



U.S. Securities and Exchange Commission
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COMMENTS ON CLIMATE CHANGE DISCLOSURES

Submitted by

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Introduction

We fully support the Securities and Exchange Commission's (SEC or the Commission) process to consider requiring disclosures related to climate change so as to better inform investors of relevant risks, impacts, and opportunities. High-quality and accurate information increases the efficiency and stability of capital markets. Investors are increasingly seeking such information about issuers' climate change-related risks, actions to mitigate climate impact, and/or ability to incorporate complex climate-related factors into strategies for value preservation and accretion. Exercise of the SEC's regulatory authority to require consistent and accurate disclosure of climate change-related information is warranted.

While we support the development of rules that generally require clear, comparable, and consistent information related to climate change, these comments focus on a single, but critical, aspect of issuers' climate risk and climate change mitigation efforts: *electricity use*. Accurate disclosure of information about an issuer's electricity use serves two important investor interests. First, accurate information on electricity use is directly related to assessing climate risk. For example, fossil generation assets that are serving a company's electricity demand (or its "load") could be impacted by future policy interventions (such as carbon pricing) that increase the costs of and prices charged for that generation. A company consuming electricity from a grid using those assets could, therefore, become exposed to higher energy prices. Any investor benefits from better information as to such risks. Second, an increasing number of investors are seeking to understand (and often positively value) a company's proactive efforts to mitigate climate change. A common consideration in evaluating such proactive efforts is to look at a company's electricity procurement practices, such as the extent to which the company is procuring renewable energy. Energy use and procurement are among the very most important determinants of issuer climate risk and leadership.

However, as it considers mandatory climate disclosures, the Commission must consider and address significant shortcomings in how such information is being calculated and disclosed (voluntarily) today. Current standardized and near-universally used accounting practices by which companies disclose their electricity use, electricity procurements, and consequent carbon footprint ("Scope 2") calculations do not accurately or adequately inform investors about climate risk

exposure or the actual climate change mitigating impacts of company electricity procurement strategies. While there is much in the current landscape of voluntary disclosure that the SEC can and should incorporate into a mandatory disclosure system, it should not incorporate current Scope 2 reporting methodology and instead require disclosure of information on issuer electricity use and purchases as described below.

Our comments describe how the Commission can improve on the information currently disclosed to investors voluntarily by requiring more accurate and relevant information related to companies' energy use and procurement. Such information will help investors better understand issuer climate risk and climate leadership.

How Companies Calculate and Report Scope 2 GHG Emissions Today

The Greenhouse Gas Protocol (the Protocol) developed and managed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) is the global de facto standard by which companies calculate their greenhouse gas (GHG) emissions footprint. That information is increasingly disclosed publicly. In 2020, for example, 65% of the S&P 500 companies reported their greenhouse emissions footprints, calculated via the Protocol, to the market through CDP¹, a non-profit that runs a global disclosure system of climate related information for investors (formerly known as the Carbon Disclosure Project). Other corporate reporting regimes, such as the Task Force for Climate-related Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the Global Reporting Initiative (GRI), encourage or require the use of the Protocol to estimate GHG emissions.²

The Protocol delineates two methodologies by which companies can calculate GHG emissions associated with their purchase and use of energy (Scope 2):

- The *Location-Based* method asks companies to report the emissions associated with their electricity use based on the emissions factor of the generation grid mix (determined by the relative combination of fossil energy, nuclear, renewable energy, etc.) on the regional grid³ serving a company's place of electricity consumption (or "load").
- The *Market-Based* method instructs companies to calculate their Scope 2 emissions based on the GHG emissions associated with choices and transactions a company executes in a given electricity market, such as choosing specific supply from a retail electricity provider, contracting directly with a generation source, or purchasing energy attribute certificates –

¹ <https://www.globenewswire.com/news-release/2020/07/16/2063434/0/en/90-of-S-P-500-Index-Companies-Publish-Sustainability-Reports-in-2019-G-A-Announces-in-its-Latest-Annual-2020-Flash-Report.html>

² TCFD recommends reporting emissions based on the Protocol. GRI requires location and market-based reporting using the Protocol. <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf>; <https://www.globalreporting.org/how-to-use-the-gri-standards/gri-standards-english-language/>; SASB includes disclosure of Scope 2 in 35 of its 77 standards. <https://www.sasb.org/wp-content/uploads/2020/10/GHG-Emissions-100520.pdf>

³ "The most appropriate spatial boundaries for emission factors serving the location-based method are those that approximate regions of energy distribution and use, such as balancing areas." [GHG Protocol Scope 2 Guidance](#), *World Resources Institute*, Section 6.10.

known as “Renewable Energy Certificates” (RECs) in the United States.⁴ Under the GHG Protocol, virtually all companies reporting their Scope 2 emissions use *both* methods.

