

Scope 3 Technical Working Group Meeting

Working draft, do not cite

Full TWG

Phase 2, Meeting 14

Circularity and series E package



July 9th 2026

Supplementary pre-read materials

- Circularity taskforce outputs:
 - Definitions: [Taskforce F1 – definitions](#)
 - Allocation approaches for recycled materials: [Taskforce F2 - allocation approaches](#)
 - Includes templates developed to assess approaches and any supplementary materials provided by the taskforce and Secretariat
 - Waste-to-energy incineration rules for category 5: [Taskforce F3 - waste-to-energy](#)
 - Stakeholder presentations from CEWEP and TOMRA: [Stakeholder Presentations](#)
- Draft category 10/11 rules:
 - [Category 10-11 package](#)

Agenda

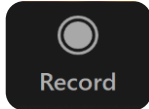
(Draft; for discussion)

- Housekeeping and workplan update (10 mins)
- Outputs of circularity taskforces:
 - Definitions (20 mins)
 - Allocation approaches for recycled materials (45 mins)
 - Waste-to-energy (30 mins)
 - *Guidance/clarification requirements for other types of circular economy activity (to be discussed 23rd July)*
- Update on series E (10 mins)
- Next steps (5 mins)

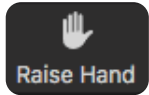
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Housekeeping and decision-making criteria

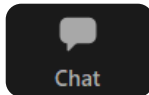
Welcome and Meeting information



This meeting is recorded.



Please mute yourself by default and unmute when speaking
Please use the Raise Hand function to speak during the call.



You can also use the chat function in the main control.



Recording, slides, and meeting minutes will be shared after the call.

Housekeeping

- TWG members should **not disclose any confidential information** of their employers, related to products, contracts, strategy, financials, compliance, etc.
- In TWG meetings, **Chatham House Rule** applies:
 - “When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.”
- **Compliance and integrity** are key to maintaining the credibility of the GHG Protocol
 - Specifically, all participants need to follow the **conflict-of-interest policy**
 - **Anti-trust rules** have to be followed; please avoid any discussion of competitively sensitive topics*
- Maintain a respectful approach to communicating by:
 - Assuming positive intent; making space for different perspectives; and defaulting to curiosity

* Such as pricing, discounts, resale, price maintenance or costs; bid strategies including bid rigging; group boycotts; allocation of customers or markets; output decisions; and future capacity additions or reductions

Decision-Making Criteria

- Evaluating options: Describe pros and cons of each option relative to each criterion. Qualitatively assess the degree to which an option is aligned with each criterion through a green (most aligned), yellow (mixed alignment), orange (least aligned) ranking system. Some criteria may be not applicable for a given topic; if so, mark N/A.
- Comparing options: The aim is to advance approaches that ideally meet all decision criteria (i.e. maximize pros and minimize cons against all criteria). If options present tradeoffs between criteria, the hierarchy should be generally followed, such that, for example, scientific integrity is not compromised at the expense of other criteria, while aiming to find solutions that meet all criteria.

<i>Illustrative example</i>	Option A: Name	Option B: Name	Option C: Name
1A. Scientific integrity	• Pros • Cons	• Pros • Cons	• Pros • Cons
1B. GHG accounting and reporting principles	• Pros • Cons	• Pros • Cons	• Pros • Cons
2A. Support decision making that drives ambitious global climate action	• Pros • Cons	• Pros • Cons	• Pros • Cons
2B. Support programs based on GHG Protocol and uses of GHG data	• Pros • Cons	• Pros • Cons	• Pros • Cons
3. Feasibility to implement	• Pros • Cons	• Pros • Cons	• Pros • Cons

(Draft; for discussion)

Circularity taskforce outputs

Taskforce topics

Taskforce	Description
F1	Establishing or revising relevant circular economy definitions
F2	Consideration of allocation approaches for recycled materials , including: Qualitative assessment of each of the considered approaches using bespoke principles and criteria
F3	Waste-to-energy allocation rules, including: Drafting and review of ruleset based on the outputs of the previous WtE survey
F4	Establish circular economy accounting examples for circular economy activities (including reuse, refurbishment, etc.) to highlight how emissions are classified and appropriate scope 3 categories for reporting

Note: F5 activities will be incorporated into finalization of F4 work over the next couple of weeks, with a primary focus of allocation approaches for inner loop activities like reuse, remanufacture etc

(Draft; for discussion)

F1 - definitions

F1 | Aims of this taskforce

The *Scope 3 Standard* is not well suited for circular activities in value chains. It better supports linear product lifecycles and does not provide sufficient direction on accounting rules and guidance for circular activities.

Building a clear set of definitions for relevant terms sets the groundwork for further guidance development

The aim of this taskforce were to **propose a set of definitions that can be used in the *Revised Scope 3 Standard*** and potentially used in further GHGP standards as well

F1 | Tasks

1) Assess whether the existing definitions related to circularity are acceptable

- Noting that changing the definitions may cause changes in interpretation of other standards. The Secretariat can help support whether changes cause material changes to other standards.

2) Identify any missing definitions that are relevant to scope 3 accounting and propose definitions

- Examples of missing definitions may include;
 - Repair; refurbishment; redistribution; reuse; regenerative production; waste-to-energy; lifetime
- With each definition, consider where in the Scope 3 Standard it applies most and propose how terminology and concepts can be integrated with text revisions and/or examples
 - e.g.,
 - refurbishment affects category 1 & 2, and use-phase emissions most – how can refurbishment logic be integrated into category 1, 2, and 9-12 text?

F1 | New overarching definitions

- **Circular economy:** An economic system that exhibits a systemic approach to maintaining a circular flow of resources (including climate change, biodiversity loss, waste, and waste) by recovering, retaining or adding to their value, while contributing to sustainable development and pollution. It is based on three principles, driven by design: eliminate waste and pollution, circulate products and materials (at their highest value), and regenerate nature (based in part on EMF)
- **Product lifecycle:** The period of time from which a product is released for use after manufacturing to the point the product or its constituent materials is sent for *material recovery*, *energy recovery*, or *final disposal*. A product lifecycle comprises one or more *use cycles*
- **Use cycle:** The period of a product's functional life that starts from the point of manufacture, or the point of re-entry of a product after repair, refurbishment, or remanufacture, and ends at the point it next requires repair, refurbishment, or remanufacture, or is sent for material recovery, energy recovery or final disposal processes (adapted based on suggestions for category 10/11 rules when they were drafted).

F1 | Definitions for inner loop / product life cycle extension activities

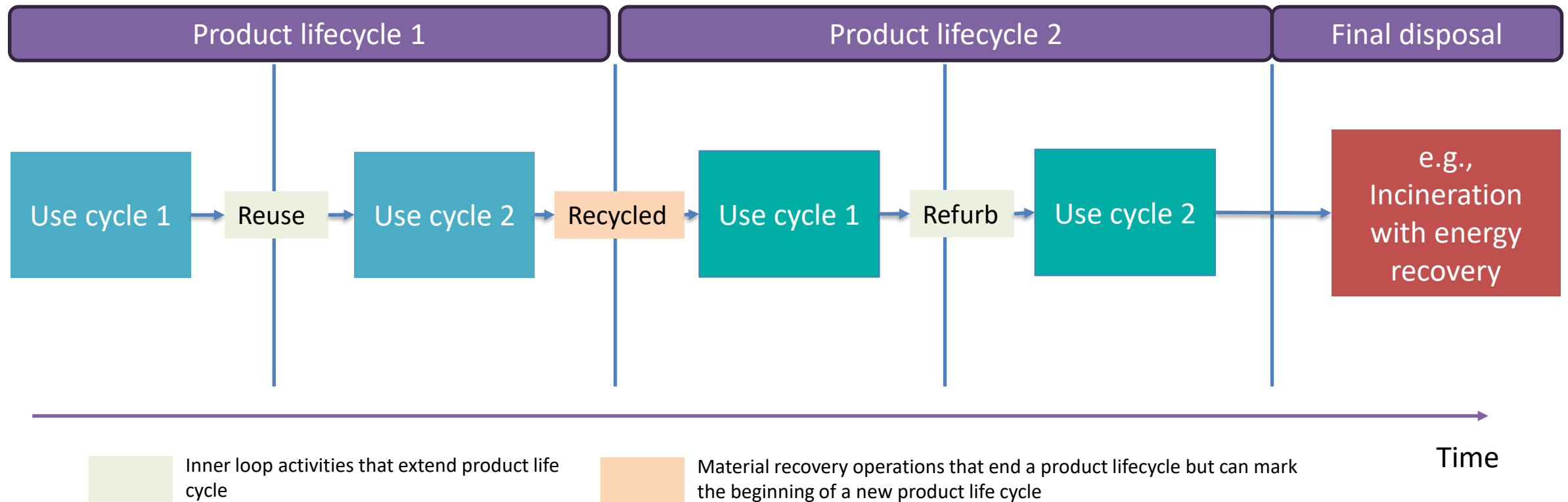
- **Reuse:** Use of a product or its component parts after their initial use, for the same purpose for which they were originally designed (ISO 59004:2024)
- **Repair:** A process by which a faulty or broken product or component is returned back to a usable state to fulfil its intended use. (based on EMF's glossary)
- **Maintenance:** A set of actions intended to retain an item or material in, or restore it to, a state in which it fulfil its intended use. (based on ISO 14009)
- **Refurbishment:** A process by which an item, during its expected service life, is restored to a useful condition for the same purpose and with at least similar quality and performance characteristics (ISO)
- **Remanufacturing:** An industrial process by which an item is returned to a like-new condition from both a quality and performance perspective (ISO 59004)
- **Upcycling:** A material recovery process by which products or their component parts are transformed into a product of greater economic value or functional quality than the input material. (Secretariat suggestion)

