



BEYOND GWP100

Accounting and Claims
for Short-Lived Climate Pollutants

APPENDIX I: CASCADE RECOMMENDATIONS ONLY
January 2026

CASCADE RECOMMENDATIONS

FOR SLCP ACCOUNTING IN A VOLUNTARY MARKET CONTEXT

At Climate Week NYC in September 2025, Cascade Climate hosted a workshop convening key stakeholders across academia, civil society, and the private sector to discuss how to ensure consistent and rigorous accounting and claims-making for both short-lived and long-lived mitigation activities, particularly within the corporate net-zero framework. This document synthesizes the major perspectives and recommendations that emerged from that workshop.

Cascade Climate has developed the following recommendations regarding the accounting of short-lived climate pollutants within **corporate greenhouse gas accounting and voluntary carbon market contexts**. These recommendations reflect Cascade Climate's synthesis and interpretation of workshop insights — they do not necessarily represent the views of individual participants or their organizations.

The recommendations are intended for corporate purchasers of short-lived climate pollutant reduction credits, and should not be directly applied to compliance markets or regulatory policy frameworks. Nonetheless, we recognize that voluntary market rulesets can be seen as test beds for future policies and industry standards. Further discussion on how voluntary climate finance could connect to policy development can be found in Cascade's writings [here](#).

For Cascade, our overarching goal is to enable greater voluntary climate finance directed towards mitigation approaches where incentives are currently lacking; climate impacts are measurable, verifiable, and additional; and strong guardrails can be put in place to prevent perverse or unintended outcomes.

Should corporate emissions reporting account for CO₂ and non-CO₂ emissions separately?

Yes, where disaggregated data are available. Despite the predominant use of GWP100 as a simplified equivalency metric for greenhouse gas reporting, we encourage corporate sustainability reports to disaggregate emissions by individual pollutant, as well as to report aggregated emissions [1]. Moving toward pollutant-level disclosures allows for a more accurate assessment of the atmospheric impacts of the emissions and mitigation actions across different timescales.

We recognize that pollutant-level reporting is generally more feasible for Scope 1 and Scope 2 emissions, but presents greater challenges for Scope 3. Given the limited direct monitoring of Scope 3 emissions for most companies, it is important to acknowledge the potential for false precision and to transparently communicate the assumptions and the inherent uncertainties

[1] In addition to emitting climate forcers with vastly different atmospheric lifetimes, human activities also typically emit a mix of cooling and warming agents, and reactive gases whose chemical reactions in the atmosphere lead to the formation or destruction of greenhouse gases (such as carbon monoxide and hydrogen). In order to know the true climate impact of any activity, it is important to account for all climate-relevant species — and as such, we should ideally move towards improved tracking and reporting of co-emitted cooling emissions over time (Buma et al. 2025).

underlying Scope 3 estimates.

Should companies and voluntary market participants consider transitioning to accounting approaches that better value near-term warming?

Yes. We encourage companies and voluntary market participants to experiment with accounting approaches beyond GWP100 as a complement — not a replacement — to conventional GWP100-based methods. While GWP100 has served as the backbone for comparability across pollutants and consistency in inventory reporting, relying exclusively on it for target setting, action planning, and accountability tracking can obscure the climate significance of near-term warming. A substantial body of literature indicates that frameworks relying solely on 100-year equivalencies undervalue the atmospheric benefits of mitigation targeting SLCPs (Miller et al. 2024).

That said, while alternatives have been proposed for decades, non-GWP100-based accounting approaches remain in early stages of methodological development and institutional acceptance. They should be introduced thoughtfully and transparently — ideally through pilots that test whether such approaches genuinely enhance climate ambition and improve outcome alignment across time horizons relative to a GWP100-based framework.

We encourage companies and voluntary market participants to lead these science-based pilot efforts. Early demonstrations can help establish methodological credibility, demonstrate practical feasibility, and build the familiarity and confidence needed to enable eventual integration into corporate disclosure standards and compliance frameworks.

Should corporate purchasers be allowed to continue compensating for residual CO₂ emissions with short-lived climate pollutant mitigation actions?

Yes — provided robust guardrails are in place. At Cascade Climate, we view the voluntary carbon market (VCM) as a vital component of the climate-finance toolkit. It enables the mobilization of mitigation actions that are not yet embedded in regulations, national policies, or industry baseline commitments. It also allows companies — once their Scope 1 and Scope 2 emissions are credibly and comprehensively addressed — to extend their impact beyond operational boundaries and to contribute to broader system-level climate gains.

