Template for submitting proposals related to GHG Protocol's *Corporate Standard, Scope 2 Guidance, Scope 3 Standard, Scope 3 Calculation Guidance* and market-based accounting approaches

(Optional)

Proposal instructions

GHG Protocol is conducting four related surveys in reference to the following GHG Protocol standards, guidance and topics:

1. Corporate Accounting and Reporting Standard (Revised Edition, 2004) ("Corporate Standard")
2. Scope 2 Guidance (2015)
3. Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011) ("Scope 3 Standard"), and Technical Guidance for Calculating Scope 3 Emissions, version 1.0, 2013 ("Scope 3 Calculation Guidance")
4. Market-based accounting approaches

The survey is open until March 14, 2023. To fill out the survey, click here.

As part of the survey process, respondents may provide proposals for potential updates, amendments, or additional guidance to the *Corporate Standard, Scope 2 Guidance, Scope 3 Standard, or Scope 3 Calculation Guidance*, by providing the information requested in this template. You may also use this template to provide justification for maintaining a current approach on a given topic.

Submitting proposals is optional. Respondents may submit multiple proposals related to different topics.

Proposals should be as concise as possible while providing the requested information. Submissions that are outside of the template may not be considered. Proposals may be made publicly available.

To submit the proposal, please save this file and fill out the fields below. When you've completed your proposal, please upload the file via this online folder. Please name your file STANDARD_Proposal_AFFILIATION, e.g., *Scope 2_Proposal_WRI*.

Respondent information

Name

Henkel Corporate Scientific Solutions – LCA Consultancy

Organization

Henkel AG & Co. KGaA

Email address

luisa.kuehn@henkel.com

If proposals are made publicly available, would you like your proposal to be made publicly available? Please write either “Yes” (make publicly available) or “No” (do not make publicly available).

Yes

If your proposal is made publicly available, would you like it to be made publicly available with attribution (with your name and organization provided) or anonymous (without any name or organization provided)? Please write either “With attribution” or “Anonymous”.

Yes

Proposal and supporting information

1. **Which standard or guidance does the proposal relate to (Corporate Standard, Scope 2 Guidance, Scope 3 Standard, Scope 3 Calculation Guidance, general/cross-cutting, market-based accounting approaches, or other)? If other, please specify.**

general/cross-cutting

2. What is the GHG accounting and reporting topic the proposal seeks to address?

This second proposal seeks to address the default recommendation of the **cut-off approach for end-of-life allocation** in current GHG-Protocol guidelines and the associated practical limitations & challenges.

The transition to renewable feedstocks in the chemical industry is urgently required to reach a net-zero future in line with 1.5°C targets. The implementation of renewable carbon sources and chemical recycling of those finally leads to a circular usage of renewable carbon as intended by the European Commission.[1][2] The use of renewable carbon and keeping it in a continuous life cycle of capturing/planting – using – recycling – using – recycling-…, instead of just emitting fossil CO_2, must be established. While various studies clearly highlight the positive effects on greenhouse gas emissions (GHG) of this approach[3][4][5], the current corporate greenhouse gas reporting standards by GHG protocol are not designed to reflect circular carbon usage as they were set-up in a linear economy context.

3. What is the potential problem(s) or limitation(s) of the current standard or guidance which necessitates this proposal?

For a successful transition of chemical industry towards a circular economy and in order to achieve the ambitious 2040 European Green Deal's Circular Economy Action Plan targets, the use of advanced recycling technologies such as chemical recycling will play an important role to avoid the incineration or landfilling of difficult to recycle materials.[6] The current end-of-life allocation approach "cut-off", as recommended by the GHG protocol, poses not only a challenge for the usage of renewable carbon feedstocks in a linear approach, but also hinders the industry's transition towards a circular economy.
Recycling processes are processes that derive a secondary material from a waste material, which is further used as energy (energy recovery) or as material for new products (material recycling). Following the waste hierarchy given under the Waste Framework Directive, mechanical material recycling should be favored over chemical material recycling that should be favored over energy recovery.[7] This hierarchy is currently not reflected in GHG-Accounting due to the given situation:
In a **cut-off approach** according to the recycled content method, the waste input of the recycling process shall be treated as free of "burdens" and "credits". In other words, in the cut-off approach, emissions of recycling process are assigned to the recycled materials. Burdens or credits associated with **waste material** from previous- or subsequent life cycles are not considered, i.e., they are "cut-off":

