April, 2023
CRS Responses GHG Protocol Survey: Market-Based Accounting

Market-based Accounting Survey:

CRS is sharing its responses beginning with Question 11:

Purpose/Background: The current GHG inventory accounting approach for scope 1 and scope 3 is an attributional accounting approach that uses a physical/average/location-based method to calculate scope 1 and scope 3 emissions, with separate reporting of project-based impacts (i.e., using project/intervention/consequential accounting methods relative to counterfactual baseline scenarios) and separate reporting of purchased credits, certificates, or other market instruments in a disaggregated GHG inventory report. (See background memo for further details.)

11. Is the current GHG inventory accounting approach for scope 1 and scope 3 effective in producing an accurate, complete, consistent, relevant, and transparent account of a company's GHG emissions and removals associated with its operations and value chain?
    - Yes
    - No
    - Not sure

12. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

Where certificate/chain of custody markets are used to transact goods, market instruments should be used to allocate the attributes of procurement to customers. Both direct and indirect emissions accounting should reflect the procurement choices available to companies to select for and invest in products that meet their environmental objectives.

13. Do you think there is a need for market-based accounting approaches related to scope 1 GHG reporting?

    - Yes
    - No
    - Not sure

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14. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

Where certificate/chain of custody markets are used to transact goods, market instruments should be used to allocate the attributes of procurement to customers. Direct emissions accounting should reflect the procurement choices available to companies to select for and invest in products that meet their environmental objectives.

15. If yes, what would be the purpose or objective(s) for incorporating market-based accounting approaches in scope 1 GHG emission reporting? You may enter brief comments here or submit a more detailed proposal using the proposal template. Market-based Accounting Survey Memo [9]

Certificate/chain of custody markets facilitate accurate accounting and are a mechanism for consumers to create demand when physical delivery of differentiated products are not able to be tracked. Market demand for low emitting products and practices increases their supply and helps transition away from less sustainable options and approaches. Certificate/chain of custody market-based accounting can be especially valuable for moving markets for new products and services faster than other mechanisms can support. They also can be a tool to ensure equitable access to products and encourage a wider range of companies to engage in decarbonization. While market demand is not the only driver of change, it is an established tool that can and should be leveraged to meet climate goals alongside regulation, financial incentives, and other voluntary activities.

16. Do you think there is a need for market-based accounting approaches related to scope 3 GHG reporting?

- Yes
- No
- Not sure

17. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

Scope 3 reflects activities in scope 1 and purchasing decisions in scope 2. There should be consistency between the accounting methods used for all scopes. Scope 3 is also a significant opportunity for companies to influence emissions across their vale chains, including by working with or on behalf of their value chain partners to increase demand in markets.

18. If yes, what would be the purpose or objective(s) for incorporating market-based accounting approaches in scope 3 GHG emission reporting? You may enter brief

comments here or submit a more detailed proposal using the proposal template. Accounting approach

Certificate/chain of custody market-based accounting is accurate where physical delivery of differentiated products cannot be tracked, and markets are used to transact goods. Emissions inventories should recognize the legal allocation of attribute rights that support credible claims in other disclosures and communications.

Certificate/chain of custody market-based accounting can also incentivize collaborative mitigation strategies in value chains and creates incentive to leverage private financing outside of a company's direct operations. This is the best tool to engage companies that are not consumer facing and may not have the same public scrutiny and demand to implement strategies to decarbonize.

19. Do you think that market-based accounting approaches ensure that emission reductions reported in a company's GHG inventory correspond to a reduction in emissions to the atmosphere?
    - Yes
    - No
    - Not sure

20. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

    It is a false question to ask that all reported changes in an individual company's inventory over time are paired directly to gross changes in global assessments of emissions to the atmosphere. Certificate/chain of custody market-based accounting is a means of allocating specified attributes to consumers where physical delivery of differentiated products cannot be tracked. To be credible, it must avoid double counting of those attributes so that complete reporting across the market for that product would result in reported emissions that are consistent with physical emissions to the atmosphere. Not allowing for this type of market activity to be reflected in the scopes and instead requiring average allocation, would inappropriately assign changes in global emissions (reduction or increases) to all companies in that market equally, regardless of their procurement choices in established markets. Such an approach may better ensure numeric consistency, but that consistency would be meaningless.