F1 | Definitions for activities that end a product lifecycle

- **Material recovery:** Any method of recapturing and reutilizing recoverable resources specifically for reuse, refurbishment, remanufacturing, recycling or other methods that retain or add value of a resource (based on GCP & ISO 59004:2024)
- **Recycling:** A material recovery process to obtain recovered resources for use in a process or a product, excluding energy recovery (ISO 59004:2024)
- **Downcycling:** A material *recovery* process that yields recovered resources of lower value or where the loss of the material's original properties precludes its use at functional equivalence to its previous life cycle, such as through reduced functional quality or loss or economic value.
- **Energy recovery:** The generation of useful energy through the direct and controlled transformation of recovered resources (ISO 59004:2024 and GCP)
- **Final disposal:** The terminal point in a product lifecycle when the product is treated without any form of material recovery.
Note: *Energy recovery* is classified as a final disposal treatment (based on 2-0 LCA)
- **Waste:** Any substance or object which the holder *discards*, intends to *discard*, or is required to *discard* for *material recovery*, *energy recovery*, or *final disposal*.
 - Note: a by-product that is sold by the reporting company for further use is not classified as waste (based on EU WFD)
 - Note: To discard means to dispose of a product or material or transfer it for *energy recovery* or *final disposal* with no further intended use.
 - Previously "*an output of a process that has no market value.*"

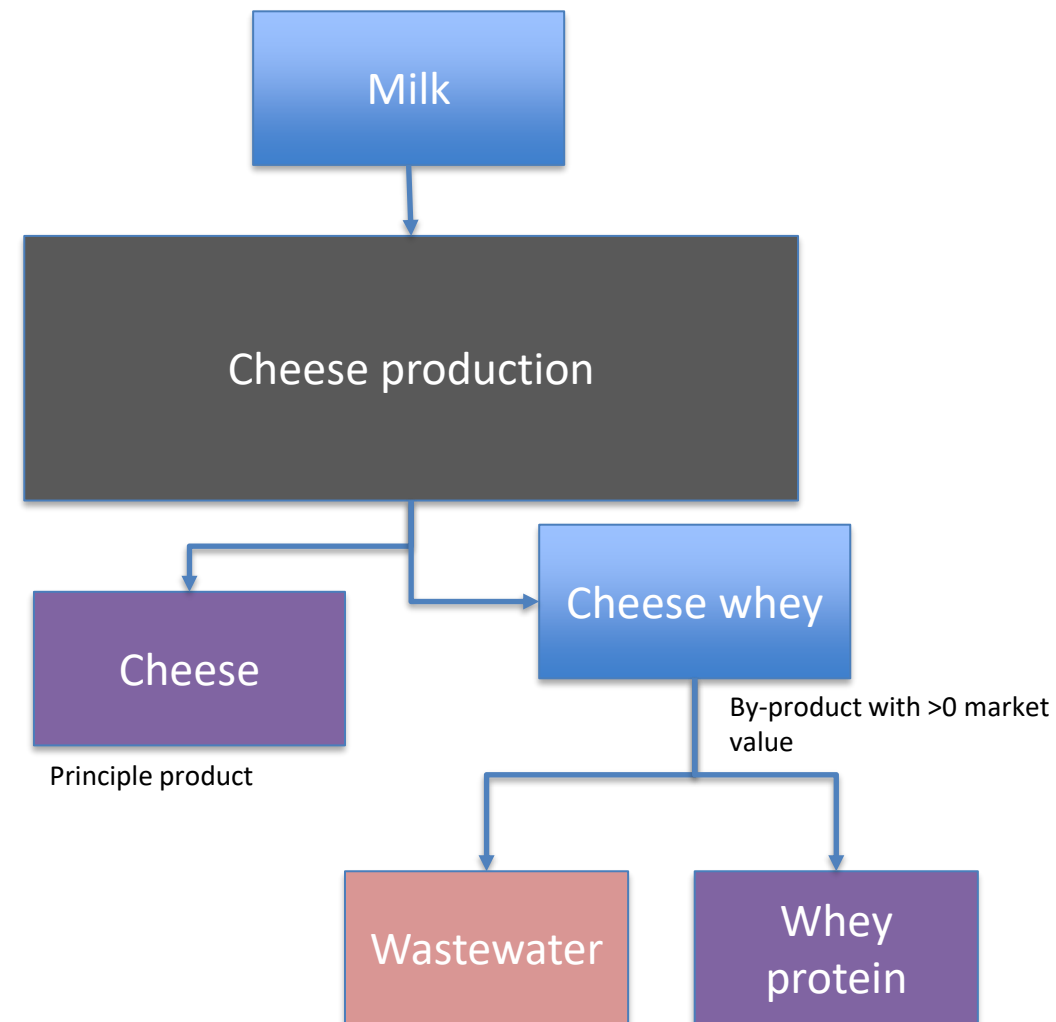
F1 | Summary of outputs

- An illustrative example of what could happen to a product after the point of manufacture and sale.
- There are 1+ use cycles in a product lifecycle



F1 | Usage of definition of waste in other corporate suite standards

- LSRS:
 - "Evidence for recycled waste: If companies use the recycled content allocation method for post-consumer waste that is recycled or reused, companies **shall** provide evidence that the waste is post-consumer and that the waste has been reused or recycled." *section 6.2.2, pp. 32*
 - "If a system or process produces waste during production, no emissions, removals, or other metrics from the system or process **should** be allocated to the waste." *section 6.3, pp. 36*
- Does the alternative definition of waste materially affect the interpretation of these requirements and recommendations?
 - *Existing*: "An output of a process or system that has no market value."
 - *Alternative*: "Any substance or object which the holder *discards*, intends to *discard*, or is required to *discard* for *material recovery, energy recovery, or final disposal*"



