EXPONENTIAL ROADMAP INITIATIVE

Views on GHG Protocol Scope 2 Updates

Summary of stakeholder interviews

Introduction

The Greenhouse Gas Protocol (GHGP) suite of standards for corporate GHG emission accounting and reporting is currently undergoing extensive revision. The most recent consultation draft on scope 2 (purchased energy[1]) proposed a shift in how companies report on their energy-related emissions.

The proposals[2] include changes to the quality criteria for contractual instruments when using the market-based accounting method. The key changes include:

- Temporal correlation – all contractual instruments **shall be matched by the hour** with electricity consumption
- Market boundaries and deliverability – all instruments **shall be sourced from generation which is deemed deliverable** to the consuming load.

The changes are intended to make scope 2 accounting more accurate, transparent, and reflective of the energy market reality. However, there are questions as to whether this new reporting approach will accelerate the transition to renewable electricity generation or not. More stringent requirements will create increased administrative burdens for companies, as organisations will be expected to collect more precise data regarding their electricity consumption by hour and region, and there are technical concerns about the feasibility of implementation, especially for organisations with operations in less developed countries.

There are also concerns that hourly matching requirements applied on the individual company level would work against the urgency of the climate crisis. It would cause companies to spend their capital on improvements that align with their individual load profiles, but are of lower benefit to the wider grid's demand. This could divert resources away from what the grid needs most to decarbonise. All of this would contribute to price increases for contractual instruments, and there are concerns about willingness to pay if this happens.

In light of this, the Exponential Roadmap Initiative has conducted a series of interviews[3] with member companies and partners to understand current perspectives on the proposed changes to the GHGP Scope 2 Standard, and its implications for renewable energy infrastructure and scaling. The focus is on the likely real-world impacts of the proposed changes. The results are presented in this summary paper.

[1] The proposal covers only requirements for purchased electricity. Heat and other energy sources are excluded.
[2] GHG Protocol (2025) Public Consultation – Scope 2.
[3] Pragmatic Carbon conducted a similar analysis to the one presented in this paper.

Ways forward

The current discourse around the proposed changes is highly polarised. While some are in favour of hourly matching and closer geographical matching, and see these as a necessary way forward[4], others offer only conditional support or would like all the proposals scrapped. ERI proposes a few ways to help move towards consensus in the broader community:

- Implementation logic – temporal:
  - **Remove the requirement** of hourly matching by changing from "shall" to "may"
  - **Implement changes incrementally** with more time between the voluntary and mandatory phases. The timeline for implementation should consider relevant update periods in related standards (eg SBTi)
  - **Apply the requirements** to organisations for which **scope 2 emissions are material** first, with incremental inclusion of other organisations
  - **Allow reporting based on the current MBM rules in parallel to new rules**, so organisations get recognition for their past actions.

- Implementation logic – geographical:
  - **Apply geographical matching requirement** only down to the level of **RE100 boundaries**, avoiding hyper-local focus
  - **Apply geographical matching requirement** only to operations in regions where **the level of renewable energy in the grid is lower** than a specific threshold, eg < x% of the grid average mix; For regions with higher level of renewable energy penetration, allow the purchase of the certificates outside of the operating region.

- Exceptions:
  - **Adopt the "grandfathering" clause** for previous and ongoing PPA agreements
  - **Expand the current list of exceptions** to certain geographic regions with lower renewable energy penetration in their base supply.[5]

- Alternative approaches:
  - **Move away from the MBM methodology in a single GHG inventory statement** by introducing a separate impact statement disclosure and consequential accounting.

- Advocacy and influence points:
  - Participate in the discussions through alternative channels, like ISO (ISO/TC 207/SC 7 Working Group 4 on ISO 14064-1) or industry consortia, or through evidence-based discourse in the form of open letters and joint publications
  - Advocate for the scope 2 proposals to be considered further within the context of the revision of the complete GHGP standard suite, rather than separate revision of scope 2 requirements
  - Identify and communicate the perceived gaps in the draft standard, which need to be closed before the final standard is published (eg coverage of other geographies, or expansion of the grandfathering clause onto geographical matching).

[4] For example, Aurora Energy Research, Princeton, TU Berlin, IEA, IRENA and S&P Global.
[5] This point is linked to the second point in "Implementation logic – geographical".

Summary of views

The following summary is based on 15 individual interviews with various stakeholders and one roundtable discussion with 5 large multinational organisations. The following stakeholder groups were addressed:

- Corporate buyers – 6 interviews, 1 roundtable discussion
- Energy providers – 4 interviews
- Academia & institutions – 3 interviews
- Other stakeholders – asset management (1), carbon accounting organisations (1)

The key points from the discussions are summarised by the stakeholder group in Tables 1 and 2.[6]

***Table 1**. Summary of concerns about the proposed changes to GHGP Scope 2 Guidance, aggregated by stakeholder groups.*

Stakeholder group	Concerns
Corporate buyers	**Near-term feasibility:** in the near-term, due to higher data requirements posed by hourly matching, implementation would be challenging in many regions and for most organisations due to technological and administrative barriers. **Stifling investments:** the proposal might slow the rate of investments in new renewable infrastructure, affecting especially investments in intermittent sources (eg solar and wind), potentially limiting PPA eligibility terms to 10 years, increasing the costs and availability of new agreements. Predictable renewable energy generation sources, and existing generation infrastructure could be favoured, removing additionality. **Reporting burden:** the proposals introduce a higher reporting burden on organisations, due to the increased requirements for data and the administrative complexity of hourly matching. At the same time, the proposed data hierarchy allows the use of estimates, which would result in the same level of accuracy as under the current requirements.
Energy providers	**Geography matters:** some regions might be prepared for the challenges that hourly matching brings, while others are not.
Academia & institutions	**Misdirection of funds:** increased reporting burden will redirect investment towards administrative overheads instead of investments in meaningful action. **Additionality:** without additionality requirements, the introduction of hourly- and location-matching could result in attribute shuffling within

