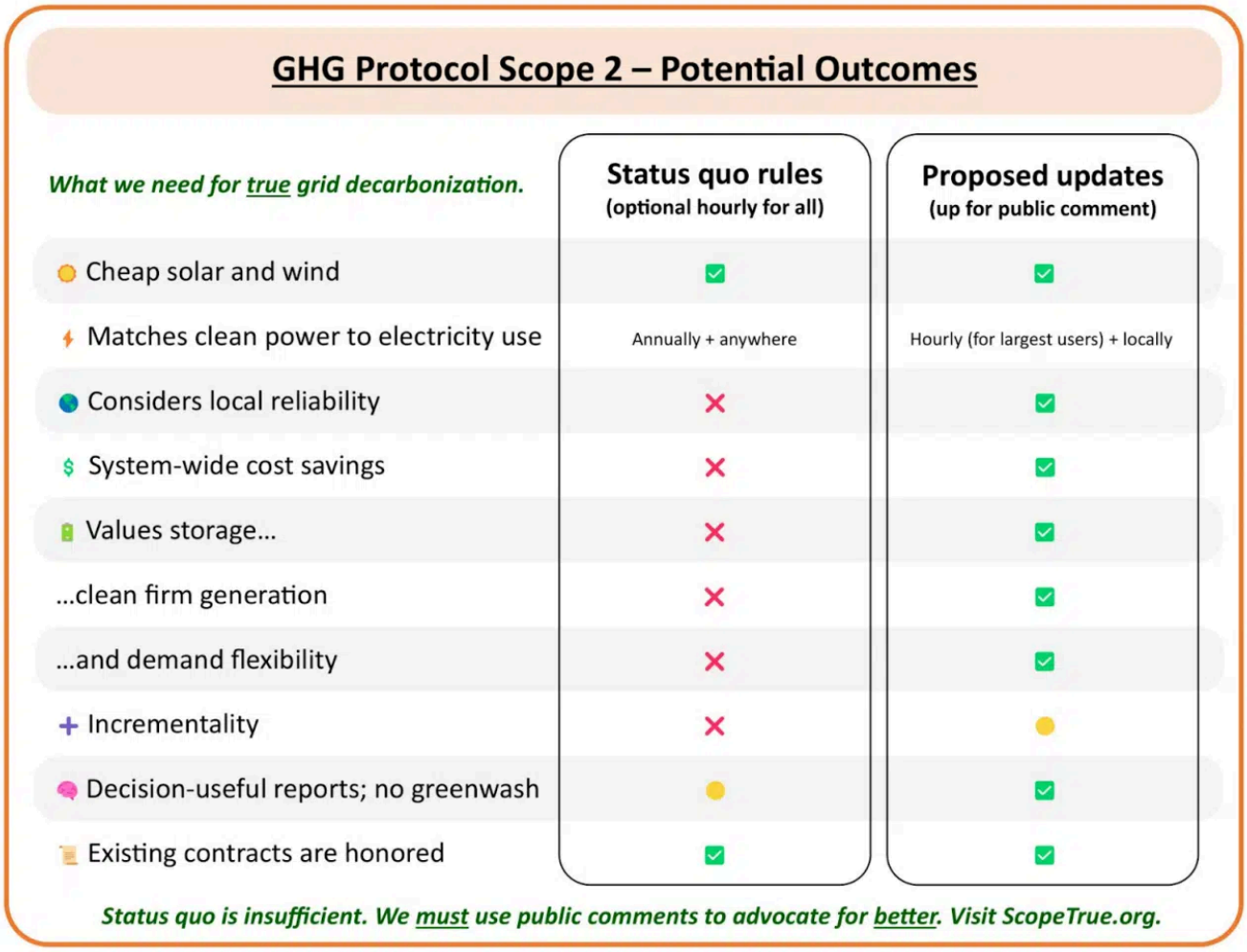
Experts & Leaders Support GHGP Scope 2 Reform

Researchers, grid experts, policymakers, NGOs, and forward-thinking companies all support more robust emissions reporting and clean energy claims. Those opposed to the Greenhouse Gas Protocol (GHGP) updates have more questionable evidence and motivations.

Important and timely updates are currently underway at the GHGP to address known shortcomings in the status quo rules - such as matching clean energy supply to usage across entire years and continents. These updates move towards the “three pillars” that are crucial to impactful and honest clean energy procurement: hourly matching of clean power to load (for large users), smaller “deliverability” boundaries, and Standard Supply Service requirements designed to restrict resource shuffling and encourage new power development.