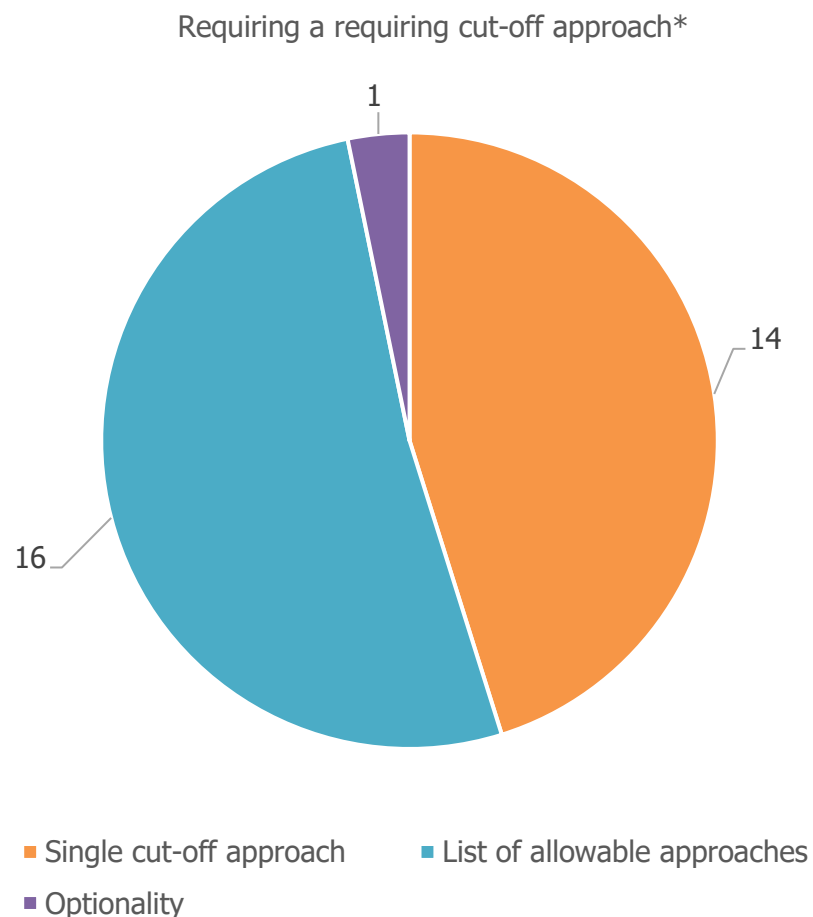
F1 | Next steps

- These definitions are not automatically added to the scope 3 standard.
 - As text gets drafted, including any accompanying guidance or the finalization of any examples (for taskforce F4 outcomes), they may be introduced either as formal glossary definitions or as in-line definitions which provide interpretation guidance but are non-binding
- For each definition, we will ask the TWG to vote on the whether they:
 - Approve with no edits
 - Approve with minor edits
 - Disapprove (with rationale or major edit suggestions)
 - Abstain
- **Voting will be in a post-meeting survey**

(Draft; for discussion)

F2 – allocation approach for recycled materials

Survey results reminder and taskforce activities



- **Near-unanimity that unconstrained optionality is unacceptable.**
- Less clear resolution on whether a single or a defined list of system boundary approaches should be used.
- **Taskforce** focused on identifying criteria that could be used to distinguish between approaches. To do this, the pros/cons of each approach were considered for three different material types:
 - Metals (*as an example of materials that can be recycled many times without significant degradation in quality*)
 - Plastics (*as an example of materials that can be recycled with degradation in quality*)
 - Cell phones (*as an example of post-consumer waste which is a complex product with some highly recyclable parts*)

Establishing criteria to consider allocation approaches

- Templates were established to mediate an initial assessment of the approaches, which included:
 - Qualitative assessment of emission source classification from recycling materials using each approach
 - Consideration of material-specific pros/cons of each approach using the decision-making criteria
- All completed templates are available to the TWG for review: [LINK](#)

1A. Scientific integrity

Whether the distinction between use phases makes sense for the material

Whether there are any arbitrary choices in terms of responsibility for burdens or credits

1B. GHG accounting and reporting principles

Whether any credits or benefits are claimed more than once by value chain actors

Any systematic mishandling of emission sources

2A. Support decision making that drives ambitious global climate action

Whether the approach incentivizes circularity

Whether the approach creates perverse incentives or disincentives

2B. Support programs based on GHG Protocol and uses of GHG data

Incompatibilities with regulation, established frameworks, or legislation

Incompatibility with other uses of GHG data (e.g., emission factor sources)

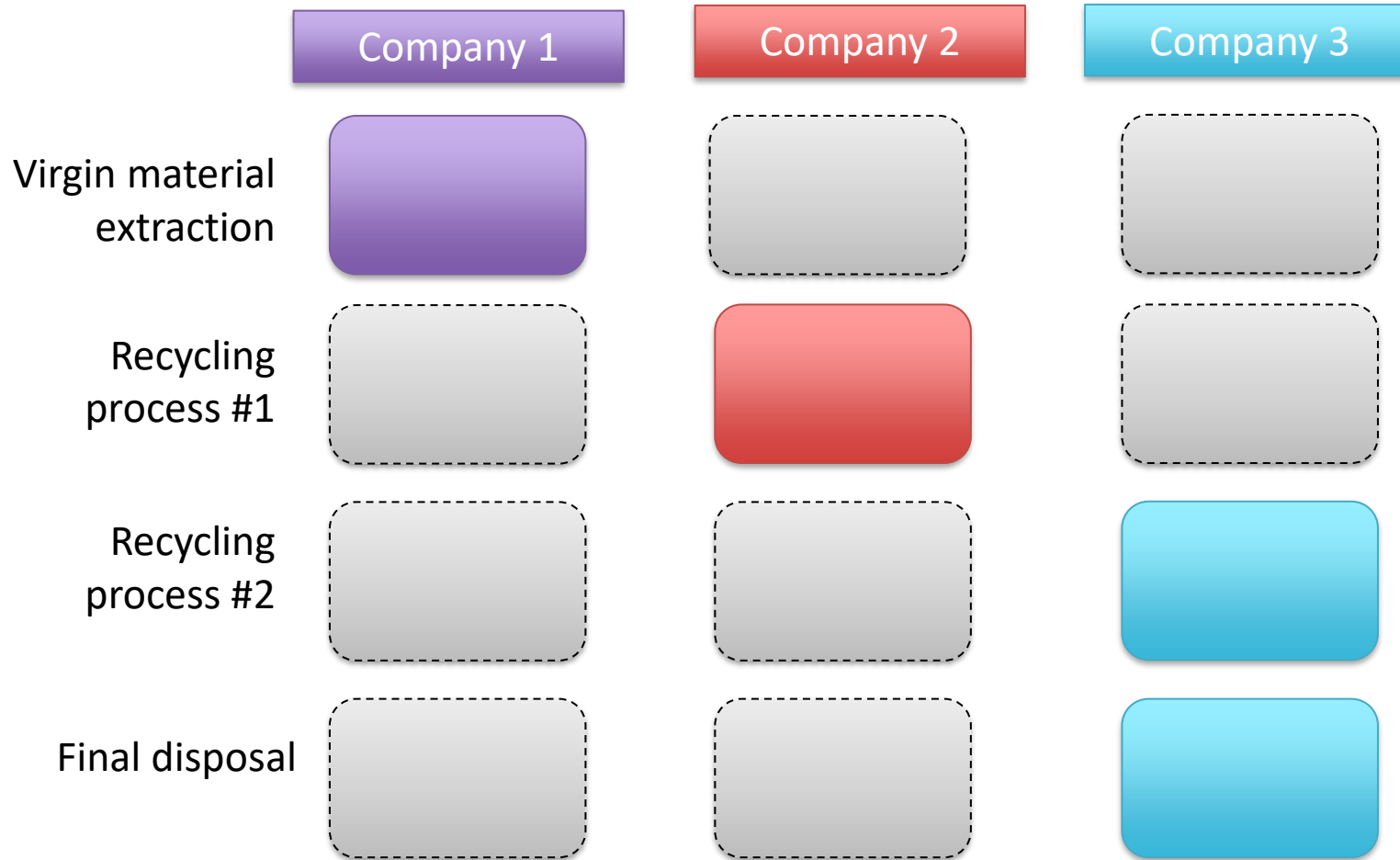
3. Feasibility to implement

Are AD and EFs required for the approach accessible?

Ease of interpretation for emissions classification

Whether a verifier could confirm an approach is applied correctly

Visualizations of the approaches



- Filled boxes = emissions are accounted for in reporting company inventory
- Grey boxes = no accounting
- Assumption is at each recycling process, 100% of material is recycled.
- For brevity, the future slides have a shortened axis

Recycled content method (RCM)

- Currently the recommended in the *Technical Guidance*.
- Cut-off is 0:100 at the point of recycling (i.e., the emissions from recycling activities are accounted for by the user of the recycled materials)



Decision-making criteria	Taskforce notes
1A. Scientific integrity	Pros: Cut-off is clear for materials (e.g., metals) where material properties do not degrade quickly over use cycles when the streams are well sorted. Cons: For mixed or contaminated streams, pre-processing costs may fall ambiguously on either side; Some materials re-enter manufacturing chains during processing which complicates a distinction between recycling and virgin-equivalent production (e.g., pyrolysis oil re-enters petrochemical chain); There is no accounting for material degradation (e.g., in plastics) where recycling degrades the quality of the material significantly. For complex products, there may be individual components which are recycled (e.g., lithium in a cell phone)
1B. GHG accounting and reporting principles	Pros: No double counting in this approach and all emissions are accounted for, ensuring completeness (across multiple inventories) Cons: Provides no visibility of non-recycling fates; fossil carbon in recycled materials may not be considered if incineration emissions from WTE activities are not included in scope 3.
2A. Support decision making that drives ambitious global climate action	Pros: Creates a modest incentive to use recycled material inputs but not a significant incentive/credit for diverting Cons: Does not provide a significant incentive/credit for diverting material into recycling streams; Does not incentivize inner-loop activities (e.g., reuse, remanufacture, repair); Provides no signal for the quality of recycling routes or distinguish between high quality recycling or recycling that reduces quality (e.g., downcycling)
2B. Support programs based on GHG Protocol and uses of GHG data	Pros: Compatible with Global Circularity Protocol and existing corporate GHG accounting infrastructure Cons: Diverges from some product standards (e.g., PEF)
3. Feasibility to implement	Pros: Data is reasonably accessible and the approach is simple although there are high variations in available EFs to use for this approach; Verifiers would require confirmation of recycled content fractions, but overall fairly simple.

