expressed concern that exclusively using specific would simply consolidate so many scope 1 emissions under a single tier, that it would essentially result in non-disaggregation, specifically, for scope 1 emissions, if a measured tier isn't introduced. They wanted to differentiate higher quality, on-site, measured emissions for scope 1 emissions.
    - The TWG member agreed that disaggregated measured vs. specific emissions makes sense for scope 1 emissions but questioned the value for scope 3 emissions.
    - The Secretariat clarified that the implications for scope 3 emissions haven't been considered; rather, the Secretariat is presenting this to the Scope 3 TWG for their input on feasibility.
- A TWG member stated that, while they appreciated the way the visual was organized, however they felt that the example provided was lacking. They suggested using the example of refrigerants; in the case of refrigerants, distinguishing between specific and measured emissions would be clearer.
    - A TWG member agreed and suggested adding another example (e.g., a process) where there is a significant difference between specific and measured emissions data.
- A TWG member asked for an example illustrating the difference between measured and specific emissions data, provided by a supplier, associated with the manufacturing of a product sold by said supplier.
- A TWG member suggested making spend-based tier 0, while keeping tiers 1-3 the same across all scopes.

- A TWG member asked whether, in cases where various emissions sources are aggregated, primary data would automatically be classified as specific.
- A TWG member stated that it should be clear that this is about measured emissions, not measured activity data. The member noted that the tiers in Scope 3 are intended as approximate tiers of data quality, and expressed skepticism that measured emissions are always better than activity × EF, but suggested it might be acceptable to add this distinction given the current three tiers already approximate data quality. This TWG ember noted that a reporting company can either measure emissions (e.g., using sensors) or calculate emissions using other data inputs. In this context, the term "measured" may confuse some companies that collect measured activity data (e.g., the total tonne (t) plastic pellets purchased based on procurement documentation), and use secondary cradle-to-gate emissions factors to quantify the emission attributable to said plastic, they may (incorrectly) deduce that these emissions are measured when, in fact, that is not what is meant by measured. The TWG member said that this confusion could be avoided if the *Corporate Standard* and/or *Scope 3 Standard* unambiguously state that: Measured emissions are greenhouse gas emissions that are themselves measured using sensors.
    - The TWG member continued, stating that only if a supplier measured its scope 1 emissions on-site, at the factory where said plastic pellets were manufactured, and passed this supplier-specific *measured* emissions on to the client, only then could a client classify (disaggregate) the supplier-specific *measured* emissions as measured emissions in its (the client's) scope 3 inventory.
    - The Secretariat clarified that the goal is to support methodological transparency, and that the tiers are not being designed to imply that measured data is inherently always better quality than calculated data, although it can be.
    - A TWG member asked, in CS TWG discussions, whether the term "measured" was considered, did it refer to measured activity data (rather than exclusively measured emissions); or was measured activity data only considered to attempt to map this tier to scope 3 emissions disaggregation.
    - The Secretariat explained that this arose from reviewing emissions programs, which often include a direct measurement tier. The EPA and EU Emissions Trading System, for example, have separate tiers for measured data (not measured activity data).
- A TWG member noted that Australia's National Greenhouse and Energy Reporting Determination provides very detailed and clear descriptions of different measurement methods (from emission factors, sampling, to PEMS/CEMS) in addition to data quality information addressing this topic.
- A TWG member stated a preference to retain three tiers for scope 1 emissions and three tiers for scope 3 emissions, but then specifying different tiers for scope 1 emissions versus for scope 3 emissions. For example, for scope 1 emissions, using Measured (tier 3), Specific (tier 2), and Non-specific (tier 1); while for scope 3 emissions, Specific (tier 3), Non-specific (tier 2), and spend-based (tier 1).
    - They expressed hesitancy concerning using "measured" for scope 3 emissions, noting that once *allocation* is performed (which is commonly unavoidable by many value chain partners and reporting companies thereof), then the emissions (irrespective of having been measured originally) would or could no longer be considered *measured*. This is the case because allocation methods introduce a new level of uncertainty to the calculated emissions results.
    - They emphasized that measured, as a tier, should only be used for scope 1 emissions, and when passed on to a client, these *measured* scope 1 emissions of a value chain partner would become the *specific* scope 3 emissions of its client.
    - They also emphasized hesitancy implying that spend-based emissions calculations are permitted or even optional for scope 1 emissions, which they believe should not be the case.
- A TWG member noted that "calculation based on direct measurements" could be interpreted as using an emission factor for fuel quantity, representing a level of disaggregation even finer than ISO guidance.
- A TWG member stated that, whatever the disaggregation requirement(s), clarity is critical in order for verifiers and assurers to be able to verify and assure a GHG inventory. They emphasized that, for data sharing to be encouraged and supported, the assurance level and/or details regarding how the inventory was developed must be clear. If the disaggregation rules are not unambiguous, then a company that switches insurance providers might have their disaggregation and implied data quality change year-over-year, for no other reason except that the new insurance provider interprets the desegregation rules differently. For implementation, if possible, the member suggested referencing existing standards for certain industry-specific standards (e.g., ISO 14083 or GLEC for transportation) to help frame implementation.
    - A Secretariat agreed that clarity is essential for verification to be possible.