Many are supportive of this change and/or are at least engaging in a good-faith debate of implementation details. The majority of this memo will highlight quotes from those experts and leaders who are supportive. However, this memo also highlights some of the lower-quality analyses, misleading claims, and influence campaigns driven by those opposed to robust GHGP updates. It is important to contrast the quality and motivations of claims in this debate.

The GHGP seeks to ensure the integrity, impact, and feasibility of its global reporting standards. Proposed updates towards more “granular matching” accomplish these goals.



Peer-reviewed research supports granular matching

Myriad studies from trusted institutions such as Princeton University ZERO Lab, TU Berlin, IEA, EPRI, and others demonstrate the importance of "three-pillar" procurement. Unfortunately, those opposed to proposed GHGP updates have used some of this same research, plus their non-peer-reviewed analyses, to advocate for either "zero pillars" (status quo rules) or something even less robust ("consequential" emissions offsetting).

- Princeton University ZERO Lab's peer-reviewed research (2024):

ZERO LAB
PRINCETON UNIVERSITY

*"...procurement strategies that match participants' demand with carbon-free generation on an **annual basis have minimal impact on long-run system-level CO2 emissions**. Similar outcomes occur when participants calculate their annual emission impacts using short-run marginal emission rates and attempt to offset these with their procurements. In contrast, we find that matching participants' demand on an **hourly basis with carbon-free generation can drive significant reductions in system-level CO2 emissions** while incentivizing **advanced clean firm generation and long-duration storage** technologies that would not otherwise see market uptake."*

- DTU peer-reviewed research echoes Princeton, explaining how to avoid races to the bottom (2024):

DTU Denmark Technical University

*"...**annual volumetric and emissions matching do not lead to significant emission reductions** relative to a counterfactual without a REC market. This is because investments are almost exclusively made in the **cheapest available renewable energy resource**, thereby cannibalising market-driven projects that would also have been built without a REC market. On the other hand, we find that **hourly matching (with PPAs involving local and new RE generators) leads to significant reductions in system emissions**."*

- Pieter Gagnon (CO School of Mines) puts it succinctly in his recent peer-reviewed study (2026):

COLORADO SCHOOL OF MINES

*"...a move to **spatiotemporal accounting can result in more clean electricity** on the US grid, for a given quantity of claims, **relative to the status quo** accounting approaches."*

- EPRI's recent peer-reviewed study shows the importance of strong "three-pillar" procurement (2026):

EPRI
ELECTRIC POWER RESEARCH INSTITUTE

*"Emissions impacts vary widely with program design, where **hourly matching combined with deliverability and incrementality produces meaningful system CO_2 reductions**, while more flexible designs may yield limited consequential abatement despite similar attributed clean electricity claims."*

Detractors have misrepresented this research and rely on less credible sources

- Iegor Riepin (TU Berlin) has publicly called out those misrepresenting his and others' research for the purposes of opposing proposed GHGP updates:

"Strategies based on alternative accounting methodologies, where actors claim to fully offset their impact with new clean electricity producing somewhere else at some other time, are ineffective at reducing system emissions. WattTime's team is selectively interpreting ***research that explicitly supports temporal and geographic granularity*** *while opposing the direction of GHGP's Scope 2 revision."*

- In contrast to the strong peer-reviewed research in respected journals cited above, opponents of GHGP updates rely heavily on analyses from more questionable sources. These include paid consultants and black-box "reviews" by entities that sell data which would be in higher demand under an offsets regime (e.g., WattTime, named in the quote above).

Grid experts and policymakers support granular matching

Time and time again, serious grid experts and policymakers have called for hourly and locational matching when considering updates to clean energy and emissions reporting requirements. These include the EU's new Carbon Border Adjustment Mechanism (CBAM) and multiple examples of clean hydrogen safeguards (e.g., US 45V tax credit requirements). Select quotes from grid experts are highlighted below:

- ENTSO-E, the organization of EU grid operators (2022):

"The current system does not provide sufficient incentives for the development of RES [Renewable Energy Sources] and the ***consumption of green electricity at the right time and in the right geographical location****. Therefore, ENTSO-E sees two major evolutions: 1. The introduction of temporal matching …[and]... 2. The consideration of the available capacity between countries."*

- Monitoring Analytics, the Independent Market Monitor of PJM (2025):