[1] European Commission (2021)
[2] Agora Energiewende und Wuppertal Institut (2019)
[3] Gabrielli, P.; Gazzani, M. and Mazzotti, M. (2020)
[4] Tan, C. & Vegelan, H. (2022)
[5] McKinsey & Company (2021)
[6] European Commission (2022)
[7] European Commission (2008)

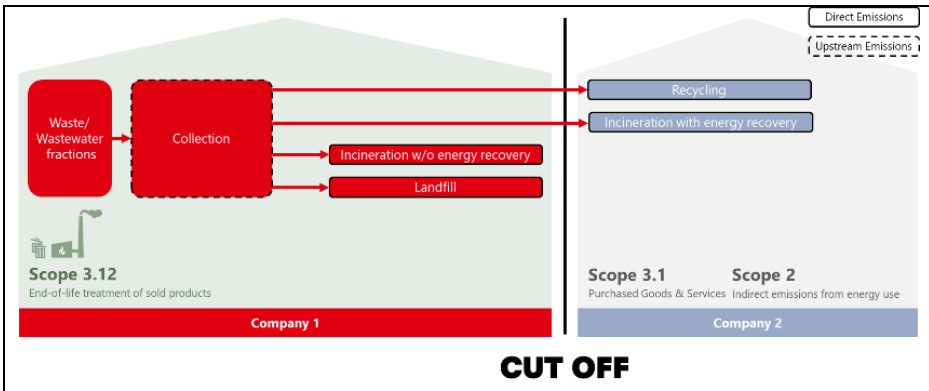
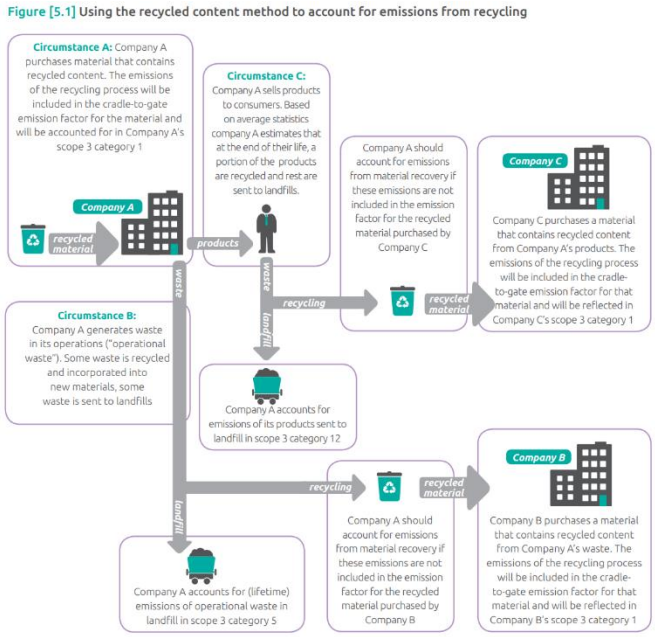


Figure 1: The rationale of "cut-off"

As shown in Figure 1, the type of waste usage – be it energy recovery, material recycling or re-use- does not play a role for the Scope 3.12 emissions of company 1 under "cut-off" if the waste is somehow further utilized. **Hence, from an emission reporting perspective, there is no need for company 1 to actively push towards material recycling and closed carbon cycles, but rather stay with energy recovery.**
In a "cut-off" system, the GHG emissions of preparatory steps need to be considered in the product system, producing the secondary product from the waste (company 2 of figure 7), i.e., sorting, and follow up processes. While mechanical recycling generally only requires minor additional processing steps from dismantling or shredding in Scope 3.1, recycling technologies for wastes, that cannot be mechanically recycled, such as chemical recycling, currently result in high processing emissions. Under the given energy market situation (and the slow decarbonization progress in it), these feedstocks will arrive with a higher footprint than virgin fossil feedstocks and will perform worse in Scope 3.1 emissions of a user. **Hence, there is no pull towards more difficult to recycle materials by the downstream industry.**
As both, the push effect towards more advanced recycling infrastructure coming from company 1, as well as the pull effect coming from company 2 or its subsequent product systems, are missing, the current "cut-off" approach will not lead to a transition towards closed carbon cycles and circular economy. **Recycling hierarchies and the "polluter pays" principle are not reflected** by this approach.

4. Describe the proposed change(s) or additional guidance.

The current Scope 3 technical guidance states that "the recycled content method is recommended for scope 3 inventories (…). However, companies may use other methods if they are more applicable to specific materials in their supply chain".