[6] ERI recognises that the sample is limited and might not represent the complete breadth of opinion and views on the outlined topic. For a more complete picture, readers can refer to resources offered by Pragmatic Carbon, Aurora Energy Research, Princeton, TU Berlin, and IEA. A full list of evidence in support of hourly matching can be found here.

	the existing generation and not lead to new capacity building. **Concerns over MBM**: academics question whether MBM could ever support real-world impact and the integrity of claims based on market instruments.
Other stakeholders	**Grid maturity dependency:** the proposed changes would be more beneficial in areas with high renewable energy penetration by encouraging new investments in storage. In areas with low maturity, it might have an opposite effect. **SMEs:** due to their size, SMEs have limited resources. Any additional administrative burden will take resources from decarbonisation actions. The provisions in the proposal aren't necessarily sufficient for SMEs.

***Table 2**. Summary of positive outlooks on the proposed changes to GHGP Scope 2 Guidance aggregated by the stakeholder group.*

Stakeholder group	Positive outlooks
Corporate buyers	**Long-term feasibility:** some corporates believe that the proposal for hourly and location matching is a correct step forward for the GHGP in the long-term. **Portfolio of energy generation solutions:** the proposed changes could increase the number of different renewable generation types that corporations invest in.
Energy providers and asset management	**Investments in storage:** hourly matching could lead to investments in energy storage solutions, which contribute to supply stability. **Market instrument scepticism:** the current price of renewable energy certificates is very low, but the changes could shift the market enough to stimulate the growth of renewable generation.
Academia & institutions	**Conditional acceptance:** academia could accept hourly and location matching if coupled with an additionality requirement (also referred to as "incrementality")[7].

As evident from Tables 1 and 2, there is a range of concerns among different stakeholder groups about the proposals, as well as some appreciation for the potential benefits.

[7] Brander, M. (2025): Proposed GHG protocol revisions for scope 2 market-based accounting still create false value chain claims. https://doi.org/10.1080/17583004.2025.2602.998

Discussion

The majority of corporate buyers interviewed are in favour of the voluntary or incremental introduction of the hourly matching requirement. The current GHGP draft, granted with provisions and exceptions, lists the hourly matching as a “shall”, which means it would become a requirement for all eligible organisations to follow.

During the interviews, a few concerns were raised regarding mandatory implementation from the very beginning. While the majority in the corporate buyers group acknowledge that hourly- and location-matching are a significant step forward in the long-term perspective, in the near-term, it can be detrimental to scaling renewable electricity needed to achieve targets and have significant technical difficulties during mandatory implementation within the outlined timeframe of GHGP.

Hourly matching requires more data on electricity consumption than the current practice of collecting information on a monthly, quarterly, or annual basis. On the demand side, this can be solved either by technologies to monitor load, such as smart meters, or by the use of default load curves. On the supply side, the primary electricity sales from the utility companies to consumers can be monitored in short time intervals. However, in markets where monitoring is not so granular today, there will be an administrative cost for setting up the necessary systems, which needs to be funded, eg by increasing certificate prices.

Large corporates operating in regions with high levels of renewables in the grid will be able to adapt to new changes over time, while smaller companies, or those operating in regions where renewable energy is not so readily available, might experience barriers to complying with all the proposals. The draft proposals address feasibility concerns, for instance, with generous consumption thresholds, but companies remain concerned about potential negative near-term impacts.

Another concern for corporate buyers, utility providers and academia is the ability to use existing PPAs for market-based reporting in future.The consultation draft included a proposal for a legacy clause to respect all commitments made prior to the date when the new rules come into effect. This approach would safeguard prior commitments, which is essential to bridge any gap between the financial and sustainability interests within organisations.

For many companies, their market-based reporting is based on PPAs, which, under the proposed new rules, would become more expensive to cover high load hours. Also, the usual time horizon for PPAs is around 15 years, to fit with typical investment periods for renewable energy projects. The new proposals discuss a possibility of a new “vintage” requirement which, if accepted, will impose a 10-year eligibility limit on the energy generation from a single facility for the certificate-based claim, making the PPA investments less attractive for corporate buyers.

The interviews revealed that the prices of renewable energy certificates vary considerably by operating region, according to the level of renewable energy penetration. Electricity is not only consumed by private industry, but also by the public sector and individual households. In regions such as, for example, France or Sweden, the demand for renewable energy certificates is much lower than the supply due to the high level of low-carbon energy in the grid, and this gap is likely to remain. In these cases, the price per certificate is very low today and, even with hourly matching, the prices are unlikely to rise high enough to fund the further scaling of low-carbon electricity infrastructure. In these circumstances, some interviewees suggested that it would be better for

companies to invest in renewable energy certificates in countries which still have fossil-based energy systems.

The scientific and academic community proposes separate reporting on all contractual instrument agreements in intervention accounting statements using consequential accounting methodology. This way, the main GHG inventory would be a representation of the emissions of the reporting companies, while the investments in renewables would be acknowledged and rewarded in a separate impact statement. This could be strengthened by introducing stronger recognition frameworks for action beyond the GHG inventory. The GHGP is currently developing a multi-statement reporting framework, which could have the potential to close this gap when implemented.

Citation

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