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Limitations of Hourly Matching Claims for Scope 2 Reporting

Is hourly matching accounting the future of Scope 2 reporting or a well-intentioned detour?

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We need to move to RE faster

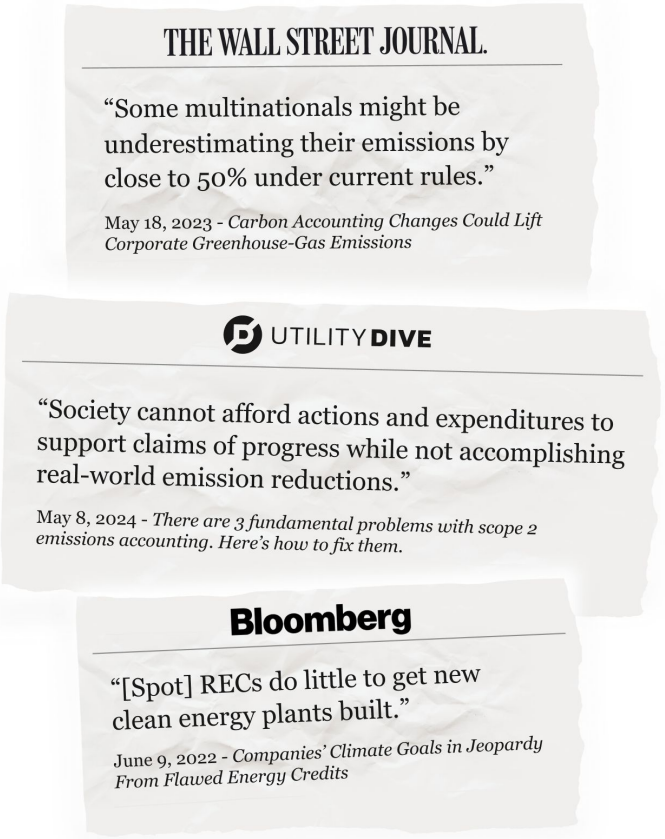
- IEA: world needs **1,200 GW** of new RE capacity every year. (Globally, ~775 GW[1] built last year)
- Governments and utilities can’t do it alone
- Voluntary CFE markets are a critical piece of reaching for these goals
- Voluntary buyers can support renewables in a number of ways including but not limited to signing long-term contracts that are material to successful project financing

[1] ember-energ.org

Where do current Scope 2 guidelines fall short?

Common criticisms focus on issues with:

1. **Inventory accounting** as RECs can represent energy you could not have used.
2. **Emissions accounting** as the tCO_2 emitted from consumption can be quite different from the tCO_2 avoided from the production of a clean MWh within current market boundaries.
3. **Misrepresenting decarbonization** as companies claim to have cut emissions but some projects would have been built anyways.



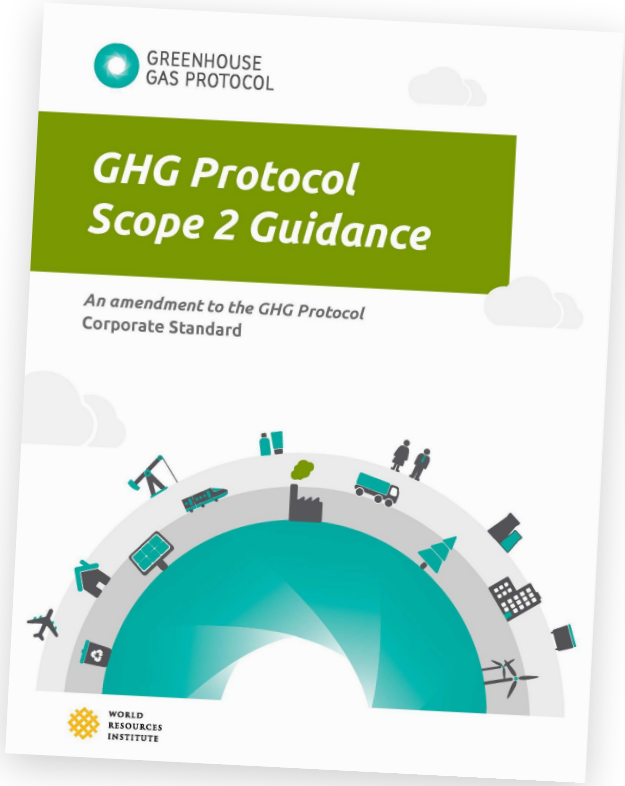
Sources: utilitydive.com, wsj.com, bloomberg.com

Standards are being updated

GHG Protocol is re-writing standards for the first time in 10 years, including the standards for scope 2 that covers emissions from electricity consumption.

The political climate has turned against renewables removing incentives and adding hurdles – it is no longer a given that the next MW of capacity will be renewable

We're on the same team. The stakes are high, urgency is palpable, what we're attempting is hard.



CHALLENGE #1

Is tracing electricity possible?

No single source: Once on the grid, electricity “mixes” and follows physics, not contracts.

No perfect tracing: You can’t know which plant served your meter or the exact emissions of each watt-hour.