In figure 5.1 of the "Technical Guidance for Calculating Scope 3 Emissions", GHG protocol makes clear that a waste producer (in figure 5.1 Company A) "should account for emissions from material recovery if these emissions are not included in the emission factor for the recycled material purchased by Company C". Against the above-mentioned rationale, Henkel advocates to use this described case as a general approach, i.e. the application of **"reverse cut-off"** in Scope 3.5 and 3.12. In a **reverse cut-off approach**, GHG emissions of the waste management, be it incineration of a waste or recycling or recovery processes are assigned to the producer of the waste following the "polluter pay principle". The recycled material or recovered energy from waste enters the product system of company 2 burden-free (Figure 2). Burdens associated with the **recycled** material/recovered energy from previous- or subsequent life cycles are not considered, i.e., they are cut off (Figure 2).

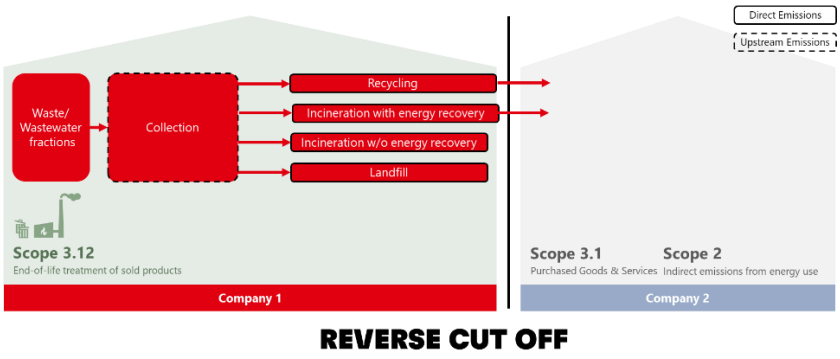


Figure 2: The rationale of "reverse cut-off"

In the reverse cut-off approach, the waste-producing company 1 will have to include emissions from the waste recovery in its Scope 3.5 and 3.12 emissions, creating an incentive for:
a) lowering waste amounts ("Prevention"),
b) improving material recyclability as material recycling is favored over energy recycling in order to avoid accounting of the CO_2-emissions of waste incineration ("Waste hierarchy")
c) actively de-carbonizing energy-intensive recycling processes.
Hence, company 1 will actively push towards material recycling and closing carbon cycles according to waste hierarchies.

As the more difficult to recycle materials products will not carry the high burdens from advanced recycling processes but enter the product system of company 2 burden-free, Scope 3.1 emissions of subsequent users will be lower compared to fossil feedstocks. Thus, **demand for products derived by more difficult to recycle materials** will rise, leading to the desired pull effect.
Both systems are explained in detail and compared to each other in the following table.

	Cut-off approach	Reverse cut-off approach
Approach description	Direct Emissions from waste treatments that produce new products out of the waste (incineration with energy recovery, mechanical & chemical recycling) are allocated to the new products (energy, recycled feedstock) in Scope 3.1	Direct Emissions from ALL waste treatments are allocated to the waste producer in Scope 3.12 (Polluter Pays Principle)
Application in standards	Recommended by GHG-Protocol, WBCSD Pathfinder & REDII (biofuels)	Recommended in EPD Possible alternative option in GHG-Protocol
Benefits	Incentivizes: • Recyclability and "combustibility" of products over combustion without any recycling	Incentivizes: • Use of recycled materials • Waste reduction • Benefits of circular carbon are displayed
Disadvantages	• "Polluter pays" principle ignored • Incentivizes waste incineration with energy recovery → not in accordance with circular carbon cycles and recycling hierarchies (material use = energetic use • Benefits of circular carbon are not displayed	• Secondary material "Energy derived from waste incineration" has very low emissions and comes with the same emissions as renewable energy (e.g., wind energy). • Currently no levers to actively influence end-of-life scenario.

Table 1: Summary: benefits and disadvantages of end-of-life allocation approaches.

However, reverse cut-off puts even more emphasis on the existing challenge for many companies in the manufacturing sector and especially raw materials: The possibility to control and actively influence Scope 3.12 end-of-life treatment of products at their end-of-life. Other than increasing recyclability of products, the direct control over end-of-life treatment is often limited due to the long and complex supply chains and large variety of applications. Hence, manufacturers will depend on local municipal waste treatment systems and thus, Scope 3.12 will be determined by local waste statistics and on general infrastructural developments as a basis. In order to actively influence a circular economy and increased recycling, the reverse cut-off at Scope 3.12 end of life should include flexibilities regarding possible mechanisms.