Circular content cut-off method

- Cut-off is 0:100 at the point of recycling
- Input material that is recycled (non-virgin) has no EoL burden
- EoL burden scaled based on non-recycling treatment pathways



Note: this simplified case assumes 100% recycling rates

Decision-making criteria	Taskforce notes
1A. Scientific integrity	Pros: Cut-off is clear for materials (e.g., metals) where material properties do not degrade quickly product lifecycles Cons: Total emissions modelled in the system does not represent reality; Zero-impact assumption for inert recycled input materials is reasonable but is problematic for materials that emit GHGs during treatment; there is no accounting for material degradation (e.g., in plastics) where recycling degrades material quality; relies on loose traceability standards which include credit mass balance and chain-of-custody models which are more appropriate for AMI
1B. GHG accounting and reporting principles	Pros: No double counting in accounting terms Cons: The zero-disposal-impact assumption for the recycled fraction creates a risk of over-reporting recycled content to reduce EoL emissions, or systemic understated or overstated EoL emissions – an extra step is needed to ensure accuracy of reporting (robust primary data and verification is needed)
2A. Support decision making that drives ambitious global climate action	Pros: Creates incentives to use recycled materials and divert waste to recycling processes Cons: Does not address inner-loop activities (e.g., reuse, remanufacture)
2B. Support programs based on GHG Protocol and uses of GHG data	Cons: The zero-impact EoL assumption for the recycled fraction has no counterpart in ISO 14044, PEF CFF, or current Scope 3 guidance. Data on 'recycled-origin' vs 'virgin-origin' is not available in some EF databases that may be used in scope 3 reporting.
3. Feasibility to implement	Pros: Methodology is clear for simple products with few materials. More complex products (e.g. cell phones) may find this method more difficult to implement. Cons: A more demanding approach, requires primary data and recycled content fractions. Feasible for materials for scrap tracking schemes, but may not be applicable to all. Verifiers would require confirmation of recycled content fractions and attribution methodology

50:50 approach

- Environmental impact of extraction and recycling processes materials split evenly between virgin producer and subsequent product system. Cut-off point remains the same, but is not 0:100 like in RCM.
- Works best for materials with two product lifecycles.



Decision-making criteria	Taskforce notes
1A. Scientific integrity	Pros: Works well for materials with genuine two lifecycles, such as some plastics. Cons: Two lifecycle assumption is an oversimplification for materials that can be recycled many times without significant reduction in material quality (e.g., for metals); The 50:50 split is an arbitrary artefact of the design for two product lifecycles. In areas where recycling efficiency and loop rates vary by scrap grade and geography, a fixed 50% allocation has no empirical basis.
1B. GHG accounting and reporting principles	Pros: No double counting when applied over two life cycles. Cons: Not applicable to scenarios with 3+ lifecycles. For the downstream manufacturer to account for 50% of the original virgin manufacturer's extraction burden may be disproportionate given the quality of material degrades between life cycles in practice, reducing the relevance
2A. Support decision making that drives ambitious global climate action	Pros: Moderate incentive for value chain actors to engage with recycling Cons: No incentive for inner loop activities; fixed 50:50 split is unresponsive to actual performance.
2B. Support programs based on GHG Protocol and uses of GHG data	Cons: Not used in PEF, ISO14044, or the current scope 3 standard. No precedent in EU frameworks
3. Feasibility to implement	Pros: Same data requirements as RCM; Concept is easy to explain although implementation will need guidance on what is split and when Cons: May need alignment (or contractual agreements) between value chain actors which isn't available for all materials.

Closed loop approximation

- Assumes that a material is recycled back into the same product system repeatedly, without loss of material quality
- Impacts blended across product lifecycles, assuming that a material is recycled indefinitely and continuously substitutes for virgin material.
- Implied by emission factors used under this system.



Decision-making criteria	Taskforce notes
1A. Scientific integrity	Pros: Approach is most defensible for materials with no significant change in material quality or properties between product lifecycles with high levels of recycling Cons: Total outputs of a system may not reflect physically occurring emissions; Not applicable for materials that do have quality change, such as plastics where polymer chains shorten, contaminants accumulate etc.; Applying a sector-average recycling rate may be arbitrary may not account for variations by geography.
1B. GHG accounting and reporting principles	Cons: Not possible to trace completeness or consistency of accounting across different value chain actors. Blended structure means that double counting or omissions can not be easily identified.
2A. Support decision making that drives ambitious global climate action	Cons: Inability to assign emissions may lead to disincentives or gaming of accounting rules: there is no reflection of a company's investment to use more recycled inputs or make their products more recyclable; Companies that operate below sector-averages are not incentivized (and vice versa)
2B. Support programs based on GHG Protocol and uses of GHG data	Pros: One of the approaches recommended by the GHGP Product Standard Cons: Not used in corporate accounting to date, and deviates from the approach recommended in scope 3 standard and other similar programs. EU's plastic regulations (PPWR) require monitoring of recycled content and this approach is not aligned with that.
3. Feasibility to implement	Pros: Simple calculation model to introduce Cons: Sector-specific averages are needed and for materials with high levels of recycling this may be the case (e.g., copper data is available from sources like International Copper Study Group). Not likely to be available everywhere, though. Translating into scope 3 corporate accounting may require further guidance.

PEF Circular footprint formulae

- Allocation approach used in the EU PEF framework
- The method distinguishes between virgin material, recycled content, and end-of-life recycling through a set of allocation factors and factors based on material quality that determine how much impact is assigned to each life cycle stage

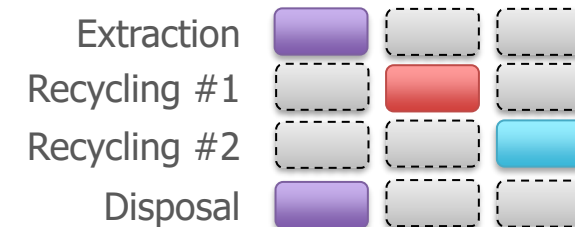


Note: Allocation depends on input parameters to the CFF. Here allocation is ~0.8

Decision-making criteria	Taskforce notes
1A. Scientific integrity	Pros: Soft cut-off and material quality factors ensure that material quality changes of product lifecycles can be appropriately accounted for; This approach enables the tracking of benefits and credits that results from sending the products/materials toward recycling patterns, and has been developed through a robust process in the EU. Cons: Allocation factors and other parameters may be interpreted as a policy choice and be arbitrarily applied if not externally defined.
1B. GHG accounting and reporting principles	Pros: Explicitly designed to prevent double counting across product lifecycles / value chain actors; improves relevance by introducing quality factors Cons: Can introduce avoided emissions logic if applied without guidance
2A. Support decision making that drives ambitious global climate action	Pros: Most nuanced approach and rewards recycled content use and design for recyclability, whilst incentivizing maintaining material quality over loops. Cons: Multiple parameters give companies options to minimize reported emissions without actually improving performance. Guidance would be essential.
2B. Support programs based on GHG Protocol and uses of GHG data	Pros: Established in product standards and frameworks, and is increasingly referenced in EU sustainable packaging legislation (for plastics) Cons: Less well established / tested at corporate level. The availability of parameters for individual materials is poorly defined in many cases and only really established in the EU for key materials. EF databases will not carry information such as quality ratios needed for the formula
3. Feasibility to implement	Pros: Verifiable in principle, if focus is on confirming the input parameters and application to scope 3. Cons: More demanding and complex approach, which requires many more data inputs. These may already be defined in PEFs or from industry sources, but this may not be the case for all materials.

