June 17th, 2022

To,
Ms. Vanessa Countryman,
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-0609

Via Electronic Transmission

Re: S7-10-22 The Enhancement and Standardization of Climate-Related Disclosures for Investors
[Release Nos. 33–11042; 34–94478; RIN 3235-AM87]

Dear Secretary Countryman,

On behalf of UH Energy at the University of Houston, we are pleased to submit our comments on S7-10-22 “The Enhancement and Standardization of Climate-Related Disclosures for Investors”.

The proposed rules are likely to considerably alter climate-related disclosures by registrants. We believe that certain provisions in the proposed rules require immediate attention from the SEC for the proposed rules to effectively meet their objectives and to ensure that disclosures are transparent, reliable, comparable, and relevant for investors (and potentially other stakeholders). Our comments and observations are detailed below.

We thank you for the opportunity to share our observations on the proposed rules. We will be happy to provide further clarifications or comments. Please contact Ramanan Krishnamoorti at ramanan@uh.edu in case any questions arise.

Sincerely,

Dr. Ramanan Krishnamoorti
Chief Energy Officer
Professor of Chemical & Biomolecular Engineering,
Cullen College of Engineering
University of Houston

Dr. Suryanarayanan Radhakrishnan
Managing Director, UH Energy
Professor of Practice,
C.T. Bauer College of Business
University of Houston

Aparajita Datta
Research Assistant, UH Energy
University of Houston
GHG Emissions Metrics Disclosure

1. As currently outlined in the proposed rules the disclosure and reporting of GHG emissions would need to be consistent with the Greenhouse Gas (GHG) Protocol, in absolute terms and terms of intensity, both disaggregated by the constituent greenhouse gases and in the aggregate. Per 17 CFR 229.1504(e)(1), “the proposed rules would require a registrant to describe the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics. . . to calculate the registrant’s GHG emissions.”

2. Further, in the setting of the scope and boundaries of disclosure\(^1\) in 17 CFR 229.1500, “when describing the methodology, significant inputs, and significant assumptions used to calculate . . . fugitive emission sources\(^2\) (equipment leaks from joints, seals, packing, gaskets, coal piles, wastewater treatment, pits, cooling towers, and gas processing facilities, and other unintentional releases).”

3. However, several recent studies\(^3\) have highlighted that these unintended releases and leaks are likely 1-5 times greater than the facility-level emissions being reported through the U.S. EPA’s Greenhouse Gas Reporting Program (GHGRP)\(^4\). In the absence of improved regulations for monitoring fugitive emissions, leaks, and unintended releases across the entire value chain, measurements and reporting under the proposed rules will not be rigorous and transparent and will penalize, disproportionately, only certain participants in the supply chain.

4. The GHGRP currently requires reporting of GHG emissions data from large GHG emission sources, fuel and industrial gas suppliers, and CO\(_2\) injection sites, accounting for about 8,000 facilities across the country. Registrants have the flexibility to choose among prescribed methodologies, as the EPA recognizes that the decision of which method to use may be influenced by the existing environmental monitoring systems in place and other factors and allows reporting entities to change emission calculation methods from year to year and within the same year. However, the events that may trigger a change in calculation methods and how registrants can ensure comparability between the emissions reported using different methodologies require further clarification.

5. The proposed rules need further clarification on methodologies and standardization for direct measurement at source, emissions from fuel combustion, process emissions, and how and under what conditions can registrants utilize (for all GHGs and in CO\(_2\) equivalent measures) continuous emission

---

\(^{1}\) Setting and Disclosure of Organizational Boundaries and Subpart 229.1500—Climate-Related Disclosure

\(^{2}\) GHG Protocol, Corporate Accounting and Reporting Standard, Chapter 6

\(^{3}\) Environmental Defense Fund https://www.edf.org/climate/methane-studies


\(^{4}\) U.S. EPA, Greenhouse Gas Reporting Program (GHGRP) https://www.epa.gov/ghgreporting
monitoring system (CEMS), mass balance models, site-specific emissions factors, and best available monitoring methods (BAMM). This is especially critical for registrants that are not currently reporting their emissions under the GHGRP and for standardization and comparability across all disclosures.

6. The proposed rules also need further clarification on whether the disclosed emissions will be subject to the pre-submittal and post-submittal verification processes outlined by the EPA in the GHGRP, and if so, which entities would be responsible for verification and what is their assumed liability (see comments on Attestation Provider Requirements below).

Scope 3 Emissions Disclosure
7. For the measurement of Scope 3 emissions, the GHG Protocol’s Corporate Accounting and Reporting Standards² do not facilitate consistent and valid comparisons of Scope 3 emissions between registrants. Since inventory methodology, company size, sectors, and structure of the companies vary considerably, the measurement, accounting, and reporting, as well as comparatives derived from such work remain uncertain.