5. Please explain how the proposal aligns with the GHG Protocol decision-making criteria and hierarchy (A, B, C, D below), while providing justification/evidence where possible.

A. GHG Protocol accounting and reporting approaches shall meet the GHG Protocol accounting and reporting principles (see Annex for definitions):

- Accuracy, Completeness, Consistency, Relevance, Transparency

- Additional principles for land sector activities and CO_2 removals: Conservativeness, Permanence, and Comparability if relevant

As the option of reverse Cut-Off accounting would already be possible under existing GHG-Protocol, the above-mentioned points are equally met by both the Cut-off or reverse accounting approach. Furthermore, other well-known product related carbon accounting standards (e.g., EPD) already recommend the reverse Cut-Off approach. However, from the Henkel point of view, the reverse Cut-off is more comprehensive as each company needs to account for the emissions it is responsible ("polluter pay principle").

B. GHG Protocol accounting and reporting approaches shall align with the latest climate science and global climate goals (i.e., keeping global warming below 1.5°C). To support this objective (non-exhaustive list):

- Direct emissions reported in a company's inventory should correspond to emissions to the atmosphere. Reductions in direct emissions reported in a company's inventory should correspond to reductions in emissions to the atmosphere.
- Indirect emissions reported in a company's inventory should in the aggregate correspond to emissions to the atmosphere. Reductions in indirect emissions reported in a company's inventory should in the aggregate correspond to reductions in emissions to the atmosphere.

The indirect emissions reported in a company's inventory would even more correspond to emissions to the atmosphere, as all end-of-life emissions would be covered within the boundaries of the reporting company that is generating waste in operations or in the End-of-Life of sold products. Same applies for reductions.

C. GHG Protocol accounting frameworks should support ambitious climate goals and actions in the private and public sector.

- Would this proposal enable organizations to pursue more effective GHG mitigation/decarbonization efforts as compared to the existing standards and guidance? If so, how?
- Would this proposal better inform decision making by reporting organizations and their stakeholders (e.g. related to climate-related financial risks and other relevant information associated with GHG emissions reporting)?

In the reverse cut-off approach, the company 1 will have to include emission from the waste recovery in its Scope 3.5 and 3.12 emissions. Thus, efforts are set in a reverse cut-off to:
a) lower waste amounts ("Prevention"),
b) improve material recyclability as material recycling is favored over energy recycling in order to avoid accounting of the CO_2-emissions of waste incineration ("Waste hierarchy"); and
c) actively de-carbonize energy-intensive recycling processes.
Hence, company 1 will actively push towards material recycling and closed carbon cycles.
As the recycled products will not carry the burdens from recycling processes but enter the product system of company 2 burden-free, Scope 3.1 emissions of subsequent users will be lower compared to fossil feedstocks. Thus, **demand for feedstock from difficult to recycled products** will rise, leading to the **desired pull effect**.

D. GHG Protocol accounting frameworks which meet the above criteria should be feasible. (For aspects of accounting frameworks that meet the above criteria but are difficult to implement, GHG Protocol should provide additional guidance and tools to support implementation.)

- What specific information, data or calculation methods are required to implement this proposal (e.g., in the case of scope 2, data granularity, grid data, consumption data, emission information, etc.)? Would new data/methods be needed? Are current data/methods available? How would this be implemented in practice?
- Would this proposal accommodate and be accessible to all organizations globally who seek to account for and report their GHG emissions? Are there potential challenges which would need to be further addressed to implement this proposal globally? What would be the potential solutions?

Additional guidance on modelling the product fate at End-of-Life might be needed for companies in the supply chain that are far away from the final end-consumer product. For them the actual product use at the end of the supply chain might be hard to track – thus options for fact-based reliable estimations need to be provided. See point below.

6. Consistent with the hierarchy provided above, are there potential drawbacks or challenges to adopting this proposal? If so, what are they?

None.

7. Would the proposal improve alignment with other climate disclosure rules, programs and initiatives or lead to lack of alignment? Please describe.

The suggested reverse Cut-Off Approach would establish better alignment with existing EU Waste Framework Directive as it ensures results, that are following the given waste hierarchy, where material recycling should be favored over energy recovery.[8]

8. Please attach or reference supporting evidence, research, analysis, or other information to support the proposal, including any active research or ongoing evaluations. If relevant, please also explain how the effectiveness of the proposal can be evaluated and tracked over time.