How Markets Are Using This Information

Many investors and sustainability-oriented ratings agencies assess climate-related performance by evaluating a company’s reported Scope 2 emissions, volume of purchased renewable energy (RE), and goals/commitments to reduce Scope 2 emissions or procure greater volumes of RE over time. While companies that follow the GHG Protocol, in most cases, report both Location-Based and Market-Based Scope 2 emissions, Market-Based Scope 2 accounting is most commonly (if not solely) used by a company to set and track progress toward renewable energy and carbon reduction goals. Current Scope 2 reporting is embedded in the current market practices for assessing registrant climate performance. For example:

- CDP issues “scores” or grades (A-F) to companies largely based on the quality and comprehensiveness of a company’s disclosure, but also on their performance and ambition in reducing emissions. CDP allows companies to select from one of several methodologies to estimate Scope 2 emissions including the Protocol. CDP assesses corporate procurement of renewable electricity and awards higher scores to companies securing higher amounts of renewable energy.⁵ CDP treats unbundled REC purchases similar to any other transaction for renewable electricity, including those that may have a greater beneficial climate impact. While many aspects of CDP’s approach are quantitative, CDP also asks companies to elaborate and provide comprehensive detail regarding their strategies to contribute to and accelerate the low-carbon transition. CDP accounts for “a company’s progress towards environmental stewardship” including its “progress towards action taken on climate change as reported in the response.”⁶ As such, CDP collects and disseminates much quantitative and qualitative information and offers its own rubric for evaluating the quality of corporate disclosure and performance. The issue is that the investment community and ratings agencies may interpret and utilize this information in several ways, but as explained above, the disclosures regarding Scope 2 emissions data and renewable procurement may not consistently and accurately capture climate impact and a company’s continued reliance on carbon-intensive fossil generation provided by the grid.
- S&P Global calculates Global ESG Scores for companies, which it then uses to select the constituents of the Dow Jones Sustainability Indices (DJSI). Its “Corporate Sustainability Assessment” evaluates companies on performance related to several environmental issues. Regarding emissions reporting, the Assessment allows companies to use either Location-Based or Market-Based approaches to report Scope 2 emissions (consistent with guidance from the

⁴ A REC is a commoditized instrument, distinct from the underlying electrons, that represents the environmental attributes associated with a given megawatt-hour (MWh) of renewable energy generation. RECs can be obtained either as part of the purchase of the underlying electricity produced by the generation source or can be obtained on their own (these are referred to as “unbundled” RECs).

⁵ [CDP Climate Change 2020 Scoring Methodology. Section C8.2a](#)

⁶ <https://guidance.cdp.net/en/guidance?cid=13&ctype=theme&idtype=ThemeID&incchild=1µsite=0&otype=ScoringMethodology&tags=TAG-599%2CTAG-605%2CTAG-646>

Protocol).⁷ It also requests that companies disclose their purchases of renewable energy, though without seeking additional information on the underlying instrument (e.g., PPA vs. unbundled RECs), nor further assessing the actual emissions impact of such transactions.

Deficiencies in Current Scope 2 Reporting Under the Protocol

Deficiencies in the Market-Based Scope 2 reporting framework must be considered by the Commission as it develops climate-related disclosure requirements. The emissions calculated using the “Market-Based” method are what companies use to track and report progress against their climate and sustainability goals and are most often considered by investors, sustainability ratings agencies, and other analysts in evaluating climate performance (and risk). Yet as explained below, those numbers may create a misleading picture of both a company’s climate risk exposure and the actual impact of a company’s efforts to reduce emissions.

Under the Market-Based method, a company reports its Scope 2 emissions based in part on its ownership of RECs.⁸ RECs can be obtained either as part of the purchase of the underlying electricity produced by the generation source or can be obtained on their own (these are referred to as “unbundled” RECs).⁹ This means that RECs obtained by a company could come from a new or existing RE generation source geographically unrelated to the company’s place of electricity consumption.¹⁰ Therefore, ownership of a REC does not necessarily reflect any change in the company’s electricity use (including the consumption of carbon-intensive generation sources that are part of the grid mix at its place of load), and therefore may not reflect any change to a company’s climate risk exposure associated with energy use.

