

BCSE Submission to GHG Protocol on Greenhouse Gas Protocol Surveys on Need and Scope for Updates or Additional Guidance

March 14, 2023

The Business Council for Sustainable Energy (BCSE) appreciates the opportunity to share its perspectives during the Greenhouse Gas (GHG) Protocol's open comment period assessing the need, scope, and potential approaches to inform updates or additional guidance related to the GHG Protocol's Corporate Standard, Scope 2 Guidance, Scope 3 Standard, and supporting documents.

The GHG Protocol is a valuable tool for reporting greenhouse gas emissions, and BCSE appreciates WRI's long-standing, open stakeholder process. BCSE advocates for energy and environmental policies that promote markets for clean, efficient, and sustainable energy products and services. Since its founding in 1992, BCSE has focused on policy adoption that will increase the deployment of energy efficiency, natural gas, and renewable energy, as well as energy storage, sustainable transportation, and emerging decarbonization technologies. As a diverse coalition, not all BCSE members take a position or endorse the issues discussed in this submission.

BCSE is pleased to provide responses to several of the questions included in the surveys as well as to offer general feedback on issues under consideration. For more detailed responses to the questions, BCSE would like to acknowledge the submissions made by the American Biogas Council, the American Gas Association, the American Public Gas Association, the Clean Energy Buyers Institute, the Coalition for Renewable Natural Gas, the Downstream Natural Gas Initiative, and the Renewable Thermal Collaborative. BCSE encourages thoughtful consideration of the issues and recommendations included in these submissions.

EACs Provide Market Signals and Investment in Decarbonized Electricity and Energy

The pairing of market-based instruments with market-based accounting creates a strong incentive for energy customers to procure clean electricity and clean fuels, as well as increase investment grid decarbonization.

Market-based instruments for the electricity sector, known as Energy Attribute Certificates (EACs), represent procurement of a megawatt-hour (MWh) through bundled or unbundled products to represent the zero-emission attributes of the MWh.

While the EAC does not represent an emission reduced from the atmosphere instantaneously and is not a carbon offset, it enables emission reductions from the grid by bolstering and accelerating grid decarbonization investments.

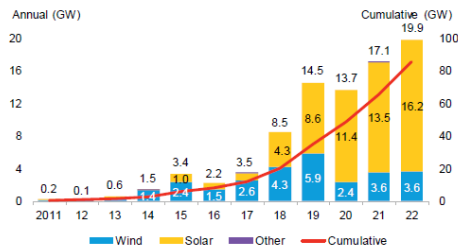
According to the 2023 [Sustainable Energy in America Factbook](#), produced by BloombergNEF in partnership with BCSE, market-based instruments have had a significant impact in the deployment of renewable energy and other clean energy resources.



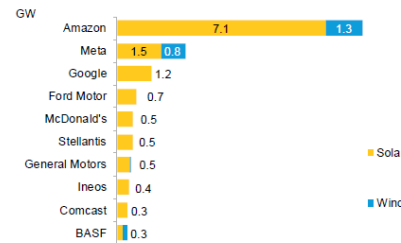
Figure 1 – Published March 1, 2023

Finance: Corporate procurement of clean energy in the US surges to new record

Renewable capacity contracted by corporations, by sector



Largest corporate offtakers, 2022



The 2023 Factbook notes that corporate power purchase agreement (PPA) volumes in the United States reached a record 19.9GW in 2022, easily surpassing the previous record of 17.1GW in 2021. Companies announced 112 individual PPAs, down from 118 the previous year but much greater in average size (178MW compared with 145MW). The overall number of different companies signing PPAs in the United States totaled 49, and global PPA signing is expanding.

Virtual PPAs reached a record 17GW in 2022, crushing the previous record of 12GW in 2021 and making up 85 percent of activity in the United States. Under this structure, the project sells power directly into the wholesale market and captures the spot price at the time. The buyer in turn gets ownership of the certificates from the project and pays a fixed price. BloombergNEF points out that the virtual PPA is becoming more popular both due to the simplicity of signing them – a major positive for new entrants to corporate procurement – but also due to increasing volatility in the U.S. power market.

Further, a significant driver for their growth has been the ability for companies to contract for long-term EACs via their PPA.

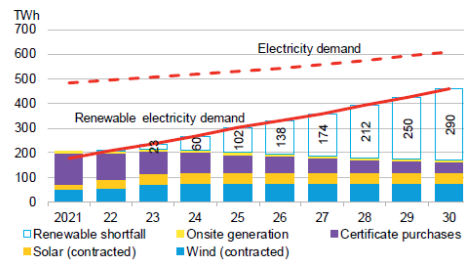
BCSE notes that growth in EAC markets has preceded the development of other market instruments like PPAs. The United States is an example, as PPAs became viable in 2011 after years of growth in the EAC market. In contrast, when Mexico changed its EAC laws in recent years, it led to declines in renewable energy development.