8. Currently, the GHG Protocol proposes 15 categories of Scope 3 emissions that should be considered for measurement and reporting purposes. The method of calculating the emissions in each of the categories is different, not standardized, or fully understood across sectors and types of emitters. The disclosure of these values will not provide meaningful context or quantify the level of associated physical and transition risks to investors or other stakeholders, even within the context of a single industry.

Third-Party Data, Voluntary Disclosure Frameworks, and International Disclosure Initiatives - Accounting for Scope 3 Emissions
9. The Commission has accurately identified in its discussion in 17 CFR 229.1500 that to some extent, the development of (these) disparate frameworks has led to an increase in the number of companies that are providing some climate-related disclosures. However, because they are voluntary, companies that choose to disclose under these frameworks may provide partial disclosures or they may choose not to participate every year. In addition, the form and content of the disclosures may vary significantly from company to company, or from period to period for the same company. The situation resulting from these multiple voluntary frameworks has failed to produce the consistent, comparable, and reliable information that investors need. Instead, the proliferation of third-party reporting frameworks has contributed to reporting fragmentation, which can hinder investors’ ability to understand and compare registrants’ climate-related disclosures. However, apart from proposing a framework based on the Task Force on Climate-Related Financial Disclosure (TCFD) and the GHGRP, the proposed rules will contribute little towards standardizing disclosure. Also, in the discussion of third-party data, voluntary disclosure, and international disclosure, especially as it pertains to Scope 3 emissions, the proposed rules do not recognize that:
a) Scope 3 emissions for one registrant are either Scope 1 or Scope 2 emissions or both for other entities or companies\(^5\);

b) Scope 3 emissions include direct and indirect emissions resulting from the consumption and use of a registrant’s products, which are either Scope 1 and Scope 2 emissions or both for end-users.

10. The Scope 3 Emissions Disclosure Safe Harbor and Other Accommodations, as outlined in 17 CFR 229.1504(f), will alleviate concerns that registrants may have about liability for information that would be derived largely from third parties in a registrant’s value chain. However, clarification is needed on:

a) Best practices to avoid double or more counting the GHG impact of emissions and especially Scope 3 emissions of registrants;

b) Apportionment, measurement, reporting, standardization, and verification of emissions based on individual consumption and use of products;

c) Best practices to avoid data fragmentation;

d) Cross-border adjustment of emissions for registrants, both from their imported and exported emissions, and goods and services, and those of a third party;

e) Avoiding competitive disadvantages from disclosure or advantages from non-disclosure.

The Task Force on Climate-Related Financial Disclosure (TCFD)

11. TCFD’s disclosure framework, as discussed in 17 CFR 229.1500, provides recommendations for disclosing clear, comparable, and consistent information about the risks and opportunities presented by climate change and is founded on the four thematic areas of governance, strategy, risk management, and metrics and targets\(^6\). As discussed by the Commission, in 2017, the TCFD published disclosure recommendations that provide a framework by which to evaluate material climate-related risks and opportunities through an assessment of their projected short-, medium-, and long-term financial impacts on a registrant. The TCFD framework establishes eleven disclosure topics related to four core themes that provide a structure for the assessment, management, and disclosure of climate-related financial risks. However, TCFD does not outline specific methodologies for the measurement of key metrics. In its discussion of cross-industry climate-related metric categories, TCFD acknowledges that there are multiple ways to measure and disclose metrics, and different jurisdictions or industries may follow different practices. Allowing for differences in units of measure can help provide organizations with flexibility without significantly impacting comparability if units are clearly stated\(^7\). The lack of standardization and the qualitative nature of several metrics will limit meaningful comparisons for investors and other stakeholders and result in over-reporting or under-reporting, and distortions in the reporting of data from year to year. From the Commission’s proposed amendments, dated 05.25.2022, to 17 CFR Part 200, 230, 232, 239, 249, 274, and 279: Enhanced Disclosures by Certain Investment Advisers and Investment Companies about Environmental, Social, and Governance Investment

---

\(^5\) U.S. EPA, Scope 3 Inventory Guidance [https://www.epa.gov/climateleadership/scope-3-inventory-guidance](https://www.epa.gov/climateleadership/scope-3-inventory-guidance)

\(^6\) Radhakrishnan, S., Datta, A., & Krishnamoorti, R. (2021). Overview of reporting of ESG metrics by the upstream oil and gas industry. Overview of Reporting of ESG Metrics by the Upstream Oil and Gas Industry - University of Houston. [https://uh.edu/uh-energy/research/white-papers/evaluating-esg-metrics](https://uh.edu/uh-energy/research/white-papers/evaluating-esg-metrics)

\(^7\) TCFD, 2021 Status Report [https://www.fsb-tcfd.org/publications/](https://www.fsb-tcfd.org/publications/)
Practices, more detailed disclosure could lead to overemphasis while underreporting will result in a loss of details and nuances. Both cases may impede informed investment decisions.