European Commission (2008): Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives, Brussels 2008, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008L0098-20180705

[8] European Commission (2008)

European Commission (2021): Communication from the Commission to the European Parliament and the Council, Sustainable Carbon Cycles

European Commission (2022): Packaging and packaging waste regulation, Draft legislative proposal on 30th November 2022, Brussels, 2022

Agora Energiewende und Wuppertal Institut (2019): Klimaneutrale Industrie: Schlüsseltechnologien und Politikoptionen für Stahl, Chemie und Zement. Berlin, November 2019.

Gabrielli, P.; Gazzani, M. and Mazzotti, M. (2020): The Role of Carbon Capture and Utilization, Carbon Capture and Storage, and Biomass to Enable a Net-Zero-CO2 Emissions Chemical Industry, Industrial & Engineering Chemistry Research 2020 59 (15), 7033-7045, DOI: 10.1021/acs.iecr.9b06579

Tan, C. & Vegelan, H. (2022): The chemical industry can wean itself off fossil raw materials. Here's how,WEF, 2022 https://www.weforum.org/agenda/2022/11/chemical-industry-fossil-fuels-decarbonization/

McKinsey & Company (2021): Net-Zero Deutschland – Chancen und Herausforderungen auf dem Weg zur Klimaneutralität bis 2045.

9. If applicable, describe the process or stakeholders/groups consulted as part of developing this proposal.

Reflected & discussed our proposal with various value chain partners and in industry initiatives.

10. If applicable, provide any additional information not covered in the questions above.

N/A

Proposal Annex

GHG Protocol Decision-Making Criteria and Hierarchy

A. First, GHG Protocol accounting and reporting approaches shall meet the GHG Protocol accounting and reporting principles:

- Accuracy, Completeness, Consistency, Relevance, Transparency
- Additional principles for land sector activities and CO_2 removals: Conservativeness, Permanence, and Comparability if relevant
- (See table below for definitions)

B. Second, GHG Protocol accounting and reporting approaches shall align with the latest climate science and global climate goals (i.e., keeping global warming below 1.5°C). To support this objective (non-exhaustive list):

- Direct emissions reported in a company's inventory should correspond to emissions to the atmosphere. Reductions in direct emissions reported in a company's inventory should correspond to reductions in emissions to the atmosphere.
- Indirect emissions reported in a company's inventory should in the aggregate correspond to emissions to the atmosphere. Reductions in indirect emissions reported in a company's inventory should in the aggregate correspond to reductions in emissions to the atmosphere.

C. Third, GHG Protocol accounting frameworks should support ambitious climate goals and actions in the private and public sector:

- Accounting framework/s would enable organizations to pursue more effective GHG mitigation/decarbonization efforts as compared to the existing standards and guidance
- Accounting framework/s would better inform decision making by reporting organizations and their stakeholders (e.g. related to climate-related financial risks and other relevant information associated with GHG emissions reporting)

D. Fourth, GHG Protocol accounting frameworks which meet the above criteria should be feasible to implement for the users of the frameworks.

- For aspects of accounting frameworks that meet the above criteria but are difficult to implement, GHG Protocol should provide additional guidance and tools to support implementation.

GHG Protocol Accounting and Reporting Principles

Principle	Definition
Accuracy	Ensure that the quantification of GHG emissions (and removals, if applicable) is systematically neither over nor under actual emissions (and removals, if applicable), and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.
Completeness	Account for and report on all GHG emissions (and removals, if applicable) from sources, sinks, and activities within the inventory boundary. Disclose and justify any specific exclusions.

Consistency	Use consistent methodologies to allow for meaningful performance tracking of emissions (and removals, if applicable) over time and between companies. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.
Relevance	Ensure the GHG inventory appropriately reflects the GHG emissions (and removals, if applicable) of the company and serves the decision-making needs of users – both internal and external to the company.
Transparency	Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.
Conservativeness (Land Sector and Removals Guidance)	Use conservative assumptions, values, and procedures when uncertainty is high. Conservative values and assumptions are those that are more likely to overestimate GHG emissions and underestimate removals, rather than underestimate emissions and overestimate removals.
Permanence (Land Sector and Removals Guidance)	Ensure mechanisms are in place to monitor the continued storage of reported removals, account for reversals, and report emissions from associated carbon pools.
Comparability (optional) (Land Sector and Removals Guidance)	Apply common methodologies, data sources, assumptions, and reporting formats such that the reported GHG inventories from multiple companies can be compared.