Cut-off variant B

- Similar to RCM, but EoL emissions from final disposal are accounted for by the original producer.



Decision-making criteria	Taskforce notes
1A. Scientific integrity	Cons: Assigning EoL to original producer extends responsibility chain. For materials which are recycled many times, this extends the responsibility horizon significantly, which may be practically infeasible without material tracking.; Cradle-responsibility is arbitrary in the absence of performance differentiation. Inconsistent with the objective of fair and accurate attribution.
1B. GHG accounting and reporting principles	Pros: No double counting of emissions, Cons: Downstream manufacturers bear no EoL liability, which may reduce the relevance for these companies
2A. Support decision making that drives ambitious global climate action	Pros: Creates incentive to design for recyclability and invest in downstream infrastructure, but no performance differentiation means good and poor performers are treated identically. Cons: No incentives for 2 nd + users to keep materials in circulation, as they can send materials to landfill with no emissions burden applied.
2B. Support programs based on GHG Protocol and uses of GHG data	Pros: Extended producer responsibility frameworks in waste regulation apply a similar philosophy. Cons: Not aligned with the current Scope 3 Standard, or other downstream programs or product standards. No standard emission factor database supports provenance tracking at product level for plastics.
3. Feasibility to implement	Pros: Logic is clear and simple to implement on a basic level, Cons: Good operationalization requires provenance tracking infrastructure not available for some materials (e.g. copper). May be practically infeasible in some cases, particularly for high-volume commodities.

Reverse recycled cut-off

- The emissions from any waste management and treatment, whether incineration, recycling, or anything else, are assigned to the producer of the waste.
- Shifts cut-off point to be 100:0



Decision-making criteria	Taskforce notes
1A. Scientific integrity	Cons: For 2 nd + lifecycle, manufacturers bear no responsibility for recycling processes, and no category 12 emissions under this approach. The exact boundary between product lifecycles will need more clarification under this approach as waste management processes, like sorting, washing, and compounding may be conducted by different operators.
1B. GHG accounting and reporting principles	Pros: No double counting between reporting companies as a clear cut-off Cons: No signal about the carbon cost or energy intensity cost of using recycled materials which may reduce relevance
2A. Support decision making that drives ambitious global climate action	Pros: Creates a clear incentive for original upstream manufacturers to design for recyclability and reduce risks of materials ending up in landfill or incineration (assuming that those forms of treatment are less environmentally costly). Cons: Downstream manufacturers have no incentive to prefer efficiently recycled materials over inefficiently recycled materials.
2B. Support programs based on GHG Protocol and uses of GHG data	Cons: Not aligned with the current Scope 3 Standard, or other downstream programs or product standards.
3. Feasibility to implement	Pros: Clear approach in theory. Cons: Process boundary definition is the key interpretive challenge; detailed technology-specific guidance would be needed for consistent application across the diverse recycling landscape

Discussion topics

- **A key factor raised by the taskforce is consideration of the quality of the recycling process that isn't reflected in a strict cut-off** (e.g., in RCM, circular content cut-off, cut-off variant B, reverse recycled cut-off).
 - Approaches which account for material quality incentivize the improvement of recycling activities and the uptake of materials that have been recycled using high-quality means vs low-quality
 - Methods like PEF CFF were developed to help resolve this issue, but are more difficult to implement and input parameters to the full equation are material-type specific and may not be available for all material types
- **Would the ideal approach be material type-specific?**
 - If TWG believe that material-type specific approaches are needed, then this extends beyond the remit of the *Scope 3 Standard* update. Instead, the Secretariat would propose:
 - Recommending a single or list of allowable approaches; and
 - Deferring to sector-specific guidance/standards when available

Next steps for finalizing F2

- All outputs and files created in the F2 taskforce are shared as part of the supplementary pre-read for this TWG meeting: [Taskforce F2 - allocation approaches](#)
- The Secretariat will distribute another survey to the TWG, which will include two parts:
 1. *PART 1*: Which approach(es) you wish to **require** within the scope 3 standard.
 - A tally of 50% of total votes = added to list of approaches that is required.
 2. *PART 2*: Whether you would feel the most appropriate allocation approach is specific to individual materials. If the TWG strongly feel that material-specific considerations are needed to determine a required allocation approach, then the Secretariat would suggest:
 - Only **recommend** the approach(es) identified in *PART 1*
 - Defer to **sector-specific guidance and standards**, highlighting that a company [should/may] use sector-specific standards and apply alternative approaches that are required or recommended by said standards
 - Introduce **overarching principles and criteria developed with taskforce F2** as guidance to assist companies in identifying the most appropriate allocation methodology.

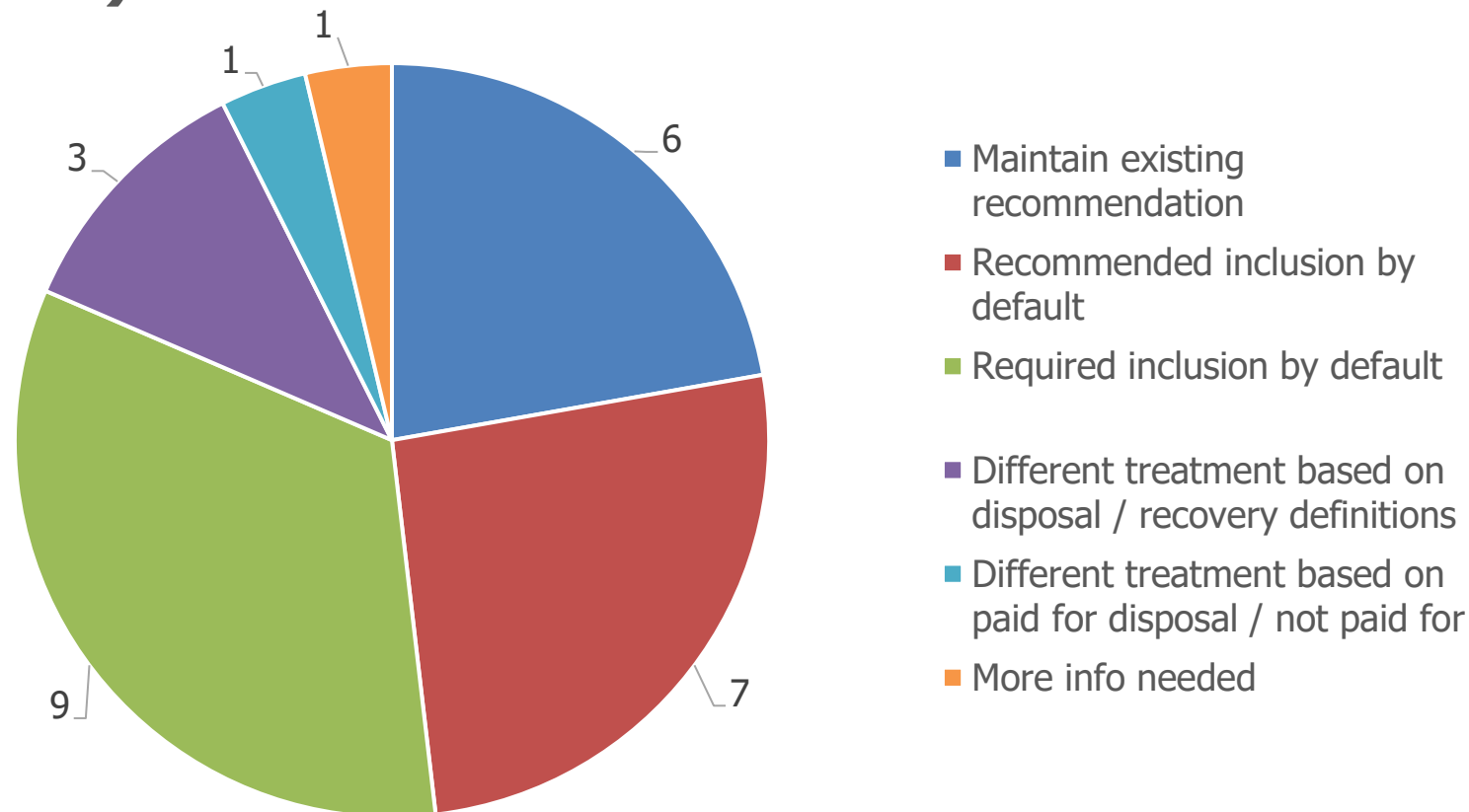
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F3 – waste-to-energy accounting rules

F3 | Survey results (May – June)

Q1: What reporting rules should apply to emissions from WTE treatment in category 5?