- A TWG member asked whether the proposal was to report Category 1 emissions by tier of data specificity. For example, a manufacturer buying raw materials might report 100 tCO_2e spend-based, 500 tCO_2e non-specific, and 400 tCO_2e specific. The member asked if the proposed 4th tier would include suppliers that take direct measurements within the specific tier.
- A TWG member stated that the approach seems mixed, making it unclear whether the focus is on data quality or data type. In addition, they asked who the intended audience is for desegregation, whether it's intended for: verifiers/assurers, internal company goal-setting, or external stakeholders. Finally, the member asked, if we achieve continuity scope 1 and scope 2 emissions, then what is the visions for passing on said scope 1 and scope 2 emissions data to other value chain partners (e.g., clients) for their scope 3 emissions inventories. The TWG members said that the revisions need to ensure: When tiered emissions data is shared by a value chain partner, that it's clear to the client receiving said supplier-specific emissions data, where said emissions should be classified in their scope 3 inventory tiers.
    - A Corporate Standard Secretariat member responded that the goal is primarily transparency for users of GHG inventories and also to help companies improve data quality over time. The focus is on specificity rather than quality. The member noted that more subjective, principle-based approaches were considered but lacked support.
    - The Secretariat said that if a value chain partner measures scope 1 emissions and passes those emissions onwards to its clients (making these emission's the client's supplier-specific emissions), then the client could report said emissions as measured (if such a tier is introduced) or specific scope 3 emissions.
    - A TWG member asked whether this would be required.
    - The Secretariat replied that, based on the way the disaggregation rules are currently written, as proposed by the Scope 3 TWG, a company shall disaggregate, however, a company may itemize all emissions as unclassified.
    - The TWG members said that this is what companies are going to do; specifically, they are going to report scope 3 emissions using the unclassified tier.
        - A TWG member reiterated that the additional value created or supported by disaggregation must be clearly articulated and documented, especially given the cost and effort necessary to disaggregate emissions. They noted that achieving better data is time-intensive and could be very costly, especially for measured data.
    - The Secretariat noted that the unclassified tier is designed for companies to make the decision themselves whether or not it's worth their time; and consumer can inform companies whether they believe companies should make it worth their time, in the interest of maintaining consumer loyalty. Based on discussion with the Scope 3 TWG, this arose as a pragmatic approach to introducing disaggregation which, everyone agreed, would or could have value-add (perhaps not in all instances).
- A TWG member asked for an example where "measured" would be of lower quality.
- A TWG member stated that direct measurement of CO_2 in vehicle exhaust is accurate but can be affected by sampling, humidity, and sensor drift. They added that fuel-based calculation methods can be just as or even more reliable when combustion is complete.
- A TWG member noted that if sampling is performed (e.g., measuring 100 tCO_2 for a fraction of the operation), it is unclear whether the 100t 'sensor sample' would be applied to the remaining fraction of the operation to classify it in the "measured" tier (or whether only the 100 tCO2 could be classified as measured). The implication being that classifying emissions as measured requires continuous, unbroken sensor-based measures to be performed and data collected.
    - Additional guidance on sampling methods would be needed to understand this.
- A TWG member recalled that there were two add-ons in addition to the tiers: verification and uncertainty, to consider quality and not just specificity.
- A TWG member stated that it is not always true that measured data is of higher quality.
- A TWG member asked whether disaggregation prevents summing emissions across different tiers (e.g., can a reporting company aggregate tier 3 and tier 2 emissions).
    - The Secretariat replied that, while a reporting template still needs to be completed, based on current discussions, yes, scope 3 emissions of different tiers can be aggregated.
- A TWG member asked whether downstream scope 3 emissions could ever be classified as measured.
    - The Secretariat responded that, no, this is unlikely; it would be very difficult to classify downstream emissions as measured.