**Proposed Time Horizons and the Materiality Determination**

12. In 17 CFR 229.1500, consistent with previous guidance from the Commission and the Supreme Court’s precedent, a matter is defined as *being material if a reasonable investor would consider it important when making an investment or voting decision*. This definition of material has been applied to a registrant’s financial performance. Scope 3 emissions, while they may be materially impactful for the financial performance of certain registrants, by their nature and as defined by 17 CFR 229.1500 (q), are not a financial measure. This ambiguous nature of the perceived materiality impact of Scope 3 emissions makes it a poor measure for the enhancement and standardization of climate-related disclosure.

13. The Commission can help registrants better assess materiality and the impact of Scope 3 emissions on a registrant’s financial performance and physical and transition risks by including a) Sustainability Accounting Standards Board’s 77 industry-specific sustainability standards that are likely to impact the financial condition or operating performance of a company, and b) GRI’s standards that provide additional clarifications on the term “impact” as referred to in the “Materiality principle” and enhance the global comparability and quality of transparent disclosure.

14. Further, the Commission has stated that, as previously indicated, the materiality determination is largely fact-specific and one that requires both quantitative and qualitative considerations. Moreover, as the Supreme Court has articulated, the materiality determination with regard to potential future events requires an assessment of both the probability of the event occurring and its potential magnitude, or significance to the registrant. When considering the materiality of different climate-related risks, a registrant might, for example, determine that certain transition risks and chronic physical risks are material when balancing their likelihood and impact. It also might determine that certain acute physical risks are material even if they are less likely to occur if the magnitude of their impact would be high. The materiality determination that a registrant would be required to make regarding climate-related risks under the proposed rules is similar to what is required when preparing the MD&A section in a registration statement or annual report. The Commission’s rules require a registrant to disclose material events and uncertainties known to management that are reasonably likely to cause reported financial information, but not to be necessarily indicative of future operating results or of future financial condition.

15. As the Commission has stated, **MD&A should include descriptions and amounts of matters that have had a material impact on reported operations as well as matters that are reasonably likely to have a**

---

8 Release No. IA-6034; IC-34594; File No. S7-17-22 RIN: 3235-AM96
9 17 CFR 240.12b-2
10 SASB [https://www.sasb.org/standards/download/](https://www.sasb.org/standards/download/)
11 GRI [https://www.globalreporting.org/standards/](https://www.globalreporting.org/standards/)
material impact on future operations. The proposed rule serves to emphasize that, when assessing the materiality of a particular risk, management should consider its magnitude and probability over the short, medium, and long term. In the context of climate, the magnitude and probability of such risks vary and can be significant over such time periods. For example, wildfires in California, which recently have become more frequent and more intense, may be a material risk for wineries, farmers, and other property owners, as discussed by the Commission. Some insurance companies have withdrawn from certain wildfire-prone areas after concluding the risk is no longer insurable. For many investors, the availability of insurance and the potential exposure to damage, loss, and legal liability from wildfires may be a determining factor in their investment decision-making. Moreover, registrants must bear in mind that the materiality determination is made with regard to the information that a reasonable investor considers important to an investment or voting decision. As is evident from the above, the understanding of materiality and its financial impacts on organizations continues to evolve and no single set of measures provides specific objective measures that are or can be standardized even within an industry.

16. Moreover, many registrants may not be equipped with the tools, methodologies, and expertise to assess their physical and transition risks. In the absence of focused guidance and clarification on what may be material to an industry, region, or geophysical unit, and over what time horizon, the determination of materiality will be challenging and resource-intensive for registrants and may result in distortions in reporting. The example of wildfire risks cited above underscores the classic challenge of evaluating materiality and quantifying risks. With the withdrawal of insurance companies, registrants that lack internal materiality and risk assessment practices will be unable to quantify and underwrite their risks and will likely underreport their physical and transition risks under the proposed rules, while the registrants that can quantify their risks and participate in disclosure under the proposed rules may overreport in comparison. Again, both cases may impede informed investment decisions.

GHG Emissions Attestation Provider Requirements

17. The Commission has outlined that requiring a third party’s attestation over these disclosures would provide investors with an additional degree of reliability regarding not only the figures that are disclosed, but also the key assumptions, methodologies, and data sources the registrant used to arrive at those figures. In other contexts, such as mineral resources and oil and gas reserves, the Commission has recognized the value that third parties with specialized expertise in audit and engineering can bring to company disclosures of physical resources or risks. While the attestation requirement and verification of data and endorsement of compliance by a third party will foster transparency, reliability, and comparability, both the TCFD framework and GHG Protocol do not outline methodologies or mandatory requirements for independent verification by an attestation provider.

18. We note that the proposed rules, as defined by 17 CFR 229.1505(a), assume ‘reasonable’ assurance by an attestation provider. However, the proposed rules do not detail methodologies for verification, quality control and assurance, or outline the scope of the liability assumed by the attestation provider while endorsing compliance and need further clarification. The absence of clear definable guidance defeats the purpose of the proposed rules.