- More than half opted for some form of inclusion by default (16/27 votes)
- *Draft text is drafted as **including incineration emissions** by default with [shall/should] text reflecting a final decision from TWG is needed*



F3 | Updated decision-making criteria

Criteria	Current approach (default to omission)	Default to recommended inclusion	Default to required inclusion
1A. Scientific integrity	Pros: Avoids double counting risk and is a determinate a clearly interpreted rule Cons: Introduces a systematic undercounting risk – real emissions occurring in a value chain are not being accounted for. Using the same allocation method as is used for recycling is not scientifically valid – WTE combustion releases GHGs with no equivalent displacement and so should be treated differently	Pros: Inclusion by default ensures a full and conservative accounting Cons: If deduction is not properly or inconsistently applied, may undermine validity of data. Lack of physical traceability may create the illusion of a more robust rule that is less clear and less determinate although advancements in digital infrastructure may mitigate this to an extent.	Pros: Inclusion by default ensures a full accounting. Requirement avoids systematic underreporting of emissions is prevented. Cons: If deduction is not properly or inconsistently applied, may undermine validity of data. Lack of physical traceability may create the illusion of a more robust rule that is less clear and less determinate although advancements in digital infrastructure may mitigate this to an extent.
1B. GHG accounting and reporting principles	Pros: Reduces double-counting. Consistency higher as clear structure Cons: Violates completeness and conservativeness principles – systematic exclusion of WTE emissions	Pros: Aligns with completeness and relevance principles. Cons: Recommendation status weakens transparency and comparability – companies retain discretion over whether to apply the approach	Pros: Completeness and relevance principles are improved for category 5. Mandatory reporting eliminates any inconsistency and any systematic underreporting of emissions, and provides an auditable methodology for all companies
2A. Support decision making that drives ambitious global climate action	Pros: Lower reporting burden may encourage participation and aid the uptake of WTE technologies, although inclusion in scope 2 precludes this somewhat. Cons: Systematic undercounting masks true emissions exposure and doesn't encourage circular economy activities that reduce emissions and waste management policies (i.e., no signal to reduces waste volumes sent for WTE incineration)	Pros: Provides better emissions visibility to make informed decisions and more transparent waste management decision making. Cons: Discretionary exclusions can still obscure hotspots – where companies elect not to apply the apply, emissions remain underreported limiting the usefulness.	Pros: Full emissions picture to support decision-making, supplier engagement, and credible planning Cons: Higher data requirements may slow adoption in early stages.
2B. Support programs based on GHG Protocol and uses of GHG data	Pros: Existing approach is easy to map to basic reporting frameworks Cons: Systematically under-reported emissions undermines downstream programs that use cat 5 data as a proxy for total waste-related emissions exposure	Pros: Improved completeness aids interoperability Cons: Voluntary nature may still produce heterogeneous datasets that limit interoperability	Pros: A mandatory approach produces consistent data with regulatory disclosure and could be auditable Cons: Downstream programs must align, and companies may need to consider re-baselining any targets
3. Feasibility to implement	Pros: Lowest burden – no tracking of waste volumes to WTE, no spatial boundary assessment, and no deduction calculation required.	Pros: Low burden but depends on how much a company wishes to show double count exists. Cons: Extra calculation steps require more data inputs that may be harder to source	Pros: Low burden but depends on how much a company wishes to show double count exists. Cons: Extra calculation steps require more data inputs that may be harder to source

F3 | CEWEP presentation to TWG

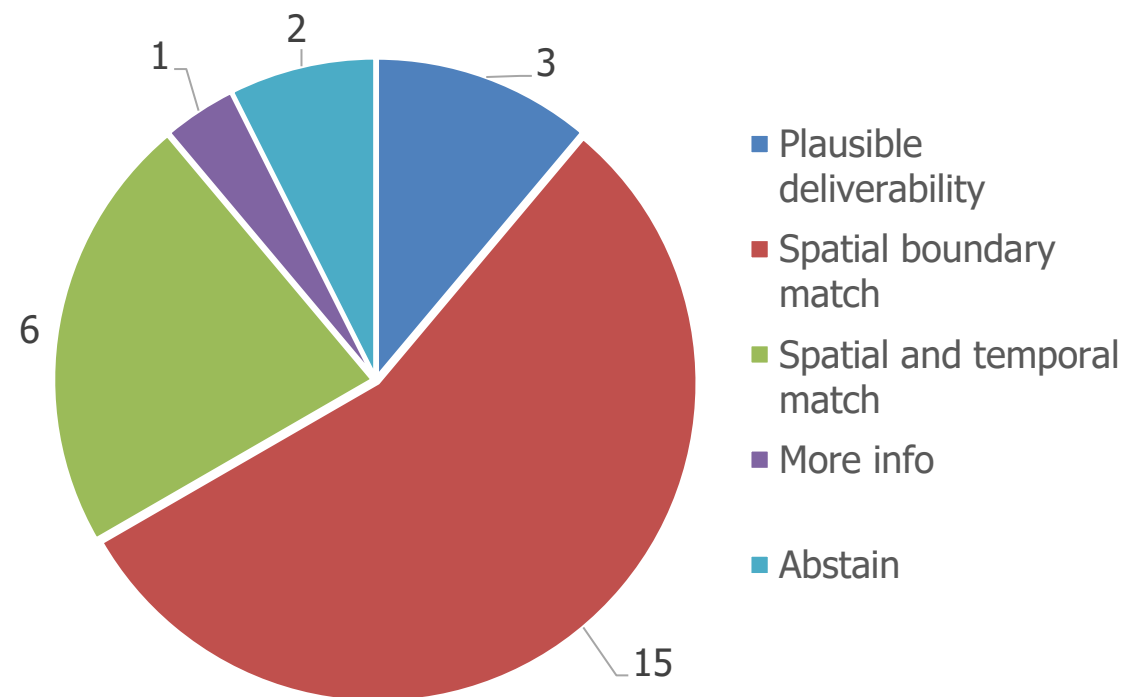
- CEWEP presentation on Tuesday 30th June to clarify the intent of their proposal shared in a previous TWG session:
 - Recording available to all TWG members
 - CEWEP summarized their proposal that had previously been considered in the TWG
 - Summary of proposal:
 - The cut-off point between product lifecycles is set to where any waste reaches an 'end-of-waste state'. In the EU, this is when:
 - The recovered material, component, or product is commonly used for specific processes;
 - A market or demand exists for the material, component, or product;
 - The recovered material, component, or product fulfils the technical requirements for the specific purposes
 - The use of the recovered material, component, or product does not lead to adverse environmental or human health impacts
 - In other words,
 - Incineration emissions from WTE should be accounted for in scope 3
 - Associated scope 2 emission factors associated with WTE incineration should only include emissions from energy recovery activities, and not the combustion process itself.
 - If a company pays for disposal, then these rules apply. If the company gets paid to dispose of this waste, then this is a 'product' and not waste by this definition – *potentially requiring accounting in category 10/11...*
 - *Note that the alternative definition of waste is at odds with the definition used here*
- Did CEWEP's this presentation shift your perspective on the accounting of incineration emissions from WtE?

F3 | Survey results (May – June)

Q2. What should be the minimum condition a reporting company must satisfy to demonstrate that a double count between scope 2 and categories 5 exists?