    - In response, the TWG member stated that for many companies with predominantly downstream scope 3 emissions, for which no emissions would or could realistically ever be classified as measured (or which have yet to occur, and therefore could never be measured in the year that downstream scope 3 emissions are reported), adding a measured tier may be problematic; but it could be clarified that it is optional for downstream scope 3 emissions.
- A TWG member suggested that combining tier information with inventory uncertainty calculations could better reflect whether data quality is high.
- A TWG member stated that calculating measured data that would fall under a potential tier 4 would imply measuring all emissions across all machines, engines, and equipment. The member noted that while companies may aspire to this, it seems unfeasible for value chain partners and/or reporting companies.
- A TWG member noted that examples are needed to understand how this would be applied in scope 3 emissions. They expressed concern that the difference between measured and specific may cause confusion or frustration without a clear value-add being communicated. They stated that there aren't enough uses cases yet showing the value add of introducing a measured tier for scope 3 emissions and recommended developing more use cases.
    - The Secretariat said that it would explore developing use cases to inform TWG members in order that TWG members could make informed decision on this issue.
- A TWG member strongly supported a measured data tier, emphasizing the distinction between measurement and calculation. They stated that it makes most sense for scope 1 emissions, but also for upstream scope 3 emissions (which have occurred and which could have been measured). For example, if an input provider compiles measured scope 1 emissions data and provides this emissions data at an input-/product-specific level to its clients, then it is measured and the client should be able to recognize it as such.
    - In addition, the member noted that using different tiers for quality or data type across scopes would create inconsistencies in aggregating scope 1, scope 2, and scope 3 emissions in an inventory; and recommended uniform tiers across all scopes, including downstream scope 3 emissions, even though the measured tier for downstream scope 3 emissions may never be filled.
    - Another TWG members said that, yes, it would be easier to have uniform tiers across scopes, however, they noted that if measured scope 3 emissions are not more accurate or better quality, necessarily, than specific, then even if we could differentiate measured emissions, it's not necessarily better. There may be some categories for which we need to make exceptions.
- A TWG member noted that Category 11 is different in nature because lifetime emissions are cumulative (ex-ante), and future emissions cannot be measured ex-post.
- A TWG member stated that telemetry[1], for example, is one way some organizations calculate actual downstream activity emissions.
- A TWG member stated that there is a competitive advantage for manufacturers able to meet the measured tier, such as EV manufacturers, but that it is not feasible for the majority of manufacturers with large Category 11 (use of sold product) emissions.
    - A TWG member asked for clarification about the reasoning behind this point.
    - A TWG member noted that telemetry for product use would require reporting emissions in the year of use rather than the current requirement of total lifetime impact in the year of sale.
    - A TWG member noted that this issue could be considered in future meetings.
    - A TWG member added that implementing this approach might necessitate changes in the calculation methodology or new calculation methodologies.
- A TWG member stated that economics, feasibility, and relevance will dictate which products reach the measured tier.
- A TWG member asked, if a supplier measures their electricity use at their plant (electricity consumption x supplier-specific emission factor), whether this would be "measured" and, if so, what that would imply for the meaning of "specific".