What we can do: Estimate the mix of generation serving a location and whether power from a source is even deliverable (congestion often blocks remote renewables). But hourly, congestion-sensitive deliverability screens (e.g, a <10 % LMP-gap test) shrink the “credible” market and does not create a stable boundary.

CHALLENGE #2

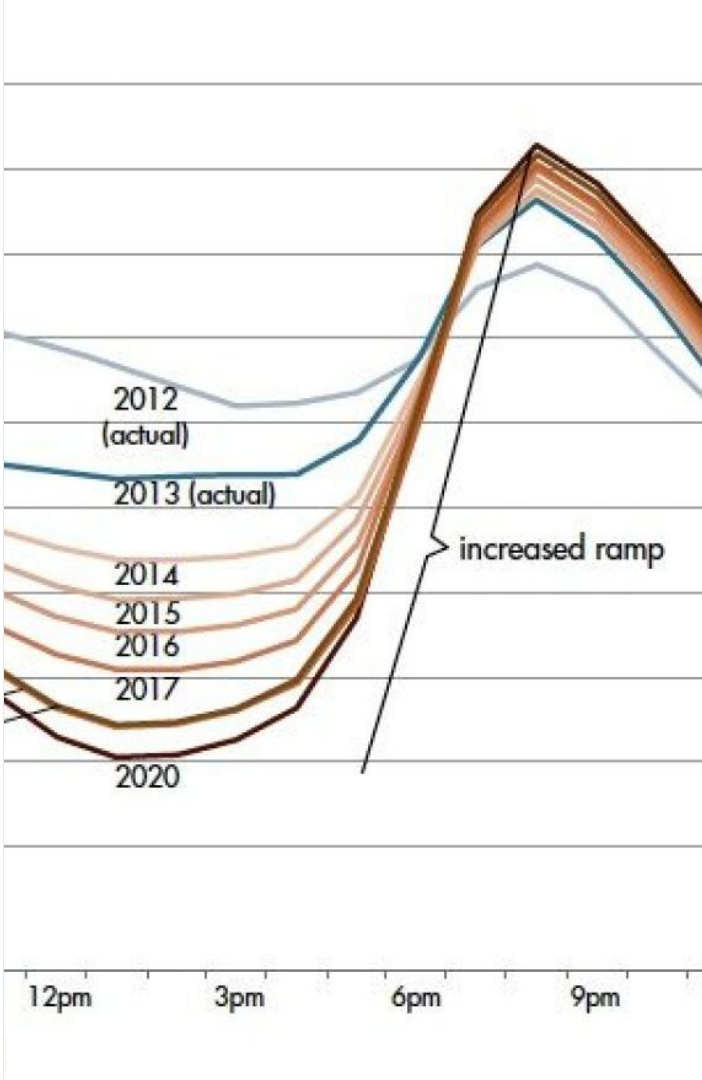
Is new RE capacity priority #1?

For mature grids (> 35% solar+wind), **integration** and smoothing the “duck curve” has become more important than capacity expansion.

Current guidelines which allow annual matching do not incentivize investments in projects or technologies that achieve this end.

How do we make cleaner grids 100% clean and prove renewables can work every hour of the year?

But much of the world is still running on < 15% solar or wind and capacity expansion remains the top priority. Is it premature focusing on making clean grids cleaner when so many grids remain dirty?



CHALLENGE #3

How important is impact in inventory accounting?

GHG Protocol's job is to tally tons, yet everyone wants it to also prove impact and enable marketing claims. We all want corporate action to make an impact but **prioritizing both an accurate inventory and impact is hard.** Accuracy/integrity of emissions or usage claims? How much impact do we give up for greater accuracy?

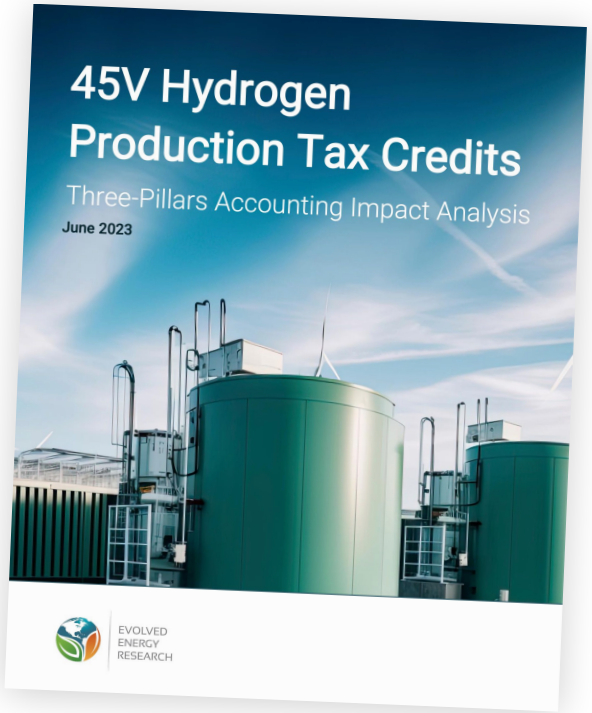
Source: ghgprotocol.org

Where we started

Maybe use the three pillars framework?