Eligibility restrictions that are overly narrow — such as blanket exclusions of certain project types — risk dampening innovation, dissuading participation, and limiting the market's capacity to channel capital at scale. A well-designed market should uphold environmental integrity while maintaining sufficient flexibility to accommodate a diverse portfolio of project types capable of delivering measurable and verifiable climate impact. For this argument to hold, it is crucial to design accounting systems that are transparent about not only the magnitude, but also the time horizon of project claims. Two time dimensions matter especially:

- (1) The duration of atmospheric impact — e.g., the persistence of the climate benefit from SLCP mitigation activities, particularly when used to compensate for residual CO₂ emissions, and
- (2) The duration where additionality holds — e.g., the period during which the mitigation activity remains genuinely “above and beyond” the regulatory or policy baseline, before that baseline catches up and the activity becomes policy-driven rather than voluntary.

If compensation of residual CO₂ emissions with short-lived climate pollutant reductions were to continue, how can equivalency be established?

There is no scientifically “correct” equivalency metric. Any equivalency metric you choose inherently introduces subjectivity and tradeoffs between different climate priorities, and we know that the current impact measurement system overemphasizes long-term impacts at the expense of short-term impacts.

Ideally, we should be working toward a system of impact measurement that accurately reflects the effects an intervention has on the climate, the duration of that impact, and when that impact occurs. It is critical that the field moves towards metrics and accounting approaches that encompass a broader range of climate impacts, even if GWP100 equivalency approaches cannot be replaced today — which means providing space for experimentation and maturation of more novel approaches that can eventually be integrated into market standards.

The status quo of GWP100 equivalency has historically provided a mechanism to convert reductions in short-lived climate pollutants into CO₂-equivalent credits within corporate net-zero strategies — but this approach will be insufficient to meet both near-term warming and long-term climate stabilization goals. **As such, companies should strive to go above and beyond this static equivalency by embedding short-lived climate pollutant mitigations within a climate strategy that more accurately reflects atmospheric impacts over time. For example, companies could:**

- Match short-lived climate pollutant reduction credits (e.g., methane, HFCs) against their own short-lived emissions, thereby maintaining consistency in pollutant-type matching, or
- Commit to progressive transition, gradually replacing short-lived climate pollutant credits with durable carbon removals, so that, over time, the aggregate impact of the credit portfolio more closely aligns with the long-lived greenhouse gas emissions being neutralized.

In effect, the second approach aims to balance net radiative forcing impacts from both short- and long-lived climate pollutants — rather than simply producing a “net-zero CO₂-equivalent” number based on GWP100 alone.

We note that the perspectives of workshop participants varied widely on this topic, with some

suggesting that today's status quo option is not credible and should be phased out, while others suggested that the current approach is reasonable for the time being. Many agreed that the status quo is critical to maintain until alternative approaches are market-ready to avoid corporates pulling out of their commitments. Participants generally agreed that there are no accounting alternatives available today that are well developed enough, or have the supporting tools required, to be adopted by the majority of companies who want to offset their residual, hard-to-abate CO₂ emissions towards net-zero goals.

From Cascade's perspective, eliminating the status quo approach without market-ready alternatives risks discouraging market participation and reducing voluntary climate ambitions at a time when climate finance options are limited. While many companies are not in a position to go beyond the status quo equivalency approach today, they are the organizations that may eventually adopt — and help to codify within standards—the novel measurement approaches that leading companies pilot and mature. Even if these organizations are not in a position to lead on novel approaches today, they can — and should — begin to extend their analysis beyond GWP100 to obtain a more comprehensive understanding of the different climate impacts their decisions and chosen mitigation approaches may have.

Conclusion

Taken together, these recommendations are meant to make corporate and voluntary climate action on short-lived climate pollutants both more ambitious and more practically grounded. By encouraging pollutant-level transparency, thoughtful experimentation with metrics and accounting frameworks beyond GWP100, and compensation practices that reflect the real timing of climate impacts, companies can play a meaningful role in closing today's incentive gaps.

At Cascade Climate, we see the voluntary market as a space to learn-by-doing — to test what works, to course-correct with evidence, and to help shape the standards and policies that will ultimately carry these efforts into the mainstream.

Note: The recommendations above are not intended to serve as a replacement or alternative to established accounting standards, frameworks, and guidance, such as the GHG Protocol and Science Based Targets Initiative.

REFERENCES

Note: The full reference list can be found in the full report.

Buma, B., Ocko, I., Walkowiak, B., et al. (2025). Considering sectoral warming and cooling emissions and their lifetimes can improve climate change mitigation policies. *npj Climate and Atmospheric Science*, 8, Article 287. <https://doi.org/10.1038/s41612-025-01131-8>

Miller, J. S., Dreyfus, G., Daniel, J. S., Willis, S. and Xu, Y. (2024). 'Beyond the single-basket mindset: a multi-gas approach to better constrain overshoot in near term warming', *Environmental Research Letters*, 19, 094011. <https://iopscience.iop.org/article/10.1088/1748-9326/ad6461>