[1] Telemetry: Automated capture, transmission, and processing of high-frequency operational data (e.g., fuel flow rates, electricity consumption, temperature, pressure, chemical composition, throughput, distance traveled, engine load, or digital service usage metrics) from sensors, meters, control systems, embedded devices, or software platforms to support calculation, allocation, or direct estimation of greenhouse gas emissions. Note: Telemetry is not itself a calculation method; it is a data collection method that elevates activity data representativeness, temporal resolution, and auditability. It is akin to measured (e.g., via sensors) emissions data.

- A TWG member stated that, if this approach is implemented, individual categories would need to be evaluated for how data would be measured or calculated.
- A TWG member clarified the difference between specific and measured: specific data comes from the input provider but is not based on direct measurement; while measured data comes from the input provider who has directly measured it. However, they asked why emissions calculated using environmentally extended input-output (EEIO) emission factors is classified in a lower tier than emissions calculated using industry-average emission factors, and what qualifies as industry average.
    - A TWG member responded that industry-specific and EEIO data are not directly comparable, including based on the simple fact that EEIO emission factors are quantified or estimated using economic spend-data, whereas industry average data is not. While industry average emission factors are used to quantify EEIO emission factors, however, industry-average emission factors can be more specific; meaning that they're not identical and they are different.
- A TWG member stated that real life application examples (cases) are needed to determine how this approach would or could be applied to different scope 3 categories, and to evaluate the principle and its benefit(s) (or drawbacks)
- A TWG member noted that some major companies have worked with "specific" data, which involves suppliers calculating emissions from upstream material production at their facilities (on-site). They asked whether this would then become "measured" and what "specific" would represent (e.g., a generic factor from a supplier).
    - A TWG member asked whether that would instead fall under scope 2 disaggregation rules.
- A TWG member stated that industry-average emission factors are typically based on surveys by industry associations, using member inputs.
- A TWG member stated that they would be okay with a measured tier if it was stress-tested and much better explained and clarified.

Outcomes

- The Secretariat will share a feedback form to gather TWG member votes on the CS proposal.
- The Secretariat will poll TWG members on (i) adding a measured tier, (ii) re-naming "non-specific" as "partially specific"), (iii) re-naming "unknown/unclassified" as simply "unclassified", (iv) whether to limit the disaggregation requirement for some or all scope 3 categories (e.g., only require it for upstream categories), (v) whether emissions within a sub-categories should also be disaggregated, (vi) whether optional emissions (which are to be disaggregated from required emissions) should also be disaggregated, if reported.

3. Boundary Setting – Category 8, 2, 11

- Refer to Presentation slides 19 – 39.
- The Secretariat presented boundary setting considerations related to
    - Category 8, amortization of embodied emissions of leased assets
    - Category 2, amortization of remaining unamortized emissions of capital goods
    - Category 11, sold product annualization

Discussion

- A TWG member asked how this relates to the emissions of capital goods used to manufacture, for example, products, which are therefore 'embodied' in said products, and whether this would extend to product carbon footprints.
    - The Secretariat stated that all of the revisions proposed by this (Scope 3) TWG which are approved by the Independent Standards Board (ISB), will be summarized and submitted to the joint (ISO/GHG Protocol) partner-led TWG being established to review and harmonize the GHG Protocol *Product Standard* and ISO 14076:2018 *Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification* PCF (the "Product Standard TWG").
    - Harmonization between the GHG Protocol *Product Standard* and the suite of GHG Protocol corporate-level standards (i.e., harmonization between corporate- and product-level accounting and reporting requirements) would be the 'gold standard' for carbon accounting and reporting.