Figure 2 – Published March 1, 2023

Finance: Corporate sustainability targets

Clean electricity supply and demand for RE100 members



US RE100 members in 2022



The *2023 Factbook* also highlights that corporate demand from RE100 members will catalyze significant clean energy build in the United States and globally in the coming years. Fifty-six new companies joined the RE100 in 2022, pledging to fully offset their electricity consumption with clean power at a future date. Ten of the new joiners in 2022 were from the United States, compared with 42 across Asia Pacific. More than 100 companies in the U.S. have now joined the RE100 – more than any other market. These companies collectively consume 165TWh of electricity annually, based on their latest disclosures.

There are now 397 RE100 members globally across 25 markets. As of 2021, these companies collectively offset 41 percent (438TWh) of their electricity demand with renewables, led by certificate purchases (123TWh) and offsite wind (51TWh).

In total, the 397 RE100 members will need to purchase an additional 290TWh of clean electricity in 2030 to meet and maintain their RE100 goals. Meeting this entirely through offsite solar and wind deals would catalyze an estimated 99GW of solar and wind build globally. An estimated 132TWh of the above demand is expected to come from the Americas region – most of this from the United States.

The Role of Market-Based Accounting under the GHG Protocol

The GHG Protocol’s [Scope 2 Guidance](#) introduced an approach for accounting for indirect Scope 2 emissions from purchased electricity, steam, heating, or cooling using two methods: 1) the location-based method, and 2) the market-based method.

BCSE views tremendous potential for accelerating decarbonization investments by defining a clear extension and expansion of market-based instruments and accounting to Scopes 1 and 3. This will provide the greatest potential global market possible for voluntary action that complements policymaker action. Any updates to the GHG Protocol should prioritize an outcome that expands the menu of options for voluntary procurement and that accelerates the decarbonization of the electric grid and wider energy system.



Specifically, per the recommendations proposed by the Clean Energy Buyers Institute (CEBI), the current GHG Protocol framework can be improved to include guidance and/or clarify how to credibly account for: 1) granular time and location data and market instruments (e.g., Granular Certificates as per the EnergyTag Scheme Standard for hourly energy attribute certificates), 2) all CFE generation resources, 3) storage and other complementary technologies (e.g., clean hydrogen), and 4) standard delivery of utility-supplied clean energy. Addressing these points will also help customers better account for the impact of their voluntary procurement.

Clarifying Use of Market-Based Mechanisms and Scope 1 Reporting for Pipeline-Injected Clean Fuels

A primary objective for incorporating market-based accounting in Scope 1 is to provide a mechanism that leads to the formation of a market that creates value, helps hasten and scale investments in decarbonization, and verifies completed energy customer action.

Market-Based Accounting for Biomethane or Renewable Natural Gas

BCSE notes that WRI published guidance in 2015 that allowed for the market-based procurement of pipeline-injected clean fuels in Scope 1:

“If a company has a contractual instrument specifying its gas supply as ‘biogas’ or ‘biogenic,’ the company should report using the market-based method and refer to the Scope 2 Quality Criteria to evaluate whether its gas use should be reported as Scope 1 natural gas using a standard emission factor or as biogenic CO₂ emissions reported separately from the scopes. This evaluation requires some interpretation since the Scope 2 Quality Criteria are specific to electricity and their guidance must be translated for use with gas. For instance, criterion 1 in relation to GHG emission rate claims should be also interpreted to include the emission rate specific to the biogenic fuel origin. The CO₂ emissions will be influenced by the heat rate/efficiency of the equipment used to consume the gas.”

Renewable gases, including renewable natural gas (RNG or biomethane) and clean hydrogen, are an important near-term decarbonization strategy for all applications which currently utilize fossil-derived gaseous fuels. In the long-term, RNG use will be necessary in applications that have certain reliability requirements, those which are not well-suited to electrification, and as a feedstock for chemicals and fuels, including hydrogen and sustainable aviation fuel (SAF).

Further, the ability to reflect market-based procurement of pipeline-injected clean fuels, such as RNG and hydrogen, in Scope 1 reporting is critically important to achieve net zero goals in the most feasible and affordable manner, by using existing gas infrastructure. The [American Gas Association’s \(AGA\) GHG Net Zero Pathways Study](#) prepared by ICF International and released in 2021 demonstrates the value of combining a flexible mix of energy efficiency, hydrogen, RNG



and other renewable energy sources, leak detection and repairs, system upgrades, and innovative technologies to achieve society's net zero goals affordably and reliably.¹

[AGA's Study on the Implications of Residential Electrification](#) shows it would be significantly more expensive to attempt to achieve net zero GHG goals by electrifying all energy needs, including winter heat. Natural gas utilities serve a winter peak demand that is double the summer air conditioning peak demand on the U.S. electric grid.² Converting that heat load to electricity could require significantly expanding the infrastructure for electric power generation, electric long distance transmission lines, and local electric distribution lines in addition to requiring customers to replace appliances and equipment.