"The market solution is to require data centers to bring their own new generation. This would include an expedited fast track load and generation interconnection process for large new data center loads that ***bring their own new generation with locational and temporal characteristics reasonably matched to their load profile****."*

- NESO, the energy system operator of the UK (2025):

*"****24/7 CFE EACs could also accelerate grid decarbonisation****, by providing time-based signals for the use of CFE and demand side response (DSR) encouraging investment and innovation. [...]* ***Currently storage and DSR are unable to participate in EAC markets****, as the annual granularity does not create an ability to trade these certificates in a useful timeframe."*

- Wilson Ricks (Clean Air Task Force) supports GHGP updates due to clear grid realities (2026):

"Increasingly common claims of ***100% reliance on intermittent wind and solar power are clearly at odds with the physical reality*** *of any company's electricity supply."*

Leading NGOs, environmental groups, and climate champions join the call for change

Trusted organizations on the front lines of environmental protection, clean energy leadership, and responsible investing all support proposed GHGP updates, and many call for even stronger new rules. The status quo (and "consequential" offsetting) is inadequate for high-integrity and high-impact decarbonization claims:

- 40+ NGOs, including Sierra Club, NRDC, Public Citizen, and Union of Concerned Scientists (2026):

SIERRA CLUB

"The status quo rules currently in place are unacceptable. ***There can be no weakening of the Scope 2 proposal as written.*** *Our proposed reinforcement of the incrementality requirement will serve to further strengthen the proposed update."*

- NewClimate Institute along with ECOS, BFF, Carbon Market Watch, and others (2024):

NEW CLIMATE INSTITUTE

*"**Many academics and civil society groups are supporting a shift to more granular renewable electricity accounting**, [...] among others. In contrast, the Emissions First Partnership championed by Amazon and Meta, among others, proposes a loosening of the current rules which we perceive to be more akin to conventional offsetting, with all its limitations."*

- ShareAction letter from 14 investors with over $1.2 trillion in assets under management (2026):

ShareAction»

"Accounting that is more accurately based on grid and power consumption realities would ***substantially improve our ability to assess companies' preparedness for the energy transition****, and the resilience of their electricity procurement strategies. It would also* ***send demand signals and create investment opportunities*** *for the deployment of renewables, storage, and flexibility technologies that will be needed to achieve deep grid decarbonization."*

- Sam Kimmins (Climate Group) on GHGP's timely revisions (2025):

CLIMATE GROUP

"The world has moved on – and the Greenhouse Gas Protocol seems ready to reflect that. ***Those who are learning about and trialling locally sourced hourly carbon-free electricity now will be in the best position*** *once the new guidance is published in 2027. The question for businesses is: will you choose to stand at the sidelines, or at the front of the pack?"*

Forward-thinking companies and procurement experts show this is possible and necessary

Pioneering clean procurements from Google, fleet-level hourly matching by Iron Mountain, and 10+ TWh of other hourly matching case studies demonstrate buy-in from leading companies. In addition, procurement experts are highlighting - and building - the necessary evolution of clean procurement to better matching.

- Google, Unilever, Vodafone, etc. supporting Climate Group's call for REGO reform in the UK (2024):

*"Moving towards 24/7 REGOs would provide powerful pricing signals to the market – with high REGO prices at times when renewable generation is low. This could **encourage businesses to adopt flexible, low carbon solutions (e.g. making use of batteries)** to avoid higher REGO prices – and would act as a spur to greater investment in these critical technologies."*

- Einstein Bros. Bagels has 90% hourly matching from ENGIE covering 25 Texas locations (2025):

*"At Einstein Bros. Bagels, we recognize the importance of sustainable energy solutions, and we're proud to take this **next step** with ENGIE toward a cleaner future. By **integrating 24/7 renewable energy matching** into a number of our Texas locations, we are reinforcing our commitment to responsible energy use and **supporting innovative solutions that drive the industry forward**."*

- Iron Mountain Data Centers in their announcement of 100+ locations doing hourly matching (2023):

*"Conventional renewable power solutions are designed to match a buyer's load annually, without **ensuring that renewable power is available when clients are actually using electricity**. Tracking hourly usage from the generator and comparing it to Iron Mountain's hourly usage demonstrates a future view of how firms can **transition to an improved carbon free energy supply**."*

- Pexapark notes the superior price hedging in its report for Eurelectric (2023):