    - A TWG member stated their strong agreement with this statement.
- A TWG member asked why the data quality framework developed by the Partnership for Carbon Accounting Financials (PCAF) is not being used. For reference, it scores all scope 3 category 15 emissions from 1 to 5, based on calculation methods and data inputs, and provides uniform disclosure language, and how AI-derived emission factors from a mix of published and primary sources would be classified.
    - A TWG member asked for clarification on AI-derived EFs.
    - A TWG member explained that products from Watershed and HowGood perform auto-LCAs derived from published, primary, and derived emissions factor sources.
    - A TWG member asked how such data would be assured.
    - A TWG member stated that these would still be called secondary EFs, derived from published sources and averaged, comparable to existing EF databases.
    - A TWG member noted that assurance would need to be addressed.
- A TWG member asked whether emissions associated with manufacturing or constructing the capital goods used by a value chain partner to produce products purchased by a reporting company (a client), would be required for inclusion by the reporting company in its scope 3 category 1 to account for complete cradle-to-gate emissions (including embodied emissions of said capital goods). The TWG member argued that, for consistency, input providers should be treated the same, otherwise value chain emissions could be lost.
    - The Secretariat summarized discussions by and between Scope 3 TWG members since Phase 2 Meeting 02 (on August 28th), including that: While this may not reflect 'perfect' consistency, however, it may not be economically feasible to require a reporting company to account for the embodied emissions of capital goods used by value chain partners, in said reporting company's scope 3 inventory. Some stakeholders argue for requiring the allocation of embodied emissions of capital goods to production output (on a product-level), in order for value chain partners to pass this data on. Optionally requiring the inclusion of said embodied emissions by a reporting company (as presented here and as currently stated in the Scope 3 Standard) provides for the possibility that a data management solution provider and vertically integrated value chain parties, that agree on uniform and/or consistent allocation rules, could optionally include the embodied emissions of capitals goods in product-level data and conform with the Revised Scope 3 Standard (were these embodied emissions to remain optional).
    - The Secretariat reiterated that a final vote or poll will be held regarding maintaining optionality or requiring the inclusion of the embodied emissions in capital goods of value chain partners by a reporting company.
- A TWG member asked whether refurbished capital goods will be addressed.
    - The Secretariat confirmed that the embodied emissions in second-hand capital goods will be considered.

Category 8, amortization of embodied emissions of leased assets

- A TWG member asked whether there is inconsistency regarding category 8. For category 8, if a lessee is leasing a building and has operational control, then it would account for the direct emissions associated with operating that building as scope 1, and purchased energy as scope 2, but would they then not report the embodied emissions on an amortized basis?
    - The Secretariat responded that this calculation method and revised boundary guidance requiring the inclusion of the embodied emissions of manufacturing or constructing the leased assets, would mean that the amortized embodied emission shall be reported by a lessee in their scope 3 category 8, because they don't own and never purchased the building (if they purchased/owned the building, then they would have already accounted for the cradle-to-gate emissions of the constructing the building in category 2).

Category 2, amortization of remaining unamortized emissions of a capital good

- A TWG member asked how embodied emissions, including second-hand goods should be treated, noting that existing LCA frameworks and companies use different lifespan values or assumptions for assets.