There are two primary emission reductions that occur based on the use of common forms of renewable gases. First, all forms of biomethane and clean hydrogen can be used as a substitute where geologic natural gas is currently used by blending these fuels in existing infrastructure, resulting in displacement of geologic CO₂ emissions (with biogenic CO₂ from recent carbon sinks in the case of biomethane or RNG). Furthermore, biomethane, hydrogen, and other fuels created using waste methane serve as a leading strategy for reducing methane emissions. This concept is best substantiated by the U.S. Department of Energy (US DOE) Argonne Laboratory's GREET model, which provides a calculation of avoided methane emissions, leading some production pathways to have highly carbon negative (i.e., better than carbon neutral) greenhouse gas performance (based on methane avoidance). Entities such as the state of California have identified biomethane/RNG production from anaerobic digestion as a primary pathway for reducing waste methane emissions from agriculture, food waste, and other sectors.

According to WRI's analysis,³ existing organic waste streams in the United States could yield energy equivalent to approximately seven percent of present-day natural gas consumption if converted to RNG (or more, depending on assumptions regarding feedstock availability).

AGA's recent analysis indicates RNG potential supply in the United States is much larger. [AGA's Pathways to Net Zero Study](#) shows that there is a significant potential supply of biomethane/RNG in the United States that could produce more than 6,000 trillion Btu by 2050 and could serve all of the existing gas heat load in the U.S.⁴

More needs to be done to encourage the development of this important resource. Biomethane currently makes up less than one percent of U.S. natural gas supply, despite major industry expansion in the last decade following the implementation of regulatory programs which allow procurement via the use of market-based instruments. In the case of biomethane, clean hydrogen, and other related, nascent clean fuel markets, it can be assumed that volumes

¹ See [Pathways to Net-Zero - American Gas Association \(aga.org\)](#), <https://www.aga.org/research-policy/pathways-to-net-zero/>, p. 38.

² See Implications of Residential Electrification, <https://www.aga.org/implications-of-policy-driven-electrification/>

³ See Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers, <https://www.wri.org/research/renewable-natural-gas-climate-strategy-guidance-state-policymakers>

⁴ See [Pathways to Net-Zero - American Gas Association \(aga.org\)](#), <https://www.aga.org/research-policy/pathways-to-net-zero/>, pp. 97-100, and figure 35.



procured via market-based instruments are additional, and that these markets allow the leading innovative customers willing to pay for these emerging fuels with the small (and relatively expensive) initial supply.

Producers and buyers of RNG have developed markets based on the use of market-based instruments, supported by the version of the Scope 2 Guidance cited above, including all major regulatory and voluntary procurement programs. As such, BCSE urges continued use of market-based reporting for biomethane and other resources.

While the language that allowed for the market-based procurement of pipeline-injected clean fuels in Scope 1 was removed in 2020, other reporting guidance that helps organizations report in line with GHG Protocol, such as The Climate Registry and Carbon Disclosure Project, retained language allowing organizations to use RNG certificates.

Ineligibility of market-based instruments in Scope 1 would limit renewable gas use claims to situations where (1) the fuel is delivered through a dedicated pipeline, or (2) the fuel can be measured and reported as a portion of natural gas throughput received by a given end-use. While these are important pathways for biomethane and hydrogen use, such a direct delivery requirement would incentivize redundant pipeline infrastructure and/or on-road gas transport, which could increase GHG emissions and non-climate environmental impacts.

In contrast, the ability to reflect market-based procurement of pipeline-injected renewable fuels in Scope 1 is crucial to grow markets for pipeline-injected clean fuels and to achieve alignment with regulatory programs which promote the procurement of such fuels in this manner. Clean fuels which are produced and used within a discrete system (i.e., a connected gas pipeline system) rely on the use of market-based instruments for procurement and supply-side growth. This type of market allows end-users who are willing to pay for the development of these fuels for sustainability purposes to do so. If entities are not able to purchase pipeline-injected clean fuels via market-based instruments, there will not be enough incentive to drive development of RNG to the point where it is a meaningful share of the gas pipeline system.

Overall, disallowing the use of market-based instruments will have an immediate effect on the development of biomethane, clean hydrogen, and sustainable aviation fuel which are currently reliant on similar market structures to achieve scale.