    Certificate/chain of custody markets create the ability to select for low carbon products and practices where physical delivery of differentiated products cannot be tracked, and markets are used to transact goods. Both the market and demand for goods that can reduce emissions as compared to a baseline scenario are necessary to reduce emissions. Without the market, there is no mechanism for that demand to be impactful. The GHG protocol, as an accounting standard, must recognize the framework that both incentivizes demand for low carbon products and practices and is consistent with legal allocation of attribute rights that support credible claims in other disclosures and communications.

Removing or limiting certificate/chain of custody market-based accounting would result in a loss of transparency, the ability to leverage purchasing behavior to drive change, and the ability to maintain accountability for purchasing behavior.

CRS is not providing feedback on other types of market instruments at this time but acknowledges that the answer for this question may be different for different categories of market instruments.

21. If yes, how do they ensure consistency between company and global emission reductions? You may enter brief comments here or submit a more detailed proposal using the proposal template.

    CRS did not respond to this question.

22. Could current or new market-based approaches be designed to ensure that emission reductions reported in a company's GHG inventory correspond to a reduction in emissions to the atmosphere?
    - Yes
    - No
    - Not sure

23. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

    Certificate/chain of custody market-based accounting should not be limited to certain procurement vehicles (which do not guarantee impact) or based on consequential accounting tests of impact. These markets are designed to track procurement and while there can be emissions impacts associated with individual procurements, those impacts should be quantified and disclosed outside of the scopes.

    CRS is not providing feedback on other types of market instruments at this time.

24. If so, how? For which types of market instruments and approaches? You may enter brief comments here or submit a more detailed proposal using the proposal template.

    CRS did not respond to this question.

25. If market-based accounting approaches are used, what accounting methodology should be used to account for them (e.g. inventory method, project/intervention method, combination of the two methods, or other method)? Why? (See background memo for a comparison of inventory vs project/intervention accounting methods.)

    Certificate/chain of custody market-based accounting uses an inventory approach, which is consistent with the attributional framework of the scopes. This is because these markets simply allocate specified attributes to consumers where physical delivery of differentiated products cannot be tracked.

    CRS is not providing feedback on other types of market instruments at this time.

26. If market-based accounting approaches are quantified using project/intervention methods relative to counterfactual baseline scenarios, can they be integrated into GHG inventory methods to calculate scope 1 and scope 3 emissions?

    - Yes
    - No
    - Not sure

27. Please explain your selection. You may enter brief comments here or submit a more detailed proposal using the proposal template.

    The scopes framework is strictly attributional, and it cannot include counterfactual accounting methodologies to either represent emission changes in reference to a baseline scenario or to use a counterfactual test to qualify the types of procurement that are eligible to be reflected in the scopes.

    If yes, how these method/s can be integrated into the accounting of a GHG inventory while meeting the GHG Protocol decision hierarchy including key GHG Protocol accounting & reporting principles (See the proposal template annex for background on decision hierarchy)? Please briefly explain your selection or use the proposal template for a more detailed reply.

    CRS did not respond to this question.

    If yes, how these method/s can be integrated into the reporting of a GHG inventory while meeting the GHG Protocol decision hierarchy including key accounting and reporting principles. For example, to meet the transparency principle, should the market-based accounting inventory results be separately reported from scope 1 and scope 3 emissions? (See the proposal template annex for background on decision hierarchy)?

CRS did not respond to this question.

28. If market-based accounting approaches are quantified using inventory methods, would your company be able to demonstrate or quantify impact (i.e. reductions in emissions to the atmosphere) associated with market instruments? If so, how?