Nevertheless, for each and every REC (which represents a zero emissions rate for a MWh because it came from a zero-emission generation source), a company can claim that a corresponding MWh of power it actually consumed from the grid can be treated as having a zero emissions rate. If in a given year a company has obtained a number of RECs (reflecting zero emission MWhs generation) that equals their electricity use (also measured in MWhs), that company can report *zero* Scope 2 emissions using the Market-Based methodology -- irrespective of the fact that there continue to be GHG emissions associated with the company’s actual electricity consumption at load locations.

It is this practice of simply substituting any and all RECs for the actual emissions associated with an issuer’s energy consumption that is the core of the problem with current Market-Based Scope 2 accounting. By this practice, the market is presented with potentially misleading information about

⁷ https://portal.csa.spglobal.com/survey/documents/SAM_CSA_Companion.pdf

⁸ Again, a REC is a commoditized instrument, distinct from the underlying electrons, that represents the environmental attributes associated with a given megawatt-hour (MWh) of renewable energy generation.

⁹ In some transactions, the REC may be “retired” on behalf of a buyer, as opposed to the buyer actually taking title to (or “owning”) the REC; the outcome is the same.

¹⁰ The geographic boundary for Market-Based reporting is very broad. For example, a company with load in Virginia can apply RECs to its Scope 2 calculations that were obtained in Texas, or anywhere in the United States and Canada, yet electricity consumption in Virginia is fully disconnected from a wind farm in Texas.

both a company's exposure to the climate risk associated with its reliance on fossil energy and its efforts to mitigate climate change.¹¹

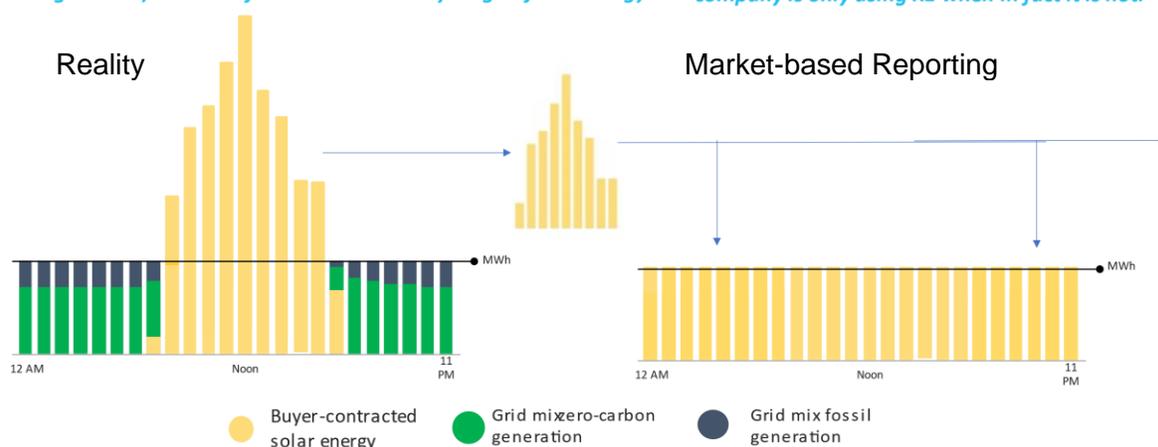
The Misleading Picture of Fossil Energy Consumption Under Current Voluntary Practice

The potential for misleading investors as to reliance on fossil energy is illustrated in the graphic below:

Market-Based Reporting vs. Reality

Buyer A contracts for an amount of RE/RECs that equals its actual electricity consumption but does not consume all of that generation (either because the RECs are from projects on a different grid or, as here, because the generation from RE project does not match timing its load) and therefore continues to rely on grid fossil energy.

But under Market-Based reporting, Buyer A can apply all the RECs from the contracted solar energy against the grid-supplied fossil it still consumes. This presents a picture to the market that the company is only using RE when in fact it is not.



Since Market-Based Scope 2 accounting and reporting does not capture the extent to which a company consumes carbon-intensive generation from the grid, it does not convey to investors adequate information as to a company's exposure to transition climate risk. Yet under current market-based reporting practices, Buyer A above remains exposed to these risks since even with 100% matching of RE/REC purchases relative to load, it continues to rely on fossil generation -- even though its Scope 2 emissions are reported as zero.