Options were:

- 1. Plausible deliverability** – the WTE facility is physically capable of delivering the energy to the reporting company's location under normal conditions
- 2. *Spatial match*** – *waste is processed at a WTE facility within the same spatial boundary as used for a company's scope 2 emissions calculations*
- 3. Spatial and temporal match** –
 - Waste is processed at a WTE facility within the same spatial boundary (i.e. option 2); and
 - Energy from the WTE facility can be temporally matched to the company's consumption, using the same granularity as used for scope 2 calculations

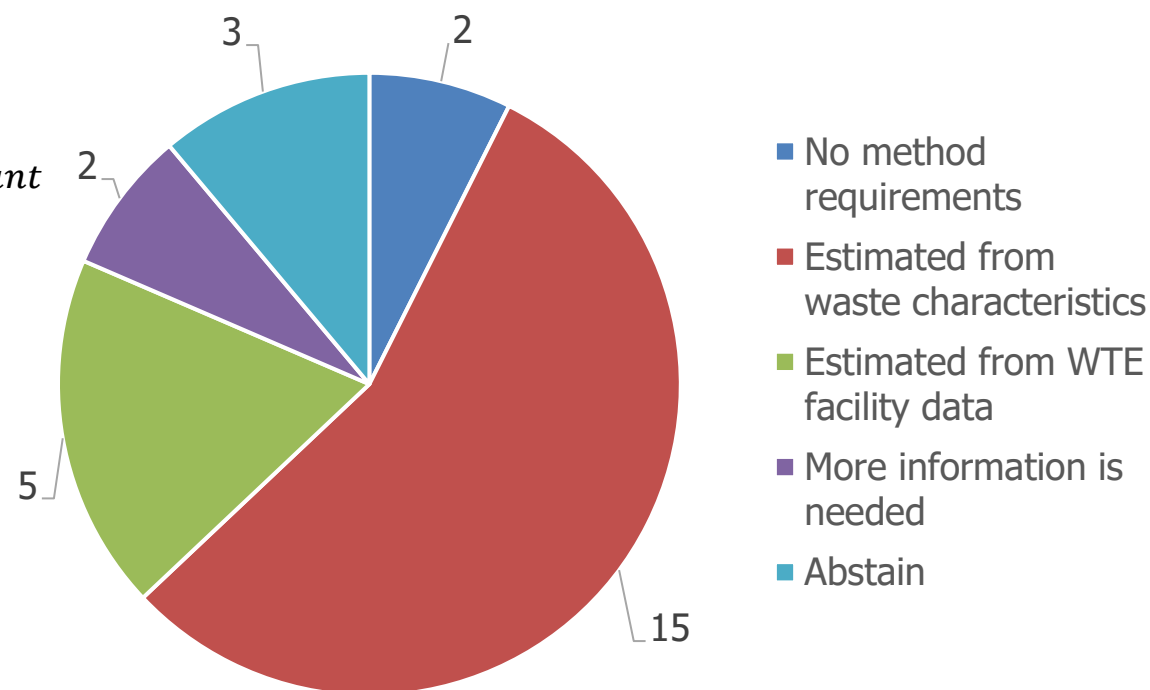


F3 | Survey results (May – June)

Q3. Where a double count is demonstrated, what is the minimum acceptable method for estimating activity data?

$$WTE\ emissions_{cat\ 5} = E_{incineration} - discount_{doublecount}$$

- This question sought to establish how to work out $E_{incineration}$
- *Most suggested that $E_{incineration}$ should be estimated using waste characteristics (i.e. using waste type, composition, and fossil/biogenic carbon content)*

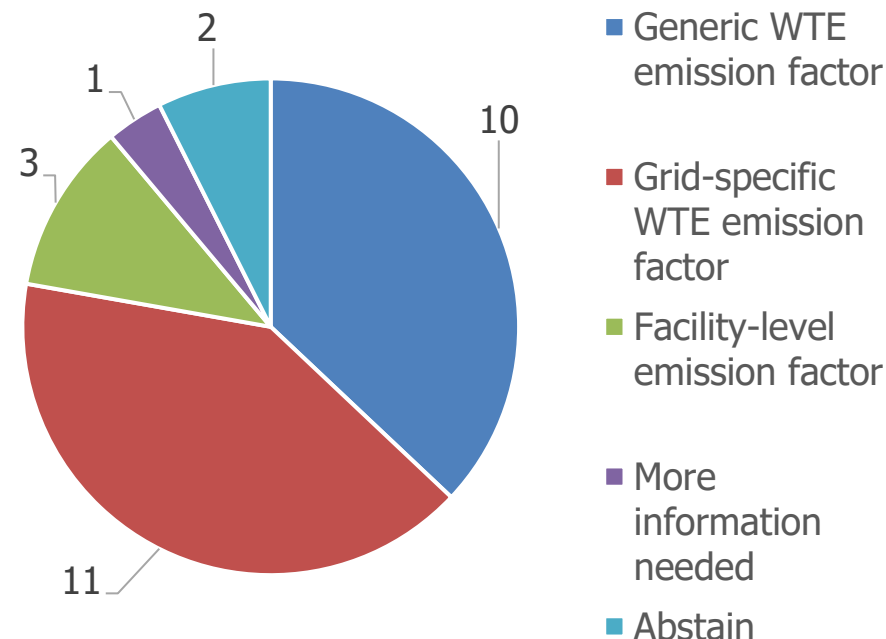


F3 | Survey results (May – June)

Q4. Where a double count is demonstrated, what is the minimum acceptable emission factor method for quantifying the emissions to discount from scope 3?

$$WTE\ emissions_{cat\ 5} = E_{incineration} - discount_{doublecount}$$

- This question sought to establish how to work out $discount_{doublecount}$
- Using:
 - AD = energy recovered (i.e., energy content of waste x efficiency of WTE process)
 - EF = no clear signal from TWG on what this may be; may be average WTE factor or grid-specific WTE factor
- Approach taken:
 - *Assume a generic WTE emission factor is allowable for now but for further discussion with TWG*

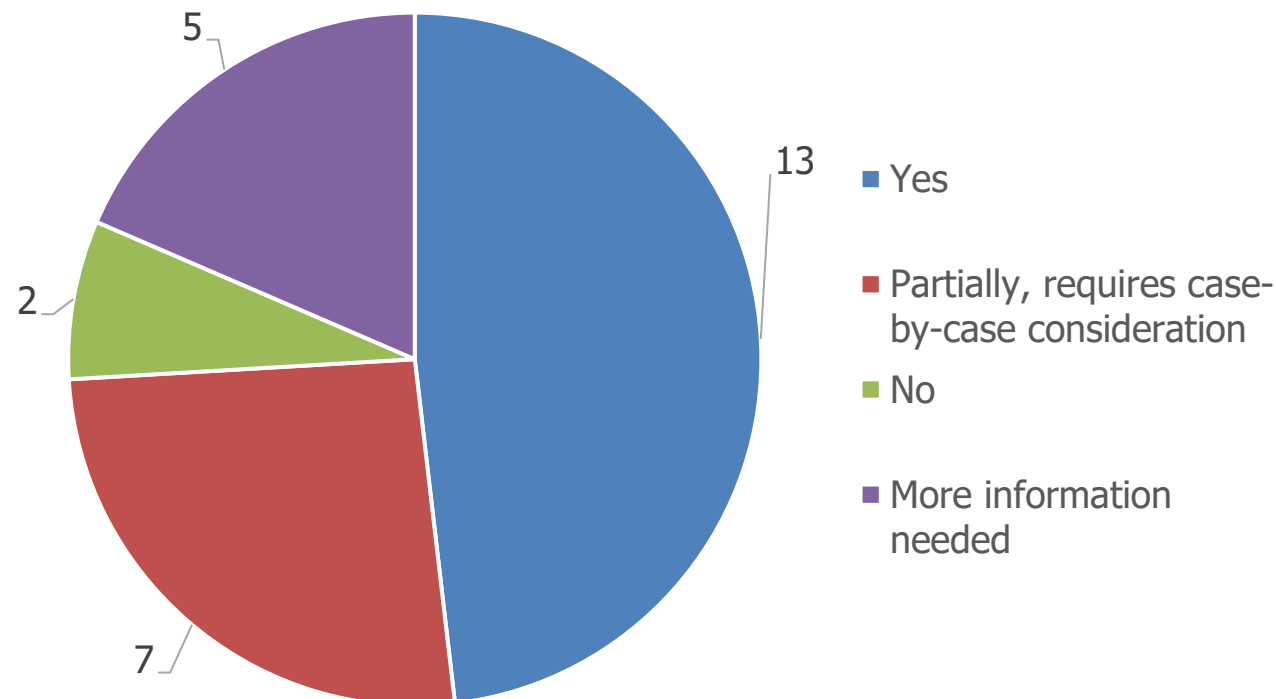


F3 | Survey results (May – June)

Q5. Should the same reporting rules and conditions for demonstrating and quantifying a double count extend to other forms of WTE treatment, such as landfill gas and anaerobic digestion?

Additional comments (available in spreadsheet) express that the emissions from other forms of WTE, particularly for biogas energy generation where timeframes are extended and the main source of double counting is from fugitive emissions (not combustion)

Approach taken in draft rules: Work on incineration with energy recovery. Consideration of applicability for other forms of WTE later on.