Requires:

1. **New supply** *(problem: not compatible with attributional accounting or the role GHGP)*
2. **High % hourly matching** *(problem: setting high targets is costly & is not the role of GHGP)*
3. **Ensured delivery** *(problem: testing for delivery of each Wh not feasible; test for general deliverability instead)*



Where we're at now

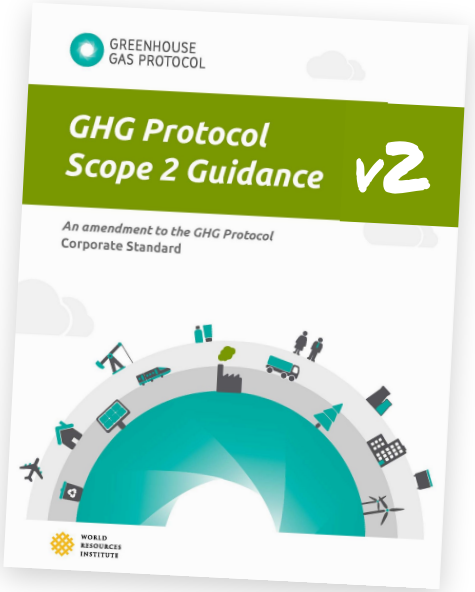
Scope 2 GHG emissions inventory		Outside of inventory (recommend or require)
Location-based	Market-based	Project

Proposal for Scope 2 Standard (inventory)

- **Location-based Method**: Use most precise emission factors accessible as identified by spatial boundaries, temporal granularity and type (i.e., production or consumption).
- **Market-based Method**: Hourly-matching and deliverability for use of contractual instruments

Consideration of a new consequential standard outside of inventory

- "Marginal Emission Impact" metric under consideration to recognize broader grid effects of clean energy procurement and electricity load.
- Reported separately from Scope 1, 2, 3 inventories, designed to inform impact and grid decarbonization, outside of quantifying organizational emissions.



Is hourly matching the same as 24/7 CFE?

They are different but related.

- **Hourly matching is a counting rule**: you may use a zero-emissions factor from a REC only when generation and consumption occur in the same hour and within a deliverable grid zone.
- **24/7 CFE is a target:** achieving 100 % hourly coverage with carbon-free electricity (not just renewables).

Draft Scope 2 update: adopts the rule (hourly matching) but does not mandate the goal (24/7 CFE).

Reality check: firms already boasting “100 % renewable” claims will feel pressure to reach very high hourly scores—so dismissing high-coverage concerns as “optional” misses the likely business response.

What is the promise of hourly matching & 24/7 CFE?

Moving from annual to hourly matching and adopting narrower market boundaries to improve confidence of deliverability could improve both accuracy and impact:

1. **Improve the accuracy of usage claims** by improving (not perfecting) the alignment of purchased RECs with consumed MWh.
2. **Maybe improve impact** by incentivizing dispatchable generation that can generate renewable energy in every region and every hour. *[Also encourages other technologies to qualify as "clean" like hydroelectric or CCS-equipped gas]*
3. **Maybe improve impact** by limiting supply, hour- and region-matched certificates. This should raise the marginal value of eligible RECs, potentially improving project revenue streams provided the rules also prevent cheap legacy or non-additional RECs from qualifying. *[Higher buyer cost doesn't automatically translate into a bankable price signal for projects]*

Requiring hourly matching comes with great risk

- Makes long-term PPAs less attractive/accessible
- Increases costs and complexity
- Emphasizes making clean grids cleaner and removes options to maximize emissions impact
- Optimizing for individual companies, not the grid
- Disincentivizing ambitious targets and action and enables gaming with fractional matching

Requiring tighter hour- and location-matching boosts optics of matching precision to MWh consumed, but at what cost?

Recent events

May 21: ISB issued "strong support for anchoring MBM eligibility around hourly matching and deliverability"

Over the following week, multiple groups expressed concern over this direction:

- CEBA said that “Imposing stricter time and location accounting requirements at the organizational level is **inefficient and infeasible for most buyers** and may curtail ambitious global climate action.”
- BCSE strongly urged the GHG Protocol to “**preserve flexibility** in accounting and procurement options that can be reflected in the scopes, including non-hourly matched unbundled EACs and **long-term PPAs from resources operating in the same national market.**”
- Green Strategies’ survey of energy customers found that nearly **80% of respondents lack confidence** that they would be able to procure time-matched clean electricity within smaller market boundaries.
- Ever.green and GHGMI published a paper on the hidden risks of requiring hourly matching.

On June 25th, the working group voted on multiple questions about the Scope 2 update. **Only 46% of the TWG’s 45-members “fully support with no concerns or changes” the hourly matching requirement provision.** Over a third of the TWG voted ‘no’ to the provision requiring hourly matching of market-based instruments.

The ISB is reviewing the current draft now, which could go out for **public comment as soon as September.**

Q & A

Your audio is muted. Please submit your questions online.