How Market-Based Reporting May Overstate – or Understate – a Company's Climate Impact.

A second shortcoming to current Scope 2 Market-Based accounting under the Protocol is that it does not convey accurate or sufficient information about the actual climate-related impacts of electricity

¹¹ As discussed below, these deficiencies can be addressed through additional information as to the location of renewable energy and REC procurement, as well information as the timing of electricity production from contracted renewable energy projects.

procurement transactions. This again stems from the fact that any and all RECs can be used to “subtract” from reported Scope 2 emissions irrespective of the actual climate benefit of the underlying renewable generation. For example, a company may obtain RECs from a new wind farm in a renewables-saturated grid region (such as West Texas). Each additional MWh of generation from that new wind farm, however, may result in only a minimal net decrease in carbon emissions, given the already clean nature of the underlying grid mix.¹² Similarly, a company’s purchase of an unbundled REC from an existing RE generation facility leads to no additional impact on emissions, since the project was already built. In contrast, a procurement from a new solar farm in Alabama, for example, likely represent much more significant avoided emission impact since the local grid region is heavily fossil-reliant. The RECs (and therefore the reported Scope 2 emissions reductions) from those two transactions, however, are treated as identical and are presented to investors as such.

Improving Registrant Disclosure

To meet the objective of disclosing material information to investors for use in assessing climate risk and climate leadership, simply incorporating existing Scope 2 Market-Based accounting and reporting is not adequate or appropriate.

Location-Based Scope 2 Reporting is Relevant, but Insufficient.

When compared to the Market-Based method, the Location-Based method more accurately reflects an entity’s exposure to climate risk from the fossil generation that it consumes because it is calculated based on the actual make-up of the entity’s load and does not apply specific emission factors associated with RECs, which can be generated from assets distant from the grid of an entity’s consumption. Nevertheless, the Location-Based method alone does not provide a complete or accurate accounting of emissions and therefore climate risk exposure. This is because Location-Based reporting does not reflect any transactions for clean energy that a company executes *in its local grid region* that do in fact impact its actual consumption of fossil energy and its exposure to policies that raise the price of fossil fuels.

Limit Market-Based Reporting to Transactions in Same Physical Grid Regions as Load (“Improved Market-Based Reporting”)

A company that transacts for carbon-free electricity in the same grid region as its load through a grid-connected project (which could not be reflected under Location-Based accounting rules) could be seen to have mitigated its carbon price exposure risk by ensuring that all or a portion of its electricity consumption in that grid region will be carbon-free and not subject to future carbon-based pricing or other related risks associated with fossil energy.

To account for this possibility and to assess climate risk more accurately, in addition to location-based Scope 2 reporting, registrants could be asked to report under the Market-Based method *only transactions for carbon-free electricity and/or RECs sourced within the same grid region as that which*

¹² And this phenomenon is not unusual; companies often seek the lowest cost RE/RECs, which tend to come from areas with the most RE potential (and thus the highest penetration of RE).

*serves a registrant's consumption*¹³. Transactions from grid regions where the company does not consume electricity would not be included (as they have no impact on the climate risk associated with their actual electricity consumption).¹⁴

In addition to requiring that Market-Based Scope 2 information be reported on a physical grid region by physical grid region basis (only for regions in which a company has load), companies should also disclose the corresponding amount of their actual load in those regions, which would allow investors to better understand the risk-mitigating impact of transactions.¹⁵ This change represents little administrative burden on companies as it calls only for a different manner of disclosing information they already have.¹⁶

Seek Information on the Time-Coincidence of Contracted Supply and Load.

While excluding out-of-grid-region RE/REC transactions from annualized Market-Based Scope 2 accounting likely eliminates significant misleading information and is an improvement over currently disclosed information, it still might not adequately inform investors as to the risk-mitigating and positive impact-creating elements of a given transaction. For example, even if contracted for in the physical grid region of company load, wind and solar generation is variable and will not fully match the timing of a company's actual electricity use. In those times of mismatch, the company will be relying on the underlying grid for power (and its fossil content).