*"Hedging energy demand with renewable Power Purchase Agreements (PPAs) can be **improved by adopting a more granular approach** to better match supply with the demand profile. [...] **Higher hourly matching provides greater absolute hedging benefits**."*

- LevelTen Energy describes the benefits of its now-running hourly REC auctions in PJM (2025):

*"The price signals generated as part of these auctions will **provide critical price transparency on where and when clean energy is most needed, informing future project development decisions** and incentivizing clean energy investments in the places and times of day where demand is greatest."*

Some organizations are fighting these high-integrity updates, sometimes via associations or coalition efforts:

Amazon and Meta are founding members of the "Emissions First Partnership" (EFP), a collection of organizations advocating for offsets-based "consequential impact" methods. EFP members have also largely supported or at least enabled the retention of flawed status quo rules. Both status quo rules and consequential impact methods make it easier for companies to hide emissions impacts from eye-watering amounts of new gas being built for data centers than updated higher-integrity rules would.

- Matthew Brander (University of Edinburgh) quoted in Bloomberg (2026):

*"**Some people want the rules to be more robust and have more integrity and other people just want the status quo**. The status quo allows companies to claim to have used electricity that is physically impossible they did actually use."*

WattTime, also a member of EFP, has said publicly that these companies, like Meta, are "basically done" cleaning up their electricity emissions and that "it's just nonsense to say that there's an AI emissions crisis." EFP's shadow of influence has been documented and called out:

- NRDC calls out these attempts to corrupt Scope 2 updates (2024):

*"**Some of those global corporate giants are proposing an emissions offsetting approach** that will weaken climate targets and open loopholes that allow them to claim success without delivering more ambitious – yet still attainable – climate outcomes."*

- Financial Times reporting on Amazon's "commercial threats" around GHGP opinions (2025):

*"**Amazon has been accused of pressuring a leading clean energy group** by raising the prospect of withdrawing funding, amid a furious debate over plans that would make it harder for Big Tech 'hyperscalers' to hit their climate targets."*

- InfluenceMap has analyzed EFP's intense lobbying around GHGP updates, including via industry organizations and intentional use of misleading claims (2026):

*"**Much engagement is occurring indirectly** through industry associations such as the **Emission First Partnership** and the **Corporate Energy Buyers Association** (formerly Clean Energy Buyers Association)."*

*"Advocates for more flexible accounting standards have employed disciplined messaging to discount the benefits of granular accounting, often **conflating mandated 24/7 CFE with hourly matching**."*

- Any conflation of hourly *accounting* with "24/7 mandates" is incorrect. It is true that ***100%*** hourly matching would be more expensive, but GHGP is a standards body that ***does not impose any level of matching*** requirements - companies could continue to procure to their level of ambition and willingness to pay, now just with more accurate accounting layered on top. From the IEA (2026):

*"…**portfolios achieving up to 80% hourly matching using wind, solar PV and batteries can be broadly cost-competitive with annual matching portfolios** (IEA, 2025a). While achieving nearly full hourly matching typically involves a cost premium compared with annual PPAs, mainly due to the need to incorporate storage technologies, it **reduces exposure to electricity price volatility** and offers protection for consumers against high market prices."*

The Rapid Debunk – have you heard these?

Is this a 100% hourly "24/7 mandate"?

- *No*. As described above, this is a proposed change to a *voluntary accounting* standard. GHGP is not a target-setting body, and does not require companies to set *any particular targets* for their procurement.

Is this way more expensive or difficult?

- *No*. These claims almost always point to analyses that force a comparison of 100% annual matching to 100% hourly matching, which is indeed more difficult and expensive. However, as the IEA notes above (and here), 80%+ hourly matching is cost-competitive with annual goals. Other experts agree, too.
- Companies can continue to pursue procurement strategies that best suit their organizations, but they would report their market-based inventory emissions based on the updated standard. Existing monthly data can also easily be translated to hourly via profiles - simple, and no new data or contracts needed.
- Updated rules align with the clean power purchases companies already make for better hedging value & firmed clean energy supply. This is being increasingly noted by PPA experts & portfolio managers.

Will everyone have to do hourly accounting?

- *No*. The current proposal indicates that only the largest energy users would be required to do hourly accounting. This size threshold for "large" is under consideration.

Further reading

- "It Can Actually Be Quite Simple" blog and a Scope 2 FAQ from GHGP Working Group Members
- 24/7 In Action - a running list of research, regulations, case studies, etc. for granular matching