    Certification/chain of custody market instruments that should be accounted for within the scopes deliver the attributes of specified procurement to the purchasing organization. The impact associated with these procurements will vary and may not always reduce emissions. For example, specified procurement is possible for both higher and lower emitting products and practices. Both the market and demand for goods that can reduce emissions as compared to a baseline scenario are necessary to reduce emissions.

    However, there is significant empirical data showing that electricity markets in the US (where market-based accounting is the norm) have increased clean energy generation through the creation of compliance markets and leadership undertaken by corporate and residential consumers in the voluntary market. In addition, as clean energy resources have come online, they have brought the overall emissions of the power sector in the US down even as net generation increases. The presence of markets and the demand vocalized through these markets is impactful.

    For indirect reporting, incomplete reporting may present the greatest challenge to observing a difference between aggregate reported changes in corporate emissions databases and direct emission. Not only for organizations and groups (e.g., residential consumers) that don't report, but even within corporate inventories, companies may have to rely on non-market data for some or all of their market-based reporting. This lack of documentation in corporate emissions databases is not proof that increasing demand for low emitting products and practices does not result in global atmospheric GHG reductions as compared to a scenario where markets could not be used to deliver attributes to consumers. In fact, collective demand has now grown enough to begin driving the proliferation of more high-quality data in order to better facilitate accurate market-based reporting.

    CRS is coordinating additional research on the importance of voluntary REC markets to new renewable energy development to address this question in regard to scope 2. This project will include a series of case studies, new analyses of project and investment data, and a new modeling approach to assess the historical and potential impact of voluntary green power demand in the US electricity system using an updated version of NREL's Regional Energy Deployment System (ReEDS) model with enhanced voluntary market capability.

Outcomes of this are expected to be published on a rolling basis between mid and late 2023.

Removing or limiting market-based accounting would result in a loss of transparency, the ability to leverage purchasing behavior to drive change, and the ability to maintain accountability for purchasing behavior.

Role in corporate GHG reporting (offsets/insets/supply chain interventions)

29. Please select which of the following option(s) best represents how you think purchases of offset credits (see background memo on types of market instruments) should be accounted for within corporate GHG inventory reporting. Please select all that apply:

    - No role in corporate GHG reporting
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
    - Used to calculate scope 1 emissions
    - Used to calculate scope 3 emissions
    - Not sure/No opinion
    - Other (please specify)

30. Please explain your selection for purchases of offset credits.

    CRS believes that current account and disclosure practices for verified offsets are correct.

31. Please select which of the following option(s) best represents how you think purchases of inset credits (see background memo on types of market instruments) should be accounted for within corporate GHG inventory reporting. Please select all that apply:

    - No role in corporate GHG reporting
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)

- Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
- Used to calculate scope 1 emissions
- Used to calculate scope 3 emissions
- Not sure/No opinion
- Other (please specify)

32. Please explain your selection for purchases of inset credits.

    Either B or C may be more appropriate for these credits. CRS looks forward to the working groups discussion on this issue.

33. Please select which of the following option(s) best represents how you think supply shed/value chain interventions (see background memo on types of market instruments) should be accounted for within corporate GHG inventory reporting. Please select all that apply:

    - No role in corporate GHG reporting
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions Market-based Accounting Survey Memo [11] (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
    - Used to calculate scope 1 emissions
    - Used to calculate scope 3 emissions
    - Not sure/No opinion g. Other (please specify)

34. Please explain your selection for supply shed/value chain interventions.

    There seem to be elements of project accounting in many of the methodology proposals for value chain interventions and it is unclear where the line should be for how disclosures are reflected in an inventory report. CRS looks forward to the working groups discussion on this issue.