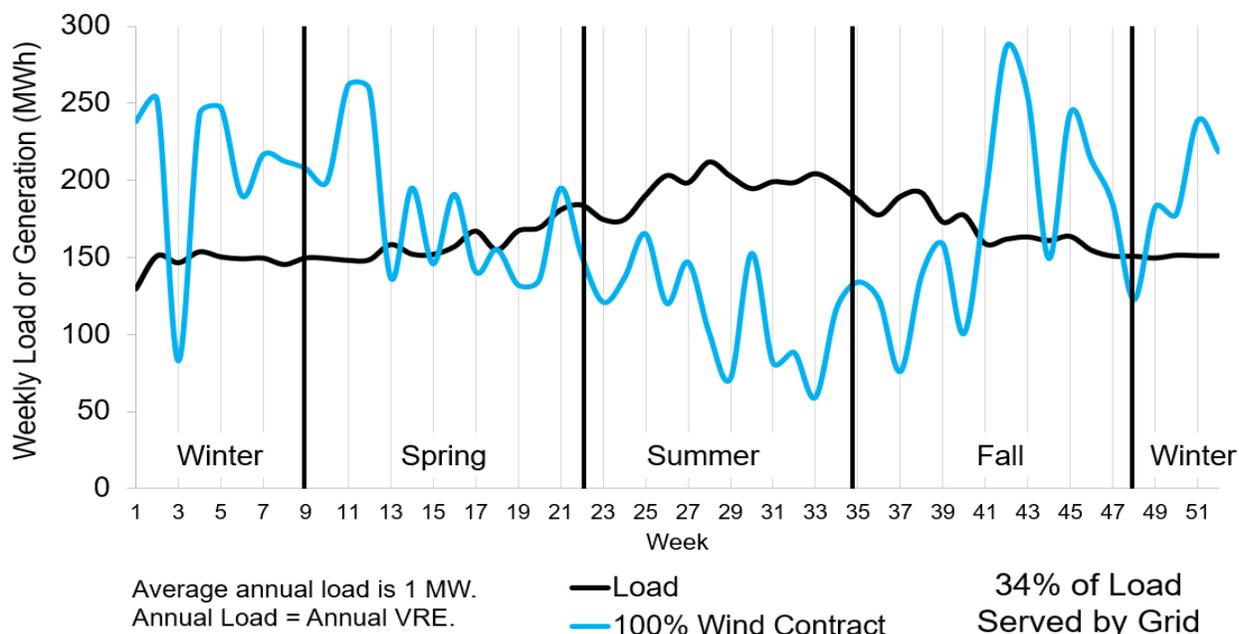
As an illustration, the figure below is a representation of a company's annual average 1 MW load matched against an in-region 100% wind energy supply contract.

¹³ Requiring disclosure of transactions by grid region in which a company has load is an improvement in transparency over current practices, but it is not perfect. For example, the risk-mitigating value of an in-region *unbundled* REC might be quite minimal (myriad efforts are underway in the marketplace to improve the value and specificity of information contained in each REC). It is not the Commission's role to fix the shortcomings of the REC marketplace. By simply requiring the geographic-based information described here, it will improve the information available to investors and any subsequent improvements in REC practices will be automatically incorporated into future disclosure.

¹⁴ While out-of-market clean energy transactions do not impact a company's risk exposure, they might very well reflect the type of climate leadership that an increasing number of investors care about (such as an intentional out-of-market renewable energy procurement in a fossil-heavy grid region). As explained below, that information is best conveyed by disclosure of the emissions-mitigating impacts of all transactions.

¹⁵ It may be hard for investors to evaluate the risk mitigating impacts of transactions without load information. A large company might, for example, make a large wind procurement in Texas but have only a small facility in that grid region; in that case the size of the procurement may greatly exceed any risk mitigation impacts. Contrarily, the company may have an amount of load much greater than its procurements in another grid region and that difference, again, is relevant information for investors.

¹⁶ The Commission should assess whether requiring grid region by grid region electric load data triggers any material concerns about confidential business information.



A company like this could take time-based generation data provided by the wind and solar facilities with which they have contracted and then calculate the periods (weekly, daily, hourly,) where grid power was needed to serve their load. Such information is increasingly becoming readily available to company buyers and its disclosure would allow investors to compare the relative exposure to fossil energy risk of companies based on their in-region energy contracts.

While current annualized Market-Based reporting does not convey information about actual grid exposure during times where a company's load is misaligned with electricity production from its contracted wind and solar, current reporting practices also do not adequately convey the results of any additional transactions a company might make to mitigate such exposure. This scenario can be seen in the graphic below:

The Need for Disclosure of Same-Grid Carbon-Free Electricity Procurement Data

Buyer A, as above, contracts for enough RE/RECs to numerically match its load but continues to consume grid fossil energy. Buyer B also contracts for that amount of RE/RECs but also contracts for carbon-free electricity to displace the fossil energy it otherwise would be left consuming due to the mismatch between the timing of RE generation and its load. Yet despite eliminating fossil fuel consumption, Buyer B's Scope 2 emissions would appear to be the same as Buyer A.