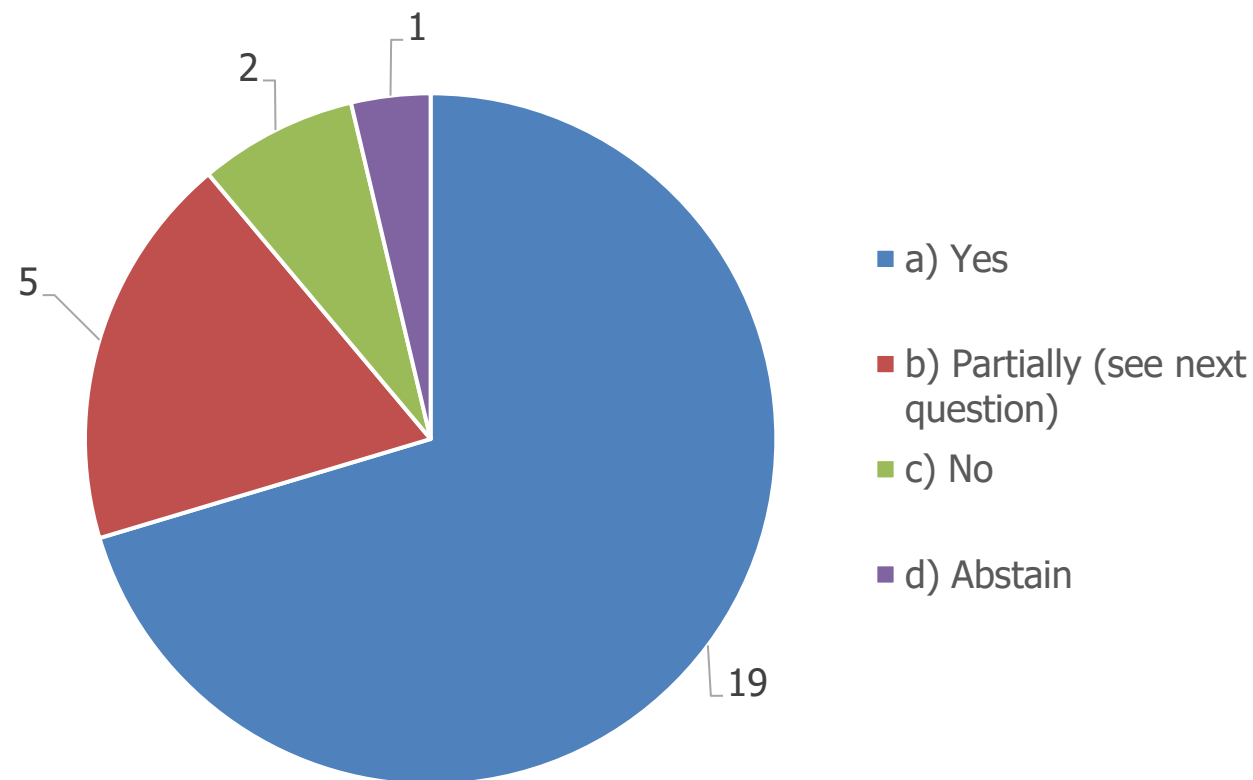


F3 | Survey results (May – June)

Q7. Should the same approach that is decided for category 5 also apply to category 12?

Additional comments (available in spreadsheet) express concerns on timeframes (particularly where a product is disposed in future years), and reduced data availability/control may mean less stringent methods if the same approach is taken up.

Approach taken in draft rules: Work on incineration with energy recovery first for category 5, then assess applicability to category 12 as a taskforce



F.3 Waste-to-energy incineration emissions

Scope 3 Technical Guidance (2013)

pp. 80

- If a company purchases energy from the same facility that it sends its waste to, then accounting for emissions from the waste-to-energy combustion process both upstream and downstream would double count the emissions.
- To avoid double counting, a company **should** account for upstream emissions from purchased energy generated from waste in scope 2.
- Companies **should** account for emissions from preparing and transporting waste that will be combusted in a waste-to-energy facility in category 5, but should not account for emissions from the waste-to-energy combustion process itself.
- These emissions **should** be included in scope 2 by the consumers of energy generated from waste.

Revised requirements and guidance

- A company [**shall/should**] quantify and report emissions from the incineration of its waste in category 5 by default
- To avoid double counting, a company [**shall/should**] reduce its reported category 5 emissions by the estimated magnitude of the double count, provided it:
 - Demonstrates that a double count exists; and
 - Quantifies the magnitude of the double count to the minimum quality standard outlined in the following clauses (on next slide)
- For the avoidance of doubt, a company that sends waste to a WTE incineration facility but does not demonstrate a double count exists [**shall/should**] report the emissions from incineration of its waste in full.

F.3 Demonstrating and quantifying a double count between scope 2 and cat 5

- To demonstrate that a double count exists, a reporting company [**shall/should**] show that:
 - i. The WTE facility processing the reporting company's waste operates within the same spatial boundary, as defined in the scope 2 emission factor hierarchy, as the location-based emission factor used by the reporting company for its scope 2 calculation.
- When quantifying the magnitude of the double count with scope 2, a company [**shall/should**] carry out the following steps:
 - i. **Estimate total emissions from the WTE process:** Use emission factor that are representative of waste type, composition, and fossil carbon content of the waste generated by the company
 - ii. **Estimate energy content of the waste:** using heating value measurements for the company's specific waste stream, or representative assumptions based no published heating values for the relevant waste category and composition
 - iii. **Estimate the energy recovered from the WTE process:** using data provided by relevant waste-to-energy facilities, or using representative assumptions on the energy recovery of the relevant facilities corresponding to the form(s) of energy purchased by the reporting company
 - iv. **Convert recovered energy to an emissions figure:** apply an emission factor that, as a minimum, represents the energy intensity of WTE facilities active within the national grid. A company **may** use more spatially granular, or facility-specific emission factors if available
 - v. **Apply the double count adjustment:** the resulting emissions figure from step iv represents the magnitude of the double count that is deductible from category 5.

F3 | Proposed text discussion

- Are there any improvements you would suggest to the revised text?
 - Comments also welcome offline via survey
- **Do you believe these rules, as they are written, can be applied also to category 12 as they stand?**
 - What adjustments do you believe are necessary, if any
 - How would you expect managing reporting period issues? e.g., should the rules be applicable to waste that is incinerated in future years?
- **Do you believe that these rules are applicable to other forms of WTE?**
 - Other forms of WTE incineration (e.g., co-incineration, combustion of refuse-derive fuels?)
 - Gas capture or anaerobic digestors?
 - Double counted emissions are fugitive emissions (combustion of resultant biogas isn't in scope of category 5/12)
 - Double count potentially exists with scope 3 category 3, not scope 2.

Next steps for finalizing F3

- Draft ruleset created in the F3 taskforce are shared as part of the supplementary pre-read for this TWG meeting: [Draft rules for TWG review Accounting for emissions from inc.docx](#)
- The Secretariat will distribute a survey asking:
 - Approval of ruleset with minor edits
 - Approval of ruleset, in general, but with major edits required for individual clauses
 - Disapprove of ruleset.
 - Abstain

(Draft; for discussion)

Category 10/11 package ruleset

Category 10/11 package ruleset

- Draft ruleset updated based on all survey results to date for series E: [Draft rules for TWG review Accounting for emissions from inc.pdf](#)
- TOMRA presented to the TWG on 1st June: [TOMRA Scope3 TWG Insight Note \(003\).pdf](#)
 - *Recording of this session is available on request*
 - *One of the main topics discussed on that presentation was annualized reporting metric. Did anything come up in that presentation that shifted your stance on this topic?*
- Please review this ruleset – there will be another survey, asking:
 - Approval of ruleset with minor edits
 - Approval of ruleset, in general, but with major edits required for individual clauses
 - Disapprove of ruleset.
 - Abstain
- Once completed, we will circulate the template which can be used to gather examples of accounting approaches for different sectors, for completion across August – September.

(Draft; for discussion)

Next Steps

Next steps

- GHG Protocol Secretariat:
 - The Secretariat will circulate a survey on:
 - Definitions for circularity (F1)
 - Allocation approaches for recycled materials (F2)
 - Waste-to-energy draft ruleset (F3)
 - Category 10/11 draft ruleset (series E)
- Next meeting:
 - **Next full TWG: July 23rd Meeting #15 at 9 - 11 AM ET**

Thank you!

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