35. Please select which of the following option(s) best represents how you think mass-balance certification approaches (see background memo on types of market instruments) should be accounted for within corporate GHG inventory reporting. Please select all that apply:

    - No role in corporate GHG reporting

- Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)
- Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
- Used to calculate scope 1 emissions
- Used to calculate scope 3 emissions
- Not sure/No opinion
- Other (please specify) – Also S2 plus avoided emissions separately from the scopes when appropriate

36. Please explain your selection for use of mass-balance certification.

CRS has concerns about the over-simplified definition of "mass balance certification" in this survey. The contractual transfer of attributes, via certificate or other means, are always tracked separately from the products a company physically consumes precisely because attributes are transacted through contracts when physical delivery of differentiated products are not able to be tracked. CRS views the proposed definition of mass-balance certification as setting a market boundary that matches the physical pool of the materials or products being mixed together. In this way it is more a subset of book-and-claim accounting, which may apply a broader market boundary based on a range of considerations including consistency of the laws and regulatory framework governing the sector, use and availability of robust tracking infrastructure, recognition of market instruments, and physical system interconnection.

However, CRS does support the use of certification/chain of custody models broadly across all scopes where markets exist, so we do support using contractual delivery of attributes in a scenario where the market boundary is limited by the physical boundary of the common pool of goods. We do not support limiting certification/chain of custody accounting to a mass balance framework as defined here. Instead, market boundaries for emissions accounting should align with the boundaries of the regulatory and legal system through which they are contractually delivered and enforceable. In some cases, this may align with the physical boundary of the common pool of goods.

Note that individual policies or procurement strategies that set limitations like this typically do so to achieve additional benefits (e.g., impact) such as creating local jobs or addressing other local environmental impacts of an activity. Programs and purchasers have full discretion to introduce these impact-driven policies, but it is not the role of a standard to do so.

Where avoided emissions impacts are aggregated in a certificate, quantification of that avoided impact could additionally be quantified using a consequential accounting approach and disclosed separately from the scopes.

37. Please select which of the following option(s) best represents how you think book-and-claim certification (see background memo on types of market instruments) should be accounted for within corporate GHG inventory reporting. Please select all that apply:

    - No role in corporate GHG reporting
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
    - Used to calculate scope 1 emissions
    - Used to calculate scope 3 emissions
    - Not sure/No opinion
    - Other (please specify) S2, plus avoided emissions separately from the scopes when appropriate

38. Please explain your selection for use of book-and-claim certification.

    CRS supports the use of attributional book and claim accounting for all scopes within the boundary of an existing market, which typically has geographic boundaries but may be larger than the physical distribution infrastructure of the materials or goods the market was created to serve. Market boundaries are not the same everywhere or for every sector and their definitions must remain flexible. While CRS is not aware of any global production attribute (e.g., emissions) delivery markets, the area of applicability for emissions attributes is not necessarily constrained to the physical area in which it is possible to deliver goods. Attribute markets can be larger than the physical pools because attributes of production (e.g., emissions) are always separated from the physical good they represent, regardless of how they are packaged or re/packaged and sold to consumers. Contractually delivered attributes are by definition separate from the materials or goods used to produce them.

    There are many considerations for determining market boundaries, including consistency of the laws and regulatory framework governing the sector, use and availability of robust tracking infrastructure, recognition of market instruments, and physical system interconnection. Market boundaries are dynamic and can only be determined through analysis of a sector and region, involving engagement with market participants, government regulators and others. That should be done through an open transparent process. The GHG Protocol should defer to regional standards where they exist. Where they do not, the guidance can encourage companies to be transparent and conservative, but it should remain broad to allow for future market analysis and standard development, as well as different and changing regional circumstances.

Finally, as consistent with our response to the mass-balance certification approach, where avoided emissions impacts are aggregated in a certificate, quantification of that avoided impact could additionally be quantified using a consequential accounting approach and disclosed separately from the scopes.