While both Buyer A and Buyer B have contracted for solar energy equal to 100% of its load in the region, Buyer B went further and contracted to replace the remaining grid mix energy to serve load at times of solar deficit. Under Market-Based accounting, however, both buyers would show the same Scope 2 (in this case, both would be zero – but only Buyer B is *actually* responsible for zero emissions from its electricity consumption).

Time coincidence information is not required, calculated, or reported under current voluntary accounting and disclosure practices. With time coincidence information disclosure, investors would get a more complete and accurate picture of climate risk and climate impact. However, even though the information needed to compare times of consumption with times of generation is largely available, the calculation and disclosure of mismatches between contracted generation and load can require substantial effort. It might be appropriate for the Commission to limit this requirement, for example, to companies of a minimum size and/or phase this requirement in over time. And it is also likely appropriate for the Commission to adopt safe harbor provisions and adopt a “furnished” not “filed” approach to this information.

Seek Information on the Actual Climate Impact of Electricity Procurement Transactions

Investors are increasingly interested in assessing efforts made by companies to mitigate climate change, including through energy procurement choices. But because current Scope 2 reporting does not convey information as to the actual climate-mitigating impact of these choices, investors would benefit from disclosures that reveal the actual mitigating impact (GHG emissions avoided) resulting from issuer electricity procurement transactions.

There are different methods by which an issuer can estimate and report the avoided emissions associated with a given clean electricity procurement transaction. While there is as of yet no single agreed upon approach to avoided emissions calculation, an increasing number of companies are making these calculations and methodological options for such calculations are widely available for

companies to use. But access to data needed to make accurate avoided emissions calculations is currently a challenge. Grid operators do not uniformly provide access to the most granular data (such as marginal generation source emissions at hourly time intervals over the course of an entire year) or even more standardized average emissions data. Grid operators, corporate energy buyers, and other stakeholders are working to make such data more available.

While the market is rapidly developing best practice methodologies for avoided emissions calculations and given that relevant data is increasingly becoming (but not yet universally being made) available, *we recommend that for a period of time the Commission should encourage (but not require) registrants that have executed transactions for the purchase of clean energy to disclose estimates of the avoided emissions that were the result of their purchases.* In the near future, it will likely be reasonable and appropriate to make such disclosures mandatory. For avoided emissions data disclosure, it is likely appropriate for the Commission to adopt safe harbor provisions and a “furnished” not “filed” approach to such information.

Summary of Recommendations

It is neither appropriate nor necessary for the Commission to rewrite the Protocol to solve these problems.¹⁷ The Commission can resolve these shortcomings in current Scope 2 reporting and ensure that investors get adequate and material information on registrant climate risk and leadership by:

1. **Requiring Continued Location-Based Scope 2 Disclosure.**
2. **Requiring “Improved Market-Based Reporting”¹⁸** that asks registrants to report under the Market-Based method only transactions for carbon-free electricity and/or RECs sourced within the same physical grid regions as their load, and to report load data for each such grid region.
3. **Requiring Time-Based Emissions Data Based on Energy Consumption¹⁹** so as to give more accurate information as to issuer’s actual dependence on fossil generation in its underlying grid region (perhaps to be phased in and/or limited to companies of minimum size).
4. **Encouraging Reporting of Avoided Emissions Resulting from Procurement Transactions²⁰** so as to allow investors to assess the actual climate impact of company electricity procurement actions. This could become a mandatory requirement in the future.

¹⁷ As the shortcomings in Scope 2 reporting identified here are becoming more well-known, it is likely that the Protocol will be reconsidered and perhaps amended. That process, however, may take years.

¹⁸ Can also be required immediately as no new information is needed.

¹⁹ Hourly emissions data is widely – but not universally – available in the market today. While the trend is toward increased availability of this information, the Commission could set a future date of compliance for this requirement (1-2 years, perhaps) and/or phase in compliance based on company size.

²⁰ While avoided emissions calculations can be done today using several available methods, the Commission could set a future date of compliance for this requirement (1-2 years, perhaps) and/or phase in compliance based on company size.