    - The Secretariat stated that the aim is to be prescriptive enough to prevent arbitrary or misleading assumptions, while acknowledging the difficulty in standardizing lifespan assumptions to be used by asset type, which ultimately may need to be market-determined.
    - A TWG member noted that while the principle is clear, however, applying it may be challenging. They brought up an instance when a group of independent practitioners discussed accounting for these embodied emissions on an annualized basis, and the discussion couldn't get past the fact that every practitioner used different lifespan assumptions which couldn't be agreed upon.
- A TWG member stated that the cradle-to-gate or embodied emissions associated with manufacturing or constructing a building should only be counted once, by the initial constructor and owner, and should not be counted more than once by future buyers of the asset. The initial owner that made the choice to construct a building should record the full cradle-to-gate emissions associated with that decision (i.e., of the building).
    - Another TWG member agree with this and reworded the argument, stating that: letting a buyer of a second-hand capital good record zero (0) scope 2 emissions would encourage the purchased and use of second-hand capital goods, which would encourage emissions reduction. This first owner (or a second owner, if the building were sold second-hand) would then record ongoing emissions from retrofits, capital improvements, and replacements that would and do occur over the lifespan of an asset. They added that this would encourage the buying or leasing of existing buildings (for which emissions have already been spent) versus building a new one and causing new emissions.
    - Several members were cautious about requiring second-hand buyers to account for unamortized emissions as potentially overcomplicating the quantification of scope 3 emissions.
    - A TWG member noted that buildings tend to become less efficient over time as a factor to consider.
- One TWG member said that the options present trade-offs, noting that letting second-hand buyers record zero (0) emissions could create mis- or disincentives. Having a fully free ride (i.e., being able to record zero emissions for an asset, like a commercial tower or mixed-use complex) simply because a company didn't build the asset and purchased it, for example, one or two years after construction, also doesn't seem to incentivize the right things. While it may complicate this further, in addition to amortizing, perhaps a depreciation could be added. Either way, it seems prudent for a company to take at least some responsibility for the emissions associated with constructing an asset that it buys second-hand.
    - Another TWG member agreed, arguing that amortizing emissions might better incentivize lifespan extension (versus letting a second-hand buyer record zero emissions). The lifespan assumption is important because once the building or asset has been in use for its entire *expected* lifespan, then from that point on, further use should be effectively 'zero burden' (i.e., zero amortized emissions) if sold to someone else (i.e., the next buyer could record zero emissions in their scope 3 category 2).
- A TWG member stated that, in the SBTi automotive standard draft, vehicle lifetimes were specified for different vehicle types, referencing existing frameworks but not financial bodies like IFRS or GAAP. They noted logic for harmonizing guidance between frameworks, however, acknowledged potential differences in lifetime assumptions made by companies irrespective of harmonization.
- A TWG member asked whether lifespans of capital goods should ideally come from industry groups that set those values.
- A TWG member asked whether amortizing emissions on an annualized basis may overcomplicate carbon accounting.
- A TWG member stated that expected useful life and recognized accounting depreciation schedules are not the same.
- A TWG member emphasized the importance of distinguishing the expected remaining useful lifespan of second-hand goods and lifespan *extensions* (i.e., that extend use *beyond* expected useful lifespans).
    - A TWG member noted that recognized accounting depreciation schedules are usually shorter than expected useful life (e.g., rapid depreciation schedules).
    - A TWG member confirmed this.
- A TWG member noted that many clients are keen to understand how second-hand goods will be accounted for in inventories for first, second, and n users.
- A TWG member said that accounting for the emissions of capital goods with an adjustment for amortization including accounting for lumpy emissions makes sense, to support boundary setting, year-

over-year accounting, and encouraging extending the lifespan of use of assets. Having a single, large, lumpy emissions record for a purchased asset (in the year it is purchased) adds volatility or noise to annual GHG inventories which affect target-setting and year-over-year performance tracking.

- A TWG member stated that for new assets it is relatively easy to estimate, but for older assets assumptions are very high-level. For example, for a multi-decade-old building, whether data on the lifespan of the asset is widely available.
- In addition, they asked whether other members have ever seen a reporting company operate a significant capital good through a subsidiary, so that when the capital good is sold, it is treated as a divestiture as opposed to a sale (which then has implications for re-baselining).
    - The Secretariat responded that in portfolios where buildings are owned by multiple LLCs, selling the building may involve selling an entity that owns the asset, allowing for re-baselining.
    - A TWG member added that if the divested asset is used by the acquiring entity, the same logic applies.
- A TWG member asked what guidance would be needed for a reporting company that purchases second-hand goods with an unknown age (e.g., manufacturing equipment, vehicles), noting that reasonable estimation processes or standardized assumptions would support adoption. It could also benefit circularity efforts to be considered for category 11 in later discussions.
- A TWG member stated that GHG Protocol must differentiate between first, second, and third (or n) owners of assets. If second or third owners are required to account for all or part of the cradle-to-gate emissions of second-hand purchased capital goods in category 2, this would necessitate justification, calculation methods, and guidance. The member also noted the need to clarify how or whether purchased capital goods differs for (a) structural changes versus (b) organic growth or decay.
    - For example, some companies may (i) acquire an entity that owns capital goods, and not account for the cradle-to-gate emissions of said capital goods in the purchase year, or (ii) acquire an asset (capital good) from an entity, in which case the buyer did purchased the asset, and therefore would account for the remaining unamortized cradle-to-gate emissions of said capital good in category 2. while and not amortized emissions) while acquisitions differently.

Outcomes

- The boundary setting discussion will be continued in the next meeting.

4. Next Steps

- Refer to Presentation slides 53-54.
- The Secretariat presented the next steps.

Discussion

- N/A

Outcomes

- The Secretariat will circulate the meeting minutes.

Summary of written submissions received prior to meeting

N/A