39. Do you think there are other market-based accounting approaches that can be reported as part of corporate GHG inventory reporting? If so, what role, and why? Please select all that apply:

    - No role in corporate GHG reporting
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, to provide transparency and context on actions the company is taking to reduce emissions (similar to reporting avoided emissions or impacts of specific actions separately from scope 1, scope 2, and scope 3 emissions)
    - Reported in a GHG inventory report, separately from scope 1 and/or scope 3 emissions, which could potentially be used to contribute to achieving a company's GHG target(s)
    - Used to calculate scope 1 emissions
    - Used to calculate scope 3 emissions Market-based Accounting Survey Memo [12]
    - Not sure/No opinion
    - Other (please specify)

40. Please specify what other market-based accounting approaches.

    CRS did not respond to this question.

41. Please explain your selection for other market-based accounting approaches.

    CRS has not engaged in other market-based accounting approaches and so has no comment.

42. Does the approach vary by type of market instrument (see background memo on types of market instruments)? Why or why not? How are the various instruments and approaches the same or different?

Yes, the approach to accounting for market instruments should vary based on whether the accounting methodology is attributional or consequential. Attributional methods should be reflected within the scopes while instruments quantified using consequential approaches should be disclosed as supplemental information or in a net total.

43. Would market-based accounting approaches be appropriate for some sectors but not others? (Example sectors include electricity, natural gas/biomethane, aviation fuels (SAF), oil, agricultural commodities, transport/shipping, hydrogen, steel, aluminum, and others.) What are the differences between sectors or conditions that would make it appropriate or not appropriate? Please briefly explain your selection or use the proposal template for a more detailed reply.

Certificate/chain of custody market-based accounting is accurate where physical delivery of differentiated products cannot be tracked, and markets are used to transact goods.

Role of GHG Protocol accounting and reporting standards vs. GHG target setting or reduction programs

Background: Implementation of a market-based accounting system related to scope 1 and/or scope 3 would require programmatic decisions and programmatic oversight/enforcement on issues such as (but not limited to):

- contractual arrangements that generate and transfer ownership of rights and obligations related to emissions and emission reductions between parties,
- policy decisions on the eligibility or lack thereof of different types of instruments to meet a company's targets,
- setting the level of ambition of targets for different companies and sectors,
- defining a set of quality criteria (e.g., additionality, permanence, avoiding leakage, unique issuance and claims, independent verification, program governance, etc., and/or other quality criteria) that cannot be enforced by a voluntary standard alone
- avoidance of double counting (including through registries for issuance, tracking, and retirement to ensure unique claims; development and use of residual emission factors by all actors in the system; avoidance of double counting between location-based and market-based accounting system

44. The GHG Protocol sets standards but does not administer any program (e.g. disclosure or target-setting). Given several programmatic considerations such as those listed above, would market-based approaches be more effectively implemented by GHG target setting or reduction programs or regulatory bodies, rather than by the GHG Protocol, in order to provide additional rules and decisions as well as ensure their administration, verification, and enforcement?

- Yes
- No
- Not sure

45. Please briefly explain your selection for who should provide rules and decisions on the accounting and reporting specifications, administration, verification and enforcement of market-based approaches.

    The GHG Protocol must incorporate the frameworks and quality criteria necessary to incorporate market-based approaches into an inventory, whether a particular instrument should be reflected within the scopes, as part of a net inventory total, or as supplemental information. Market-specific analysis of instruments, however, is outside of the GHG Protocol's role as a global standard setter. Third parties with expertise and direct market engagement should determine when instruments are credible and eligible to be applied to certain operations.

46. Do you have any other feedback?

    From an editorial perspective, the term certification in US markets typically means the independent verification and provision of quality assurances for a product or service relative to a standard or set of requirements. However, as it is being used in the survey questions it seems to mean only that a market-based certificate is generated and used to allocate attributes to purchasers. CRS would encourage the use of more universally applicable language and greater sensitivity to this difference in the definition of terms. We have used the proposed terminology in our responses here to facilitate aggregation of comments across stakeholders but hope this can be a part of the standard development process going forward.