Industry acknowledges that it may be appropriate to adjust the protocol to restrict or eliminate the use of market-based instruments in this sector once clean fuel reaches a certain blend level of penetration. However, even when high penetration is reached, there may be value to maintaining the certificate infrastructure to differentiate between fuel types or other attributes.

In addition, the current markets for biomethane, renewable hydrogen, SAF, and other adjacent resources have been developed to operate on the premise of market-based instruments. Although WRI is typically regarded as a voluntary standard, clean fuels purchased under compliance programs are also accounted for within companies' GHG inventories.



Withholding the eligibility of market-based instruments creates a direct contradiction between the Protocol and such programs and would lead to incongruence within jurisdiction-level GHG inventory accounting (e.g., biomethane purchases by actors in regulatory programs pioneered by states leading U.S. climate action, such as California and Oregon), company level inventories (e.g., those who purchase biomethane for use in their operations), and corporate inventories which may be required to report using WRI guidelines in the future.

For example, it is likely that WRI's GHG Protocol will be explicitly or implicitly included as a required reporting framework under the U.S. Securities and Exchange Commission's emission disclosure requirements, and there is currently active legislation which would require reporting using the GHG Protocol in California and New York. Guidance which eliminates the ability to procure renewable gases using market-based instruments in a manner which runs contrary to existing practice would, at minimum, cause additional confusion as organizations are working to understand these already complex new requirements.

Market-Based Accounting and Scope 3 Reporting

BCSE recommends that the GHG Protocol confirm the use of Energy Attribute Certificates (EACs) to decarbonize the measured or estimated electricity and energy-based components of an energy customer's Scope 3 greenhouse gas emissions. This will spur voluntary carbon-free electricity (CFE) demand and expand investment in grid decarbonization. Expanding market-based accounting under Scope 3 will enable customers to take verifiable action to decarbonize the electricity-based components of their value chains.

BCSE notes proposals being considered by some stakeholders, including the CEBI, to expand the menu of CFE procurement options available to customers to reduce Scope 3 electricity-based emissions.

Specifically, an avoided emissions impact indicator is one concept that is being assessed to optimize CFE procurement impact. An avoided emissions impact-based indicator would reflect the level by which a given customer is sending targeted market signals for more CFE in the most carbon-intensive places and times.

The avoided carbon emissions impact-based indicator could be allowed, in addition to the location-based and market-based methods. CEBI is furthering conversations around the merits of different options and any prerequisites needed to feasibly calculate, utilize, and report this figure.

In addition, the GHG Protocol should also extend the use of EACs to other emerging zero-carbon and low-carbon fuels outside of electricity markets in order to provide customers a means and incentive to procure these fuels and help increase investments in and deployment of these fuels.



Ensuring Effective Use of Market-Based Accounting

BCSE believes robust systems are already in place in both voluntary and compliance markets to assess and transparently report the carbon intensity of clean fuel and electricity sources; generate, verify, track, and retire certificates; and prevent double counting. These programs have been designed to enable the effective use of market-based instruments in voluntary and compliance markets. WRI must seek to align its reporting framework with existing mandatory policies to avoid issues in reporting between compliance markets, voluntary markets, and those who may be required to report all purchases under the GHG Protocol. The option to leave market-based reporting methods in the hands of reduction program managers and regulatory bodies without accounting for such mechanisms within the WRI protocol simply does not exist if WRI wishes to remain a widely used GHG accounting standard.

Given the GHG Protocol's governance and the fact that it is not an elected official, governing body, or regulator, the GHG Protocol best serves stakeholders and the wider public by establishing and promoting best practices for greenhouse gas accounting.

The GHG Protocol would likely increase access and participation by having more staff dedicated to translating the GHG Protocol into more languages and translating the meaning of its accounting to stakeholders. It is unclear what having the GHG Protocol administer, verify, and enforce the GHG Protocol would entail and the cost-benefit analysis of what would likely become a complex yet potentially duplicative institution.

Opportunities to Improve Transparency and the Stakeholder Process

As noted above, the GHG Protocol is a valuable tool for reporting greenhouse gas emissions, and BCSE appreciates WRI's long-standing, open stakeholder process document. Through this current process, suggestions have been offered to improve stakeholder engagement and transparency. Specifically, WRI should include a version number and date on the cover of each document to help stakeholders identify the most current version.

Also, WRI should provide an opportunity for transparent stakeholder discussion and engagement following this round of surveys. This could take the form of a series of stakeholder webinars, similar to those provided by the U.S. Environmental Protection Agency for its updates to methodologies for use in the annual national GHG inventory.

Please do not hesitate to contact BCSE President [Lisa Jacobson](#) with any questions.

Thank you for your consideration.